

SLOVAKIA

The Report referred to in Article 9 of Directive 2003/99/EC

TRENDS AND SOURCES OF ZOONOSSES AND ZOOTIC AGENTS IN HUMANS, FOODSTUFFS, ANIMALS AND FEEDSTUFFS

including information on foodborne outbreaks,
antimicrobial resistance in zoonotic agents and some
pathogenic microbiological agents.

IN 2013

INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: Slovakia

Reporting Year: 2013

Laboratory name	Description	Contribution
Public Health Authority of the Slovak Republic (PHA), District Public Health Authorities (DPHA)		food and FBO tables
State Veterinary and Food Administration of the Slovak Republic (SVFA)	SVFA manage, direct and control the exercise of state administration by regional and district veterinary and food administrations, Control Institute of veterinary drugs, state veterinary laboratories	reporting authority
State Veterinary Institute (SVI)	carry out laboratory analyses, laboratory diagnostics and testing of official samples taken at veterinary checks and controls of animal health and provide the services of laboratory diagnostics and testing	animal tables
State Veterinary and Food Institutes (SVFI)	carry out laboratory analyses, laboratory diagnostics and testing of official samples taken at veterinary checks and controls of foodstuffs, feedingstuffs and animal health and provide the services of laboratory diagnostics and testing	animal, food and feed tables

PREFACE

This report is submitted to the European Commission in accordance with Article 9 of Council Directive 2003/99/ EC*. The information has also been forwarded to the European Food Safety Authority (EFSA).

The report contains information on trends and sources of zoonoses and zoonotic agents in Slovakia during the year 2013 .

The information covers the occurrence of these diseases and agents in humans, animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and commensal bacteria as well as information on epidemiological investigations of foodborne outbreaks. Complementary data on susceptible animal populations in the country is also given. The information given covers both zoonoses that are important for the public health in the whole European Community as well as zoonoses, which are relevant on the basis of the national epidemiological situation.

The report describes the monitoring systems in place and the prevention and control strategies applied in the country. For some zoonoses this monitoring is based on legal requirements laid down by the Community Legislation, while for the other zoonoses national approaches are applied.

The report presents the results of the examinations carried out in the reporting year. A national evaluation of the epidemiological situation, with special reference to trends and sources of zoonotic infections, is given. Whenever possible, the relevance of findings in foodstuffs and animals to zoonoses cases in humans is evaluated.

The information covered by this report is used in the annual Community Summary Report on zoonoses that is published each year by EFSA.

* Directive 2003/ 99/ EC of the European Parliament and of the Council of 12 December 2003 on the monitoring of zoonoses and zoonotic agents, amending Decision 90/ 424/ EEC and repealing Council Directive 92/ 117/ EEC, OJ L 325, 17.11.2003, p. 31

List of Contents

1	ANIMAL POPULATIONS	1
2	INFORMATION ON SPECIFIC ZOOSES AND ZOONOTIC AGENTS	5
2.1	SALMONELLOSIS	6
2.1.1	General evaluation of the national situation	6
2.1.2	Salmonella in foodstuffs	7
2.1.3	Salmonella in animals	88
2.1.4	Salmonella in feedingstuffs	135
2.1.5	Antimicrobial resistance in Salmonella isolates	146
2.2	CAMPYLOBACTERIOSIS	225
2.2.1	General evaluation of the national situation	225
2.2.2	Campylobacter in foodstuffs	226
2.2.3	Campylobacter in animals	239
2.2.4	Antimicrobial resistance in Campylobacter isolates	249
2.3	LISTERIOSIS	259
2.3.1	General evaluation of the national situation	259
2.3.2	Listeria in foodstuffs	260
2.3.3	Listeria in animals	292
2.4	E. COLI INFECTIONS	296
2.4.1	General evaluation of the national situation	296
2.4.2	Escherichia coli, pathogenic in foodstuffs	297
2.5	TUBERCULOSIS, MYCOBACTERIAL DISEASES	301
2.5.1	General evaluation of the national situation	301
2.5.2	Mycobacterium in animals	302
2.6	BRUCELLOSIS	307
2.6.1	General evaluation of the national situation	307
2.6.2	Brucella in animals	308
2.7	YERSINIOSIS	324
2.7.1	General evaluation of the national situation	324
2.7.2	Yersinia in foodstuffs	325
2.7.3	Yersinia in animals	328
2.8	TRICHINELLOSIS	330
2.8.1	General evaluation of the national situation	330
2.8.2	Trichinella in animals	331
2.9	ECHINOCOCCOSIS	339
2.9.1	General evaluation of the national situation	339
2.9.2	Echinococcus in animals	341
2.10	TOXOPLASMOSIS	344
2.10.1	General evaluation of the national situation	344
2.10.2	Toxoplasma in animals	345
2.11	RABIES	347

2.11.1	General evaluation of the national situation	347
2.11.2	Lyssavirus (rabies) in animals	348
2.12	STAPHYLOCOCCUS INFECTION	355
2.12.1	General evaluation of the national situation	355
2.12.2	Staphylococcus in animals	355
2.13	Q-FEVER	361
2.13.1	General evaluation of the national situation	361
2.13.2	Coxiella (Q-fever) in animals	361
2.14	WEST NILE VIRUS INFECTIONS	363
2.14.1	General evaluation of the national situation	363
2.14.2	West Nile Virus in animals	363
3	INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL	365
3.1	ESCHERICHIA COLI, NON-PATHOGENIC	366
3.1.1	General evaluation of the national situation	366
3.1.2	Antimicrobial resistance in Escherichia coli, non-pathogenic	367
3.2	ENTEROCOCCUS, NON-PATHOGENIC	377
3.2.1	General evaluation of the national situation	377
3.2.2	Antimicrobial resistance in Enterococcus, non-pathogenic isolates	377
4	INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS	384
4.1	CRONOBACTER	385
4.1.1	General evaluation of the national situation	385
4.1.2	Cronobacter in foodstuffs	385
4.2	HISTAMINE	388
4.2.1	General evaluation of the national situation	388
4.2.2	Histamine in foodstuffs	388
4.3	STAPHYLOCOCCAL ENTEROTOXINS	390
4.3.1	General evaluation of the national situation	390
4.3.2	Staphylococcal enterotoxins in foodstuffs	390
5	FOODBORNE OUTBREAKS	395

1. ANIMAL POPULATIONS

The relevance of the findings on zoonoses and zoonotic agents has to be related to the size and nature of the animal population in the country.

A. Information on susceptible animal population

Sources of information

Central Evidence of Animals, statistics, District Veterinary and Food Administrations in the Slovak Republic

Dates the figures relate to and the content of the figures

31 December 2013

Table Susceptible animal populations

* Only if different than current reporting year

Animal species	Category of animals	Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
		Data	Year*	Data	Year*	Data	Year*	Data	Year*
Cattle (bovine animals)	dairy cows and heifers			24654					
	calves (under 1 year)			1841					
	- in total			38311		484332		23066	
Gallus gallus (fowl)	breeding flocks, unspecified - in total	170				2675815			
	laying hens	466		392955		7380813			
	broilers	2414		37748399		46900916			
	- in total			38141354					
Goats	- in total			39		11034		2595	
Pigs	fattening pigs			615253					
	breeding animals - unspecified - sows and gilts			12753					
	- in total			628006		502356		7651	
Sheep	animals under 1 year (lambs)			67296					
	- in total			72512		406091		7489	

Table Susceptible animal populations

Animal species	Category of animals	Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
		Data	Year*	Data	Year*	Data	Year*	Data	Year*
Solipeds, domestic	horses - in total			2		2818	2014	6804	2014
Turkeys	meat production flocks	18				50430			
	breeding flocks, unspecified - in total	33				82440			
	- in total			14713					

2. INFORMATION ON SPECIFIC ZONNOSES AND ZOONOTIC AGENTS

Zoonoses are diseases or infections, which are naturally transmissible directly or indirectly between animals and humans. Foodstuffs serve often as vehicles of zoonotic infections. Zoonotic agents cover viruses, bacteria, fungi, parasites or other biological entities that are likely to cause zoonoses.

2.1 SALMONELLOSIS

2.1.1 General evaluation of the national situation

A. General evaluation

History of the disease and/or infection in the country

Recent actions taken to control the zoonoses

Recent actions taken to control the zoonoses

- official samples of foodstuffs taken by inspectors
- official controls of farm animal feed manufacturing
- in animals, samples were taken in case of ill or dead animals,
- national eradication programmes and surveys related to poultry.

2.1.2 Salmonella in foodstuffs

A. Salmonella spp. in food

Monitoring system

Sampling strategy

All obtained data were collected from the State Veterinary and Food Institutes, the State Veterinary Institute, Public Health Authorities in Slovakia.

The samples comprised of official samples taken by inspectors of the Veterinary and Food Administrations according direction of State Veterinary and Food Administration "Plan for sampling and laboratory examination if products of animal origin for official controls", according Regulation (EC) No 2073/2005 and within direction of SVFA the target control of sheep cheese samples taken directly in special sheep farm establishments.

The Public Health Authority of the Slovak Republic (PHA of the SR) and Regional Health Authorities in the Slovak Republic (RHA in the SR) performed the sampling of foodstuffs and raw materials in compliance with the multi-annual national plan of the official control carried out by public health authorities and its updating for the current year and according Regulation (EC) No 2073/2005.

Samples are taken also in case of suspicion or consumers incentive.

All samples were tested in accordance with standardized international methods STN EN ISO 6579/A1.

Samples of foodstuffs were taken at all stages of food chain.

Frequency of the sampling

according to sampling plan, in case of suspicion or consumers incentive

Type of specimen taken

According Regulation (EC) No 2073/2005

Definition of positive finding

According Regulation (EC) No 2073/2005

Diagnostic/analytical methods used

Bacteriological method: STN EN ISO 6579/A1:2008

Preventive measures in place

According Regulation (EC) No 2073/2005

Control program/mechanisms

The control program/strategies in place

All obtained data were collected from the State Veterinary and Food Institutes, the State Veterinary Institute, Public Health Authorities in Slovakia.

The samples comprised of official samples taken by inspectors of the Veterinary and Food Administrations according direction of State Veterinary and Food Administration "Plan for sampling and laboratory examination if products of animal origin for official controls" and according Regulation (EC) No 2073/2005.

The Public Health Authority of the Slovak Republic (PHA of the SR) and Regional Health Authorities in the Slovak Republic (RHA in the SR) performed the sampling of foodstuffs and raw materials in compliance with the multi-annual national plan of the official control carried out by public health authorities and according Regulation (EC) No 2073/2005.

Slovakia - 2013 Report on trends and sources of zoonoses

Samples are taken also in case of suspicion or consumers incentive.

All samples were tested in accordance with standardized international methods STN EN ISO 6579/A1.

Samples of foodstuffs were taken at all stages of food chain.

Measures in case of the positive findings or single cases

According Regulation (EC) No 2073/2005

Notification system in place

Rapid Alert System

Results of the investigation

See relevant tables.

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	3	0		
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	31	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	6	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	14	0		
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	5	0		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	5	0		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0		
Meat from turkey - meat products - raw but intended to be eaten cooked - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Meat from broilers (Gallus gallus) - carcase - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample > neck skin	Unknown	Batch	25 Gram	2	1		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	4	0		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	0		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	20	0		
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Single	25 Gram	4	0		
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	14	0		
Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	16	2	1	
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	1	1		
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	24	0		
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	16	3		
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	25	2	1	

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - fresh - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	7	0		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	33	2		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	5	0		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	13	0		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	11	0		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - frozen - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	1	1		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	6	0		
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from duck - fresh - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	4	0		
Meat from geese - fresh - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
Meat from poultry, unspecified - fresh - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	15	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	6	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	68	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Meat from turkey - carcase - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	2	0		
Meat from turkey - carcase - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	2	0		
Meat from turkey - carcase - frozen - Retail - Surveillance ¹⁾	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	8	1		
Meat from turkey - mechanically separated meat (MSM) - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Indiana	S. Infantis	S. Newport	S. Ohio	S. Saintpaul	S. Tennessee			
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance											
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance											
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Processing plant - Surveillance											

Table Salmonella in poultry meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Indiana	S. Infantis	S. Newport	S. Ohio	S. Saintpaul	S. Tennessee
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Retail - Surveillance								
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - Retail - Surveillance								
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - Processing plant - Surveillance								
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - Retail - Surveillance								
Meat from turkey - meat products - raw but intended to be eaten cooked - Processing plant - Surveillance								
Meat from broilers (Gallus gallus) - carcase - Processing plant - Surveillance			1					
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance								
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance								
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance								
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance								
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance								

Table Salmonella in poultry meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Indiana	S. Infantis	S. Newport	S. Ohio	S. Saintpaul	S. Tennessee
Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Surveillance					1			
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance			1					
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance								
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance			1		1	1		
Meat from broilers (Gallus gallus) - fresh - chilled - Retail - Surveillance				1				
Meat from broilers (Gallus gallus) - fresh - frozen - Retail - Surveillance								
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance				2				
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance								
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance								
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance								
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - frozen - Processing plant - Surveillance				1				

Table Salmonella in poultry meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Indiana	S. Infantis	S. Newport	S. Ohio	S. Saintpaul	S. Tennessee
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - frozen - Retail - Surveillance								
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - frozen - Retail - Surveillance								
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - Retail - Surveillance								
Meat from duck - fresh - frozen - Retail - Surveillance								
Meat from geese - fresh - frozen - Retail - Surveillance								
Meat from poultry, unspecified - fresh - Catering - Monitoring								
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring								
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring								
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring								
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring								

Table Salmonella in poultry meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Indiana	S. Infantis	S. Newport	S. Ohio	S. Saintpaul	S. Tennessee
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Surveillance (human disease)								
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Processing plant - Monitoring								
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Retail - Monitoring								
Meat from turkey - carcass - chilled - Retail - Surveillance								
Meat from turkey - carcass - chilled - Retail - Surveillance								
Meat from turkey - carcass - frozen - Retail - Surveillance ¹⁾							1	1
Meat from turkey - mechanically separated meat (MSM) - Retail - Surveillance								

Comments:

¹⁾ 2 serovars found in the same sample

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Milk, cows' - raw milk - intended for direct human consumption - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	12	0		
Cheeses made from goats' milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	7	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	5	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	1		
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Batch	25 Gram	1	1		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	29	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	39	0		
Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	7	0		
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	5	0		
Cheeses made from cows' milk - curd - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	3	0		
Cheeses made from cows' milk - hard - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Cheeses made from cows' milk - hard - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	1	0		
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	13	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	7	0		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
Cheeses made from goats' milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	4	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	12	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	0		
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	213	0		
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	6	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	1		
Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	18	0		
Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	7	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - butter - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	3	0		
Dairy products (excluding cheeses) - dairy desserts - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	9	0		
Dairy products (excluding cheeses) - dairy desserts - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	6	0		
Dairy products (excluding cheeses) - dairy desserts - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
Dairy products (excluding cheeses) - dairy desserts - frozen - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	510	0		
Dairy products (excluding cheeses) - dairy desserts - frozen - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	165	0		
Dairy products (excluding cheeses) - dairy products, not specified - ready-to-eat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	1	1		
Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Dairy products (excluding cheeses) - fermented dairy products - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	91	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	25	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	45	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	25	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	16	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Millilitre	82	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	217	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	41	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	25	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	27	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Millilitre	10	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	68	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	5	0		
Dairy products (excluding cheeses) - sour milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0		

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Milk, cows' - raw milk - intended for direct human consumption - Farm - Surveillance			
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from goats' milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance			
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance			1
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Retail - Surveillance			1
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance			

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - Retail - Surveillance			
Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Surveillance			
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance			
Cheeses made from cows' milk - curd - Processing plant - Surveillance			
Cheeses made from cows' milk - hard - Processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - Retail - Surveillance			
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Retail - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance			

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance			
Cheeses made from goats' milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance (human disease)			
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Retail - Surveillance			
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Retail - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance			

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Farm - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance			1
Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from raw or low heat-treated milk - Retail - Surveillance			
Dairy products (excluding cheeses) - butter - made from pasteurised milk - Processing plant - Surveillance			
Dairy products (excluding cheeses) - dairy desserts - Processing plant - Surveillance			

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Dairy products (excluding cheeses) - dairy desserts - Retail - Surveillance			
Dairy products (excluding cheeses) - dairy desserts - Retail - Surveillance			
Dairy products (excluding cheeses) - dairy desserts - frozen - Retail - Surveillance			
Dairy products (excluding cheeses) - dairy desserts - frozen - Retail - Surveillance			
Dairy products (excluding cheeses) - dairy products, not specified - ready-to-eat - Processing plant - Surveillance			1
Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Surveillance			
Dairy products (excluding cheeses) - fermented dairy products - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Monitoring			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Monitoring			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Surveillance			

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Monitoring			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Monitoring			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			

Table Salmonella in milk and dairy products

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Montevideo
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - Retail - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - Retail - Surveillance			
Dairy products (excluding cheeses) - sour milk - Processing plant - Surveillance			

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Eggs - table eggs - Packing centre - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Eggs - table eggs - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	53	0		
Eggs - raw material (liquid egg) for egg products - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	4	0		
Fishery products, unspecified - cooked - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample		Batch	25 Gram	5	0		
Fishery products, unspecified - cooked - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	19	0		
Fish - smoked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
Crustaceans - unspecified - cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	2	0		
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	0		
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	19	0		
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	45	0		
Juice - fruit juice - unpasteurised - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	11	0		
Bakery products - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	15	0		
Bakery products - cakes - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	31	0		
Bakery products - cakes - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	9	0		
Beverages, non-alcoholic - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Millilitre	5	0		
Beverages, non-alcoholic - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Millilitre	10	0		
Beverages, non-alcoholic - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Millilitre	6	0		
Cereals and meals - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	7	0		
Cereals and meals - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Cereals and meals - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	6	0		
Cocoa and cocoa preparations, coffee and tea - Packing centre - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	74	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cocoa and cocoa preparations, coffee and tea - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	5	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	18	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	13	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	27	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	3	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	20	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	9	0		
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	34	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Confectionery products and pastes - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Confectionery products and pastes - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Confectionery products and pastes - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	98	0		
Confectionery products and pastes - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	63	0		
Confectionery products and pastes - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	22	0		
Confectionery products and pastes - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	90	0		
Confectionery products and pastes - Processing plant - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	267	0		
Confectionery products and pastes - Processing plant - Surveillance	Public Health Authorities	Suspect sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	1	1	
Confectionery products and pastes - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	287	0		
Confectionery products and pastes - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	31	0		
Confectionery products and pastes - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	6	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Confectionery products and pastes - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	113	0		
Confectionery products and pastes - Retail - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Confectionery products and pastes - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	152	0		
Confectionery products and pastes - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	192	0		
Confectionery products and pastes - Retail - Surveillance	State Veterinary and Food Institutes	Unspecified	Official sampling	food sample	Domestic	Batch	25 Gram	6	0		
Confectionery products and pastes - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	176	0		
Confectionery products and pastes - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	16	0		
Eggs - table eggs - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	9	0		
Eggs - table eggs - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	15	1	1	
Eggs - table eggs - Packing centre - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	0		
Eggs - table eggs - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	12	0		
Eggs - table eggs - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	1	1	
Eggs - table eggs - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	30	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Eggs - table eggs - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Eggs - table eggs - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	24	0		
Fishery products, unspecified - cooked - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	1	0		
Fishery products, unspecified - cooked - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	12	0		
Fishery products, unspecified - cooked - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Fishery products, unspecified - cooked - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	35	0		
Fishery products, unspecified - cooked - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0		
Fishery products, unspecified - ready-to-eat - chilled - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Foodstuffs intended for special nutritional uses - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	9	0		
Foodstuffs intended for special nutritional uses - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Foodstuffs intended for special nutritional uses - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	26	0		
Foodstuffs intended for special nutritional uses - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	6	0		
Foodstuffs intended for special nutritional uses - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	15	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	9	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Single	25 Gram	6	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	78	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	9	0		
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample		Single	25 Gram	5	0		
Fruits - pre-cut - ready-to-eat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	1	0		
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	6	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Honey - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	7	0		
Infant formula - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	27	0		
Infant formula - dried - intended for infants below 6 months - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	11	0		
Infant formula - dried - intended for infants below 6 months - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	5	0		
Infant formula - dried - intended for infants below 6 months - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	65	0		
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	107	0		
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	154	0		
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	11	0		
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	98	0		
Infant formula - liquid - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0		
Infant formula - liquid - intended for infants below 6 months - Hospital or medical care facility - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Millilitre	3	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Infant formula - liquid - intended for infants below 6 months - Hospital or medical care facility - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Unknown	Single	25 Millilitre	135	0		
Infant formula - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Infant formula - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	15	0		
Infant formula - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	3	0		
Juice - fruit juice - unpasteurised - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Millilitre	9	0		
Nuts and nut products - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample		Batch	25 Gram	3	0		
Nuts and nut products - dried - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Nuts and nut products - dried - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	1	0		
Nuts and nut products - roasted - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	2	0		
Other food - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	13	1		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other food - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	2	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	52	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	20	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	198	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	109	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	6	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	110	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	40	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	7	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	214	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	43	0		
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Other processed food products and prepared dishes - noodles - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	12	0		
Other processed food products and prepared dishes - noodles - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	0		
Other processed food products and prepared dishes - noodles - Processing plant - Surveillance	State Veterinary and Food Institutes	Unspecified	Official sampling	food sample		Batch	25 Gram	10	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - noodles - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	10	0		
Other processed food products and prepared dishes - noodles - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	3	0		
Other processed food products and prepared dishes - noodles - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Other processed food products and prepared dishes - pasta - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	4	0		
Other processed food products and prepared dishes - sandwiches - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	4	0		
Other processed food products and prepared dishes - sandwiches - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	42	0		
Other processed food products and prepared dishes - sandwiches - non-meat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	29	0		
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	43	0		
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	8	0		
Other processed food products and prepared dishes - sandwiches - non-meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Other processed food products and prepared dishes - sandwiches - non-meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	17	0		
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	69	0		
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	13	0		
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	111	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	8	0		
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	12	0		
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	29	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	10	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	15	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	4	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	357	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	456	0		
Other processed food products and prepared dishes - sushi - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	19	0		
Other processed food products and prepared dishes - unspecified - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - unspecified - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	42	0		
Other processed food products and prepared dishes - unspecified - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	885	0		
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample		Batch	25 Gram	26	0		
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	153	0		
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	246	0		
Other processed food products and prepared dishes - unspecified - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample		Batch	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	37	0		
Other processed food products and prepared dishes - unspecified - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	28	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	5	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	15	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	147	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	80	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Suspect sampling	Official sampling	food sample	Domestic	Single	25 Gram	7	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	33	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	78	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	218	1		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	Single	25 Gram	16	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	903	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	11	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Hospital or medical care facility - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Hospital or medical care facility - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	6	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	7	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	7	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	30	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	Single	25 Gram	7	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	277	4	4	
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - frozen - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	11	0		
Ready-to-eat salads - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	15	0		
Ready-to-eat salads - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Ready-to-eat salads - Processing plant - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Ready-to-eat salads - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	20	0		
Ready-to-eat salads - Processing plant - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	88	0		
Ready-to-eat salads - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	21	0		
Ready-to-eat salads - containing mayonnaise - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	148	0		
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	12	0		
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	9	0		
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	27	0		
Ready-to-eat salads - containing mayonnaise - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	65	0		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	13	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	26	0		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	81	0		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	29	0		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Seeds, dried - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	27	0		
Seeds, dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Seeds, dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	85	0		
Soups - ready-to-eat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	28	0		
Soups - ready-to-eat - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	1	0		
Soups - ready-to-eat - Catering - Surveillance	Public Health Authorities	Suspect sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Soups - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	24	0		
Soups - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	92	0		
Soups - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0		
Soups - ready-to-eat - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	0		
Soups - ready-to-eat - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Soups - ready-to-eat - Hospital or medical care facility - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Soups - ready-to-eat - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Soups - ready-to-eat - Hospital or medical care facility - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Spices and herbs - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	29	0		
Spices and herbs - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	13	0		
Spices and herbs - dried - Processing plant - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	25	0		
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	32	1		
Spices and herbs - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	5	0		
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	49	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	9	0		
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	11	0		
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	17	0		
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	3	0		
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	229	0		
Vegetables - pre-cut - ready-to-eat - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Vegetables - pre-cut - ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	12	0		
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	6	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	7	0		
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	7	0		
Vegetables - products - dried - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Vegetables - products - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	5	0		
Water - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	30	0		
Water - bottled water - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	250 Millilitre	26	0		
Water - bottled water - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	100 Millilitre	22	0		
Water - bottled water - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	250 Millilitre	63	0		
	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka							
Eggs - table eggs - Packing centre - Surveillance											

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Eggs - table eggs - Retail - Surveillance				
Eggs - raw material (liquid egg) for egg products - Processing plant - Surveillance				
Fishery products, unspecified - cooked - Processing plant - Surveillance				
Fishery products, unspecified - cooked - Retail - Surveillance				
Fish - smoked - Retail - Surveillance				
Crustaceans - unspecified - cooked - Retail - Surveillance				
Fruits - pre-cut - ready-to-eat - Retail - Surveillance				
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance				
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance				
Juice - fruit juice - unpasteurised - Retail - Surveillance				
Bakery products - Retail - Surveillance				
Bakery products - cakes - Processing plant - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Bakery products - cakes - Retail - Surveillance				
Beverages, non-alcoholic - Processing plant - Surveillance				
Beverages, non-alcoholic - Retail - Monitoring				
Beverages, non-alcoholic - Retail - Surveillance				
Cereals and meals - Processing plant - Monitoring				
Cereals and meals - Processing plant - Surveillance				
Cereals and meals - Retail - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Packing centre - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Processing plant - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Retail - Monitoring				
Cocoa and cocoa preparations, coffee and tea - Retail - Monitoring				
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				
Cocoa and cocoa preparations, coffee and tea - Retail - Surveillance				
Confectionery products and pastes - Catering - Monitoring				
Confectionery products and pastes - Catering - Monitoring				
Confectionery products and pastes - Catering - Surveillance				
Confectionery products and pastes - Catering - Surveillance				
Confectionery products and pastes - Processing plant - Monitoring				
Confectionery products and pastes - Processing plant - Monitoring				
Confectionery products and pastes - Processing plant - Surveillance				
Confectionery products and pastes - Processing plant - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Confectionery products and pastes - Processing plant - Surveillance				
Confectionery products and pastes - Processing plant - Surveillance				
Confectionery products and pastes - Retail - Monitoring				
Confectionery products and pastes - Retail - Monitoring				
Confectionery products and pastes - Retail - Monitoring				
Confectionery products and pastes - Retail - Surveillance				
Confectionery products and pastes - Retail - Surveillance				
Confectionery products and pastes - Retail - Surveillance				
Confectionery products and pastes - Retail - Surveillance				
Confectionery products and pastes - Retail - Surveillance				
Eggs - table eggs - Catering - Monitoring				
Eggs - table eggs - Catering - Surveillance				
Eggs - table eggs - Packing centre - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Eggs - table eggs - Processing plant - Surveillance				
Eggs - table eggs - Processing plant - Surveillance				
Eggs - table eggs - Retail - Surveillance				
Eggs - table eggs - Retail - Surveillance				
Eggs - table eggs - Retail - Surveillance				
Fishery products, unspecified - cooked - Catering - Surveillance (human disease)				
Fishery products, unspecified - cooked - Processing plant - Surveillance				
Fishery products, unspecified - cooked - Processing plant - Surveillance				
Fishery products, unspecified - cooked - Retail - Monitoring				
Fishery products, unspecified - cooked - Retail - Surveillance				
Fishery products, unspecified - ready-to-eat - chilled - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - Processing plant - Surveillance				
Foodstuffs intended for special nutritional uses - Processing plant - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Foodstuffs intended for special nutritional uses - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Monitoring				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Monitoring				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Monitoring				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance				
Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Surveillance				
Fruits - pre-cut - ready-to-eat - Processing plant - Surveillance				
Fruits - pre-cut - ready-to-eat - Retail - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Fruits - pre-cut - ready-to-eat - Retail - Surveillance				
Honey - Processing plant - Surveillance				
Infant formula - Processing plant - Surveillance				
Infant formula - dried - intended for infants below 6 months - Retail - Monitoring				
Infant formula - dried - intended for infants below 6 months - Retail - Monitoring				
Infant formula - dried - intended for infants below 6 months - Retail - Monitoring				
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance				
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance				
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance				
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance				
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance				
Infant formula - liquid - Retail - Surveillance				
Infant formula - liquid - intended for infants below 6 months - Hospital or medical care facility - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Infant formula - liquid - intended for infants below 6 months - Hospital or medical care facility - Surveillance				
Infant formula - ready-to-eat - Retail - Surveillance				
Infant formula - ready-to-eat - Retail - Surveillance				
Infant formula - ready-to-eat - Retail - Surveillance				
Juice - fruit juice - unpasteurised - Processing plant - Surveillance				
Nuts and nut products - Processing plant - Surveillance				
Nuts and nut products - dried - Retail - Surveillance				
Nuts and nut products - dried - Retail - Surveillance				
Nuts and nut products - roasted - Retail - Surveillance				
Other food - Processing plant - Surveillance			1	
Other food - Retail - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Catering - Monitoring				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - ices and similar frozen desserts - Catering - Monitoring				
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Monitoring				
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Monitoring				
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Processing plant - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Monitoring				
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Monitoring				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance				
Other processed food products and prepared dishes - ices and similar frozen desserts - Retail - Surveillance				
Other processed food products and prepared dishes - noodles - Catering - Monitoring				
Other processed food products and prepared dishes - noodles - Catering - Surveillance				
Other processed food products and prepared dishes - noodles - Processing plant - Surveillance				
Other processed food products and prepared dishes - noodles - Retail - Surveillance				
Other processed food products and prepared dishes - noodles - Retail - Surveillance				
Other processed food products and prepared dishes - noodles - Retail - Surveillance				
Other processed food products and prepared dishes - pasta - Catering - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - sandwiches - Catering - Surveillance				
Other processed food products and prepared dishes - sandwiches - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance				
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance				
Other processed food products and prepared dishes - sandwiches - non-meat - Catering - Surveillance				
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Monitoring				
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - non-meat - Retail - Monitoring				
Other processed food products and prepared dishes - sandwiches - non-meat - Retail - Monitoring				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Monitoring				
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Monitoring				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Monitoring				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring				
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance				
Other processed food products and prepared dishes - sushi - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - Catering - Monitoring				
Other processed food products and prepared dishes - unspecified - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance			1	
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance (human disease)				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Hospital or medical care facility - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Hospital or medical care facility - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Hospital or medical care facility - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Monitoring				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - frozen - Processing plant - Surveillance				
Ready-to-eat salads - Catering - Surveillance				
Ready-to-eat salads - Catering - Surveillance				
Ready-to-eat salads - Processing plant - Surveillance				
Ready-to-eat salads - Processing plant - Surveillance				
Ready-to-eat salads - Processing plant - Surveillance				
Ready-to-eat salads - Retail - Surveillance				
Ready-to-eat salads - containing mayonnaise - Catering - Surveillance				
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance				
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance				
Ready-to-eat salads - containing mayonnaise - Retail - Monitoring				
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance				
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance				
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance				
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance				
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance				
Seeds, dried - Processing plant - Surveillance				
Seeds, dried - Retail - Surveillance				
Seeds, dried - Retail - Surveillance				
Soups - ready-to-eat - Catering - Monitoring				
Soups - ready-to-eat - Catering - Monitoring				
Soups - ready-to-eat - Catering - Surveillance				
Soups - ready-to-eat - Catering - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Soups - ready-to-eat - Catering - Surveillance				
Soups - ready-to-eat - Catering - Surveillance				
Soups - ready-to-eat - Catering - Surveillance				
Soups - ready-to-eat - Catering - Surveillance (human disease)				
Soups - ready-to-eat - Hospital or medical care facility - Monitoring				
Soups - ready-to-eat - Hospital or medical care facility - Monitoring				
Soups - ready-to-eat - Hospital or medical care facility - Surveillance				
Spices and herbs - Processing plant - Surveillance				
Spices and herbs - Retail - Surveillance				
Spices and herbs - dried - Processing plant - Surveillance				
Spices and herbs - dried - Retail - Surveillance				1
Spices and herbs - dried - Retail - Surveillance				
Spices and herbs - dried - Retail - Surveillance				
Spices and herbs - dried - Retail - Surveillance				
Spices and herbs - dried - Retail - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring				
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring				
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance				
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance				
Vegetables - pre-cut - ready-to-eat - Processing plant - Monitoring				
Vegetables - pre-cut - ready-to-eat - Processing plant - Surveillance				
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring				
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance				
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance				
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance				
Vegetables - products - dried - Processing plant - Surveillance				

Table Salmonella in other food

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Infantis	S. Mbandaka
Vegetables - products - dried - Retail - Surveillance				
Water - Retail - Surveillance				
Water - bottled water - Processing plant - Surveillance				
Water - bottled water - Retail - Monitoring				
Water - bottled water - Retail - Surveillance				

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from pig - carcase - Slaughterhouse - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample > carcase swabs	Unknown	Single	25 Gram	238	0		
Meat from pig - fresh - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	3	0		
Meat from pig - fresh - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	0		
Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	81	0		
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	9	0		
Meat from bovine animals - fresh - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	5	0		
Meat from bovine animals - fresh - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other products of animal origin - gelatin and collagen - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0		

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other products of animal origin - gelatin and collagen - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	45	0		
Meat from bovine animals - fresh - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	21	0		
Meat from bovine animals - fresh - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	1	0		
Meat from bovine animals - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	5	0		
Meat from bovine animals - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	4	0		
Meat from pig - fresh - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	12	0		
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	1	1		
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	0		
Meat from pig - fresh - Hospital or medical care facility - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	1		1
Meat from pig - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	0		
Meat from pig - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	73	0		
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	7	0		

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Meat from pig - meat preparation - intended to be eaten cooked - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0		
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	5	0		
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	79	0		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	42	0		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	3	1		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	4	0		

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	49	0		
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	33	0		
Meat from pig - meat preparation - intended to be eaten cooked - frozen - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	5	0		
Meat from pig - meat preparation - intended to be eaten cooked - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	21	0		
Meat from pig - meat products - cooked ham - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	12	0		
Meat from pig - meat products - cooked ham - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0		
Meat from pig - meat products - cooked ham - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	7	0		
Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	31	0		
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	15	0		
Meat from pig - minced meat - intended to be eaten cooked - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Meat from pig - minced meat - intended to be eaten cooked - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	3	0		
Meat from pig - minced meat - intended to be eaten cooked - frozen - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	2	0		
Meat, mixed meat - meat preparation - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	3	0		
Meat, mixed meat - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	28	0		
Meat, mixed meat - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	8	0		
Meat, mixed meat - meat products - fermented sausages - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0		

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat, mixed meat - meat products - fermented sausages - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	21	0		
Meat, mixed meat - meat products - fermented sausages - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	14	0		
Meat, mixed meat - meat products - fermented sausages - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	8	0		
Meat, mixed meat - meat products - raw and intended to be eaten raw - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0		
Meat, mixed meat - meat products - raw and intended to be eaten raw - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat preparation - intended to be eaten cooked - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	8	1		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat preparation - intended to be eaten cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	19	0		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat preparation - intended to be eaten cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	2	0		

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - minced meat - intended to be eaten cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	5	0		
	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Typhimurium, monophasic	S. enterica subsp. enterica						
Meat from pig - carcase - Slaughterhouse - Surveillance											
Meat from pig - fresh - Processing plant - Surveillance											
Meat from pig - fresh - Retail - Surveillance											
Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Surveillance											
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance											
Meat from bovine animals - fresh - Processing plant - Surveillance											
Meat from bovine animals - fresh - Retail - Surveillance											
Other products of animal origin - gelatin and collagen - Processing plant - Surveillance											
Other products of animal origin - gelatin and collagen - Retail - Surveillance											

Table Salmonella in red meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Typhimurium, monophasic	S. enterica subsp. enterica
Meat from bovine animals - fresh - Catering - Monitoring					
Meat from bovine animals - fresh - Catering - Surveillance (human disease)					
Meat from bovine animals - fresh - Retail - Surveillance					
Meat from bovine animals - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance					
Meat from pig - fresh - Catering - Monitoring					
Meat from pig - fresh - Catering - Surveillance					
Meat from pig - fresh - Catering - Surveillance					1
Meat from pig - fresh - Catering - Surveillance					
Meat from pig - fresh - Hospital or medical care facility - Monitoring					
Meat from pig - fresh - Processing plant - Surveillance					
Meat from pig - fresh - Retail - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring					
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring					
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring					

Table Salmonella in red meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Typhimurium, monophasic	S. enterica subsp. enterica
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Surveillance (human disease)					
Meat from pig - meat preparation - intended to be eaten cooked - Hospital or medical care facility - Monitoring					
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring					
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring					
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Processing plant - Surveillance				1	
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance					

Table Salmonella in red meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Typhimurium, monophasic	S. enterica subsp. enterica
Meat from pig - meat preparation - intended to be eaten cooked - chilled - Retail - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - frozen - Processing plant - Surveillance					
Meat from pig - meat preparation - intended to be eaten cooked - frozen - Retail - Surveillance					
Meat from pig - meat products - cooked ham - Processing plant - Surveillance					
Meat from pig - meat products - cooked ham - Retail - Surveillance					
Meat from pig - meat products - cooked ham - Retail - Surveillance					
Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Monitoring					
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance					
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance					
Meat from pig - minced meat - intended to be eaten cooked - Catering - Surveillance					
Meat from pig - minced meat - intended to be eaten cooked - chilled - Retail - Surveillance					
Meat from pig - minced meat - intended to be eaten cooked - frozen - Processing plant - Surveillance					

Table Salmonella in red meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Typhimurium, monophasic	S. enterica subsp. enterica
Meat, mixed meat - meat preparation - Processing plant - Surveillance					
Meat, mixed meat - meat products - cooked, ready-to-eat - Processing plant - Surveillance					
Meat, mixed meat - meat products - cooked, ready-to-eat - Retail - Surveillance					
Meat, mixed meat - meat products - fermented sausages - Processing plant - Surveillance					
Meat, mixed meat - meat products - fermented sausages - Processing plant - Surveillance					
Meat, mixed meat - meat products - fermented sausages - Retail - Surveillance					
Meat, mixed meat - meat products - fermented sausages - Retail - Surveillance					
Meat, mixed meat - meat products - raw and intended to be eaten raw - Processing plant - Surveillance					
Meat, mixed meat - meat products - raw and intended to be eaten raw - Retail - Surveillance					
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat preparation - intended to be eaten cooked - Processing plant - Surveillance			1		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat preparation - intended to be eaten cooked - Retail - Surveillance					

Table Salmonella in red meat and products thereof

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Typhimurium, monophasic	S. enterica subsp. enterica
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat preparation - intended to be eaten cooked - Retail - Surveillance					
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - minced meat - intended to be eaten cooked - Retail - Surveillance					

2.1.3 Salmonella in animals

A. Salmonella spp. in Gallus Gallus - breeding flocks

Monitoring system

Sampling strategy

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

The target for the reduction of Salmonella Enteritidis, Salmonella Hadar, Salmonella Infantis, Salmonella Typhimurium (including monophasic strains 1,4,[5],12:i:-) and Salmonella Virchow in breeding flocks of Gallus gallus shall be a reduction of the maximum percentage of adult breeding flocks comprising at least 250 birds remaining positive to 1% or less.

Official checks at the level of poultry flocks are organized and carried out by the relevant District Veterinary and Food Administration, which also take measures in the case of positive results. Sampling in poultry flocks is carried out by farmers or private veterinarians. Official confirmation samples are taken and sent to the laboratory examination by official veterinarians from the relevant District Veterinary and Food Administrations.

The control programme is yearly evaluated.

The owner or the person responsible for hatcheries or for breeding flocks must, at his own expense, perform the sampling for analysis for the detection of salmonella either in an approved national laboratory or in a laboratory recognized by the competent authority. Samples taken by operator are part of official controls.

Monitoring for salmonella is composing the target in adult breeding flocks of Gallus gallus comprising at least 250 birds.

In the SR breeding flocks of Gallus Gallus are sampled according to the following scheme:

- rearing flocks — day-old chicks
 - four-week-old birds
 - two weeks before moving to laying phase or laying unit
- adult breeding flocks — every second week during the laying period

Breeding flocks shall be sampled:

A. at the initiative of the operator - sampling at the initiative of the operator shall take at the farm or hatchery every 3 weeks during laying period

B. official sampling:

Official control sampling is taken:

a) Routine sampling every 16 weeks at hatchery, which shall on that occasion replace the corresponding sampling at the initiative of the operator;

b) routine sampling at the holding on two occasions during the production cycle, the first one being within four weeks following moving to laying phase or laying unit and the second one being towards the end of the laying phase, not earlier than eight weeks before the end of the production cycle.

c) Confirmatory sampling at the holding, following detection of relevant salmonella from sampling at hatchery.

d) In case of suspicion of false negative or false positive results District Veterinary and Food Administration can decide to take confirmatory samples at farm.

Sampling at the initiative of the operator shall take at the hatchery every 2 weeks.

Official control sampling at flock level is taken:

I. If sampling at the initiative of the food business operator takes place at the hatchery:

a) routine sampling every 16 weeks at hatchery, which shall on that occasion replace the corresponding

sampling at the initiative of the operator;

b) routine sampling at the holding on two occasions during the production cycle, the first one being within four weeks following moving to laying phase or laying unit and the second one being towards the end of the laying phase, not earlier than eight weeks before the end of the production cycle;

c) confirmatory sampling at the holding, following detection of relevant salmonella from sampling at hatchery.

II. If sampling at the initiative of the food business operator takes place at the holding, routine sampling shall be carried out on three occasions during the production cycle:

(a) within four weeks following moving to laying phase or laying unit;

(b) towards the end of the laying phase, not earlier than eight weeks before the end of the production cycle;

(c) at any time during the production cycle which is sufficiently distant in time from the sampling referred to in points (a) and (b).

Frequency of the sampling

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

Every 2 weeks at hatchery.

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

2 weeks prior to moving to laying phase,

4 week old birds

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

Every 3 weeks during the laying period.

Type of specimen taken

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

hatcher basket liners, or

fabric swabs, or

broken eggshells

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

Faeces

Boot swabs and/or dust

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

Faeces

Boot swabs and/or dust

Methods of sampling (description of sampling techniques)

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

a) one composite sample of visibly soiled hatcher basket liners taken at random from five separate hatcher baskets or locations in the hatcher, to reach a total sampling surface of at least 1 m²; however, if the hatching eggs from a breeding flock occupy more than one hatcher, then such a composite sample shall be taken from all up to five hatchers; or

b) one sample taken with one or several moistened fabric swab(s) of at least 900 cm² surface area in total, taken immediately after the removal of the chickens from the whole surface area of the bottom of at least

a total of five hatcher baskets, or from fluff from five places, including on the floor, in all up to five hatchers with hatched eggs from the flock, ensuring that at least one sample per flock from which eggs are derived, is taken; or

c) 10 g broken eggshells taken from a total of 25 separate hatcher baskets (i.e. 250 g initial sample) in up to five hatchers with hatched eggs from the flock, crushed, mixed and subsampled to form a 25 g subsample for testing.

Breeding flocks: Production period

Sampling shall primarily consist of faecal samples and shall aim to detect a 1 % within flock prevalence, with a 95 % confidence limit. To that effect, the samples shall comprise one of the following:

A) Pooled faeces made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from a number of sites in the house in which the flock is kept, or where the flock has free access to more than one house on a particular holding, from each group of houses on the holding in which the flock is kept. Faeces may be pooled for analysis up to a minimum of two pools.

B) Boot swabs and/or dust samples:

Boot swabs used shall be sufficiently absorptive to soak up moisture. Tubegauze 'socks' shall also be acceptable for that purpose. The surface of the boot swab shall be moistened using appropriate diluents (such as 0,8 % sodium chloride, 0,1 % peptone in sterile deionised water, sterile water or any other diluent approved by the competent authority). The samples shall be taken while walking through the house using a route that will produce representative samples for all parts of the house or the respective sector. This shall include littered and slatted areas provided that slats are safe to walk on. All separate pens within a house shall be included in the sampling. On completion of sampling in the chosen sector, boot swabs must be removed carefully so as not to dislodge adherent material. The samples shall consist of:

- five pairs of boot swabs, representing each about 20 % of the area of the house; the swabs may be pooled for analysis into a minimum of two pools; or
- at least one pair of boot swabs representing the whole area of the house and an additional dust sample collected from multiple places throughout the house from surfaces with visible presence of dust. One or several moistened fabric swab(s) of at least 900 cm² surface area in total shall be used to collect this dust sample.

C) In cage breeding flocks, sampling may consist of naturally mixed faeces from dropping belts, scrapers or deep pits, depending on the type of house. Two samples of at least 150 g shall be collected to be tested individually:

- droppings belts beneath each tier of cages which are run regularly and discharged into an auger or conveyor system;
- droppings pit system in which deflectors beneath the cages are scraped into a deep pit beneath the house;
- droppings pit system in a step cage house when cages are offset and faeces fall directly into the pit. There are normally several stacks of cages within a house. Pooled faeces from each stack shall be represented in the overall pooled sample. Two pooled samples shall be taken from each flock as described in the following third to sixth subparagraphs:

In systems where there are belts or scrapers, these shall be run on the day of the sampling before sampling is carried out.

In systems where there are deflectors beneath cages and scrapers, pooled faeces that have lodged on the scraper after it has been run, shall be collected.

In step-cage systems where there is no belt or scraper system it is necessary to collect pooled faeces from throughout the deep pit.

Droppings belt systems: pooled faecal material from the discharge ends of the belts shall be collected. That procedure shall be followed for sampling at the initiative of the operator as well as for official sampling.

Case definition

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

Positive breeding flock is when presence of relevant salmonella (other than vaccine strains) was detected in one or more faecal and dust samples (or if there is a secondary official confirmation in the relevant faecal samples or birds organ samples) taken at the holding. Invasive salmonella serovars included in the programme are *Salmonella enteritidis*, *Salmonella typhimurium*, *Salmonella infantis*, *Salmonella virchow*, *Salmonella hadar*.

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

Positive breeding flock is when presence of relevant salmonella (other than vaccine strains) was detected in one or more faecal and dust samples (or if there is a secondary official confirmation in the relevant faecal samples or birds organ samples) taken at the holding. Invasive salmonella serovars included in the programme are *Salmonella enteritidis*, *Salmonella typhimurium*, *Salmonella infantis*, *Salmonella virchow*, *Salmonella hadar*.

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

Positive breeding flock is when presence of relevant salmonella (other than vaccine strains) was detected in one or more faecal and dust samples (or if there is a secondary official confirmation in the relevant faecal samples or birds organ samples) taken at the holding. Invasive salmonella serovars included in the programme are *Salmonella enteritidis*, *Salmonella typhimurium*, *Salmonella infantis*, *Salmonella virchow*, *Salmonella hadar*.

Diagnostic/analytical methods used

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

Bacteriological method: STN EN ISO 6579/A1:2008

1) Detection method

The method recommended by the Community Reference Laboratory (CRL) for *Salmonella* in Bilthoven, the Netherlands, for detection shall be used. This method is described in the current version of draft Annex D of ISO 6579 (2002): 'Detection of *Salmonella* spp. in animal faeces and in samples of the primary production stage'. In this method, a semi-solid medium (modified semi-solid Rappaport-Vassiladis medium, MSRV) is used as the single selective enrichment medium.

2) Serotyping

At least one isolate from each positive sample shall be serotyped, following the Kaufmann-White scheme.

3) Alternative methods

With regard to samples taken at the initiative of the operator, the methods of analysis provided for in Article 11 of Regulation (EC) No 882/2004 (1), may be used instead of the methods for the preparation of samples, detection methods and serotyping provided in this ANNEX (Examination of the samples), if validated in accordance with EN/ISO 16140/2003.

4) Storage of strains

At least the strains isolated from samples collected by the competent authority, shall be stored for future phagotyping or anti-microbial susceptibility testing, using the normal methods for culture collection, which must ensure integrity of the strains for a minimum of two years.

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

Bacteriological method: STN EN ISO 6579/A1:2008

1) Detection method

The method recommended by the Community Reference Laboratory (CRL) for Salmonella in Bilthoven, the Netherlands, for detection shall be used. This method is described in the current version of draft Annex D of ISO 6579 (2002): 'Detection of Salmonella spp. in animal faeces and in samples of the primary production stage'. In this method, a semi-solid medium (modified semi-solid Rappaport-Vassiladis medium, MSRV) is used as the single selective enrichment medium.

2) Serotyping

At least one isolate from each positive sample shall be serotyped, following the Kaufmann-White scheme.

3) Alternative methods

With regard to samples taken at the initiative of the operator, the methods of analysis provided for in Article 11 of Regulation (EC) No 882/2004 (1), may be used instead of the methods for the preparation of samples, detection methods and serotyping provided in this ANNEX (Examination of the samples), if validated in accordance with EN/ISO 16140/2003.

4) Storage of strains

At least the strains isolated from samples collected by the competent authority, shall be stored for future phagotyping or anti-microbial susceptibility testing, using the normal methods for culture collection, which must ensure integrity of the strains for a minimum of two years.

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

Bacteriological method: STN EN ISO 6579/A1:2008

1) Detection method

The method recommended by the Community Reference Laboratory (CRL) for Salmonella in Bilthoven, the Netherlands, for detection shall be used. This method is described in the current version of draft Annex D of ISO 6579 (2002): 'Detection of Salmonella spp. in animal faeces and in samples of the primary production stage'. In this method, a semi-solid medium (modified semi-solid Rappaport-Vassiladis medium, MSRV) is used as the single selective enrichment medium.

2) Serotyping

At least one isolate from each positive sample shall be serotyped, following the Kaufmann-White scheme.

3) Alternative methods

With regard to samples taken at the initiative of the operator, the methods of analysis provided for in Article 11 of Regulation (EC) No 882/2004 (1), may be used instead of the methods for the preparation of samples, detection methods and serotyping provided in this ANNEX (Examination of the samples), if validated in accordance with EN/ISO 16140/2003.

4) Storage of strains

At least the strains isolated from samples collected by the competent authority, shall be stored for future phagotyping or anti-microbial susceptibility testing, using the normal methods for culture collection, which must ensure integrity of the strains for a minimum of two years.

Vaccination policy

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

Use of vaccines and antimicrobials in the framework of these programmes must be realized according to Commission Regulation (EC) No. 1177/2006 of 1. August 2006 implementing Regulation (EC) No. 2160/2003 as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry. Vaccination is allowed in breeding flocks of Gallus gallus in the Slovak Republic by using inactivated or live marked vaccines registered by the Institute for the State Control of Veterinary Biologicals and Medicaments in Nitra. Live salmonella vaccines for which the manufacturer does not provide an appropriate method to distinguish bacteriological wild – type strains of salmonella from vaccine strains shall not be used. Application of live attenuated vaccines to laying hens during the laying phase is prohibited. Vaccination in breeding flocks of Gallus gallus is voluntary in the Slovak Republic.

Other preventive measures than vaccination in place

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

Movement of poultry and hatching eggs shall be carried out only in compliance with the classification of holdings which is performed for purposes of the prevention and control of infectious diseases and according to the health situation in the holding in relation to this disease. Movement is subject to the veterinary control and is carried out in compliance with the Decree of the Slovak Government No 297/2003 Coll.

Control program/mechanisms

The control program/strategies in place

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

The legal basis of the control programme is:

Act No. 39/2007 Coll. on veterinary care and amendment of some acts,

Regulation No 2160/2003/EC of the European Parliament and of the Council of 17. November 2003 on the control of salmonella and other specified food-borne zoonotic agents, on the basis of which must Member States draw up national programmes for control of salmonellae.

Decree of the Slovak Government No 626/2004 Coll., on the monitoring of zoonoses and zoonotic agents, Commission Regulation (EU) No 200/2010 of 10 March 2010 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Union target for the reduction of the prevalence of Salmonella serotypes in adult breeding flocks of Gallus gallus

Commission Regulation No. 1003/2005 implementing Regulation No 2160/2003 as regards a Community target for the reduction of the prevalence of certain salmonella serotypes in breeding flocks of Gallus gallus and amending Regulation No 2160/2003

Commission Regulation (EC) No 1177/2006 of 1 August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry

The veterinary authorities are the respective authorities responsible for the control and coordination of fulfilment of the programme.

Recent actions taken to control the zoonoses

- National control programme for Salmonella infections in poultry Gallus Gallus breeding flocks in Slovak Republic in 2013
- Control of movement of poultry and hatching eggs
- Vaccination
- Measures in case of positive finding : movement prohibition, birds, non-incubated eggs produced by the birds in the house, eggs for hatching , all poultry in the positive flock, including one – day chicks, must be

slaughtered or destroyed so as to reduce as much as possible the risk of spreading salmonella, antibiotics may be used in accordance with legislation

Measures in case of the positive findings or single cases

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

The measures must comply with the following minimum requirements:

- a. no bird may leave the house concerned unless the competent authority has authorized the slaughter and safe destruction under supervision or slaughter in a slaughterhouse designated by the competent authority.
- b. non-incubated eggs produced by the birds in the house in question must be safely destroyed on the spot or after appropriate marking be taken under supervision to an approved egg-processing establishment to be heat treated in accordance with the requirements of the special rule.
- c. all poultry in the positive flock, including one – day chicks, must be slaughtered or destroyed so as to reduce as much as possible the risk of spreading salmonella. Slaughtering must be carried out in accordance with the legislation on food hygiene. By – products not intended for human consumption must be disposed of in accordance with Regulation (EC) No. 1774/2002 of the European Parliament and of the Council of 3. October 2002 laying down health rules concerning animal by – products not intended for human consumption.
- d. where eggs for hatching are still present in a hatchery, they must be safely destroyed or treated as high risk material in accordance with Regulation (EC) No. 1774/2002 of the European Parliament and of the Council.
- e. a thorough cleansing and disinfection must be carried out after slaughtering or destruction from infected flocks, including safe disposal of manure or litter, in accordance with procedure laid down by the competent veterinary administration authority.
- f. Antibiotics may be used in accordance with Commission Regulation (EC) No 1177/2006 of 1. August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry

Notification system in place

Holder of animals, operator of the hatchery is obliged to notify to veterinary authority each suspicion or laboratory confirmation of the presence of invasive salmonella in flock, holding, hatchery without any delay, according to § 37 of the Act No. 39/2007 Coll. on veterinary care.

In case of breaking the law an owner, holder committed an offence according to § 48 of the Act No. 39/2007 Coll. on veterinary care and administrative infringement according to the § 50.

The state veterinary laboratories in the Slovak Republic notify the results of all examinations in breeding flocks and in hatcheries to the competent District Veterinary and Food Administrations and private veterinarians. The District Veterinary and Food Administrations notify results in the annual report to the State Veterinary and Food Administration of the Slovak Republic (they send the notification for information to the Regional Veterinary and Food Administration).

Where as a result of monitoring carried out the presence of *Salmonella enteritidis*, *Salmonella typhimurium*, *Salmonella hadar*, *Salmonella infantis* and *Salmonella virchow* is detected in a breeding flock, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock notify the results to the competent District Veterinary and Food Administration.

Results of the investigation

See relevant table.

Relevance of the findings in animals to findings in foodstuffs and to human cases (as a source of infection)

B. Salmonella spp. in Gallus Gallus - broiler flocks

Monitoring system

Sampling strategy

Broiler flocks

The target for the reduction of Salmonella Enteritidis and Salmonella Typhimurium (including monophasic strains 1,4,[5],12:i:-) in broilers shall be annual reduction of the maximum percentage of flocks of broilers remaining positive of Salmonella Enteritidis and Salmonella Typhimurium (including monophasic strains 1,4,[5],12:i:-) to 1 % or less.

The control programme is yearly evaluated.

Official sampling at the level of poultry flocks are organized and carried out by the relevant district veterinary and food administration, which also take measures in the case of positive results.

Sampling on the initiative of the food business operator is carried out by private veterinarians.

Flocks of broilers shall be sampled:

A. sampling on the initiative of the food business operator - sampling on the initiative of the food business operator shall take place within three weeks before the birds are moved to the slaughterhouse.

The competent authority may decide to sample at least one flock of broilers per round on holdings with several flocks if:

- an all in/all out system is used;
- the same management applies to all flocks;
- feed and water supply is common to all flocks;
- during one year and at least six rounds, Salmonella spp were tested according to the monitoring scheme set out in point (b) in all flocks on the holding and samples of all flocks of at least one round were taken by the competent authority; and
- all results from the testing for Salmonella enteritidis or Salmonella typhimurium were negative.

B. sampling by the competent authority (official sampling)

i. Sampling by the competent authority shall include each year at least 10 % of the holdings with more than 5 000 birds. It shall be done on a risk basis each time the competent authority considers it necessary, according following rules:

- district veterinary and food administrations with 10 or less broiler holdings in competence must perform official sampling in at least one holding and all flocks within holding must be sampled,
- district veterinary and food administrations with 11 or more broiler holdings in competence must perform official sampling at least in 2 holdings and all flocks within holding must be sampled.

District veterinary and food administration must in risk assessment take into account incidence of salmonella in relevant holding in previous turns and incidence of salmonella in broiler from relevant holding at slaughterhouse.

ii. One sampling carried out by the competent authority may replace the sampling on the initiative of the food business operator.

Frequency of the sampling

Broiler flocks: Rearing period

3 weeks prior to slaughter

Type of specimen taken

Broiler flocks: Rearing period

Socks/ boot swabs

Methods of sampling (description of sampling techniques)

Broiler flocks: Rearing period

The sampling frame shall cover all flocks of broilers in the Slovak Republic.

SAMPLING PROTOCOL

- At least two pairs of boot/sock swabs shall be taken.
 - For free range flocks of broilers, samples shall only be collected in the area inside the house.
 - All boot/sock swabs must be pooled into one sample.
 - In flocks with less than 100 broilers, where it is not possible to use boot/sock swabs as access to the houses is not possible, they may be replaced by hand drag swabs, where the boot swabs or socks are worn over gloved hands and rubbed over surfaces contaminated with fresh faeces, or if not feasible, by other sampling techniques for faeces fit for the intended purpose.
 - Before putting on the boot/sock swabs, their surface shall be moistened with maximum recovery diluents (MRD: 0,8 % sodium chloride, 0,1 % peptone in sterile deionised water), or sterile water or any other diluents approved by the national reference laboratory referred to in point 5 of this programme. The use of farm water containing antimicrobials or additional disinfectants shall be prohibited. The recommended way to moisten boot swabs shall be to pour the liquid inside before putting them on.
 - Alternatively, boot swabs or socks may be autoclaved with diluents within autoclave bags or jars before use. Diluents may also be applied after boots are put on using a spray or wash bottle.
- It shall be ensured that all sections in a house are represented in the sampling in a proportionate way. Each pair should cover about 50 % of the area of the house.
- On completion of sampling the boot/sock swabs shall be carefully removed so as not to dislodge adherent material. Boot swabs may be inverted to retain material. They shall be placed in a bag or pot and labelled.
 - Competent authority may decide to use one pair of boot swabs to cover 100% of area of the house if it is combined with dust sample collected from several surfaces.

Case definition

Broiler flocks: Day-old chicks

A flock of broilers shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of broilers shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of broilers for the purpose of the Community target.

Broiler flocks: Rearing period

A flock of broilers shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of broilers shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of broilers for the purpose of the Community target.

Broiler flocks: Before slaughter at farm

A flock of broilers shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of broilers shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of broilers for the purpose of the Community target.

Broiler flocks: At slaughter (flock based approach)

A flock of broilers shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of broilers shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of broilers for the purpose of the Community target.

Diagnostic/analytical methods used

Broiler flocks: Day-old chicks

Bacteriological method: STN EN ISO 6579/A1:2008

—

Broiler flocks: Rearing period

Bacteriological method: STN EN ISO 6579/A1:2008

Broiler flocks: Before slaughter at farm

Bacteriological method: STN EN ISO 6579/A1:2008

Broiler flocks: At slaughter (flock based approach)

Bacteriological method: STN EN ISO 6579/A1:2008

Other preventive measures than vaccination in place

Broiler flocks

Movement of poultry shall be carried out only in compliance with the classification of holdings which is performed for purposes of the prevention and control of infectious diseases and according to the health situation in the holding in relation to this disease. Movement is subject to the veterinary control and is carried out in compliance with the Ordinance No 297/2003 Coll.

Control program/mechanisms

The control program/strategies in place

Broiler flocks

Act No. 39/2007 Coll. on veterinary care

Regulation of the European Parliament and of the Council No 2160/2003/EC of 17. November 2003 on the control of salmonella and other specified food-borne zoonotic agents, on the basis of which must Member States draw up national programmes for control of salmonellae

Ordinance of the Government of the Slovak Republic No 626/2004 Coll., on the monitoring of zoonoses and zoonotic agents

Commission Regulation (EC) No 1177/2006 of 1. August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry
Commission Regulation (EC) No 646/2007 of 12 June 2007 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Community target for the reduction of the prevalence of *Salmonella enteritidis* and *Salmonella typhimurium* in broilers and repealing Regulation (EC) No 1091/2005

Commission Regulation (EC) No 199/2009 of 13 March 2009 laying down a transitional measure derogating from Regulation (EC) No 2160/2003 of the European Parliament and of the Council, as regards direct supply of small quantities of fresh meat derived from flocks of broilers and turkeys

Measures in case of the positive findings or single cases

Broiler flocks: Rearing period

When invasive serovars are confirmed in broiler flock the relevant district veterinary and food administration starts to carry out the epizootological investigation in order to detect the source of contamination.

The measures must comply with the following minimum requirements:

1. After slaughtering of infected flocks safe disposal of manure or litter must be carried out in accordance with procedure laid down by the competent veterinary administration authority.
2. A thorough cleansing and disinfection must be carried out of the building.
3. After cleaning and disinfection must be performed the effectiveness check by taking of swabs from the superficies of the house, which are designated for bacteriological investigation to the NRL. Houses can be restocked only when results of bacteriological investigation of control swabs are negative for invasive salmonella.

Broiler flocks: Before slaughter at farm

When invasive serovars are confirmed in broiler flock the relevant district veterinary and food administration starts to carry out the epizootological investigation in order to detect the source of contamination.

The measures must comply with the following minimum requirements:

1. After slaughtering of infected flocks safe disposal of manure or litter must be carried out in accordance with procedure laid down by the competent veterinary administration authority.
2. A thorough cleansing and disinfection must be carried out of the building.
3. After cleaning and disinfection must be performed the effectiveness check by taking of swabs from the superficies of the house, which are designated for bacteriological investigation to the NRL. Houses can be restocked only when results of bacteriological investigation of control swabs are negative for invasive salmonella.

Broiler flocks: At slaughter (flock based approach)

When invasive serovars are confirmed in broiler flock the relevant district veterinary and food administration starts to carry out the epizootological investigation in order to detect the source of

contamination.

The measures must comply with the following minimum requirements:

1. After slaughtering of infected flocks safe disposal of manure or litter must be carried out in accordance with procedure laid down by the competent veterinary administration authority.
2. A thorough cleansing and disinfection must be carried out of the building.
3. After cleaning and disinfection must be performed the effectiveness check by taking of swabs from the superficies of the house, which are designated for bacteriological investigation to the NRL. Houses can be restocked only when results of bacteriological investigation of control swabs are negative for invasive salmonella.

Notification system in place

Owner or holder of broilers is obliged to notify the suspicion and outbreak of Salmonella infection without any delay, according to § 37 of the Act No. 39/2007 Coll. In case of breaking the law an owner or holder committed an offence according to § 48 of the Act No. 39/2007 Coll. and administrative infringement according to the § 50.

The state veterinary laboratories in the Slovak Republic notify the results of all examinations of broiler flocks to the relevant district veterinary and food administrations, owners and private veterinarians.

Where as a result of monitoring carried out the presence of Salmonella enteritidis, Salmonella typhimurium is detected in a broiler flock, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock notify the results to the relevant district veterinary and food administration.

The District Veterinary and Food Administrations notify results in the annual report to the State Veterinary and Food Administration of the Slovak Republic (they send the notification for information to the Regional Veterinary and Food Administration).

Results of the investigation

See relevant table.

C. Salmonella spp. in Gallus Gallus - flocks of laying hens

Monitoring system

Sampling strategy

Laying hens flocks

The target for the reduction of *Salmonella enteritidis* and *Salmonella typhimurium* (including monophasic strains 1,4,[5],12:i:-) in adult laying hens of *Gallus Gallus* shall be an annual minimum percentage of reduction of positive flocks of adult laying hens equal to at least 10 % if the prevalence in the preceding years was less than 10%.

The control programme is yearly evaluated.

The sampling frame shall cover all flocks of adult laying hens of *Gallus gallus* (laying flocks).

– rearing flocks

oday-old chicks

opullets two weeks before moving to laying phase or laying unit

– laying flocks — every 15 weeks during the laying phase

Adult laying flocks shall be sampled:

I. by the operator

Sampling by the operator shall take place at least every fifteen weeks. The first sampling shall take place at the age of 24 ± 2 weeks.

II. by the competent authority (official sampling)

Sampling by the competent authority shall take place at least:

a.in one flock per year per holding comprising at least 1 000 birds;

b.at the age of 24 ± 2 weeks in laying flocks housed in buildings where salmonella was detected in the preceding flock;

c.in any case of suspicion of *Salmonella enteritidis* or *Salmonella typhimurium* infection, as a result of the epidemiological investigation of food-borne outbreaks in accordance with Ordinance No. 626/2004 Coll. transposing Directive of the European Parliament and of the Council No. 2003/99/EC

d.in all other laying flocks on the holding in case *Salmonella enteritidis* or *Salmonella typhimurium* are detected in one laying flock on the holding;

e.official confirmatory sample of production flocks of laying hens for confirmation of positive result of samples taken by the operator or positive official sample.

f. in case of detection of invasive salmonella in pullets two weeks before moving to laying phase - 1 week after moving to laying phase

g.in cases where the competent authority considers it appropriate.

A sampling carried out by the competent authority may replace one operator sampling.

Official checks at the level of poultry flocks are organized and carried out by the relevant District Veterinary and Food Administration, which also take measures in the case of positive results. Sampling in poultry flocks is carried out by private veterinarians. Official confirmation samples are taken and sent for laboratory examination by official veterinarians from the relevant District Veterinary and Food Administrations.

The sampling frame has covered all flocks of adult laying hens of *Gallus gallus* (laying flocks). The geographical area in which the programme has been performed depends on density of holdings of laying hens.

Frequency of the sampling

Laying hens: Rearing period

Pullets two weeks before moving to laying phase

Laying hens: Production period

Every 15 weeks by the operator The first sampling shall take place at the age of 24 ± 2 weeks.

Sampling by the competent authority shall take place at least:

a.in one flock per year per holding comprising at least 1 000 birds;

b.at the age of 24 ± 2 weeks in laying flocks housed in buildings where salmonella was detected in the preceding flock;

c.in any case of suspicion of *Salmonella enteritidis* or *Salmonella typhimurium* infection, as a result of the epidemiological investigation of food-borne

Type of specimen taken

Laying hens: Day-old chicks

Internal linings of delivery boxes

Laying hens: Rearing period

Faeces

Laying hens: Production period

Dust, faeces

Methods of sampling (description of sampling techniques)

Laying hens: Production period

In order to maximise sensitivity of sampling, both faecal material and the environment shall be sampled at least:

a.In cage flocks, 2×150 grams of naturally pooled faeces shall be taken from all belts or scrapers in the house after running the manure removal system; however, in the case of step cage houses without scrapers or belts 2×150 grams of mixed fresh faeces must be collected from 60 different places beneath the cages in the dropping pits..

b.In barn or free-range houses, two pairs of boot swabs or socks be taken, without changing overboots between boot swabs.

In the case of sampling by the competent authority, 250 ml containing at least 100 gram of dust shall be collected from prolific sources of dust throughout the house. If there is not sufficient dust, an additional sample of 150 grams naturally pooled faeces or an additional pair of boot swabs or socks shall be taken.

In the case of sampling in flocks of laying hens with positive finding in previous flock, in case of suspicion or in case of *Salmonella enteritidis* or *S. typhimurium* detection, the competent authority shall satisfy itself by conduction further tests as appropriate that the results of examinations for salmonella in birds are not affected by the use of antimicrobials in the flocks.

Case definition

Laying hens: Day-old chicks

Positive laying flocks or infected flocks - a laying flock shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* (other than vaccine strains) was detected in one or more samples in the laying flock. Positive laying flocks shall be counted only once, irrespective of the number of sampling and testing operations and only be reported in the first year of detection. Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are it

shall be accounted for as an infected laying flock for the purpose of the Community target.

Laying hens: Rearing period

Positive laying flocks or infected flocks - a laying flock shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* (other than vaccine strains) was detected in one or more samples in the laying flock. Positive laying flocks shall be counted only once, irrespective of the number of sampling and testing operations and only be reported in the first year of detection. Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are it shall be accounted for as an infected laying flock for the purpose of the Community target.

Laying hens: Production period

Positive laying flocks or infected flocks - a laying flock shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* (other than vaccine strains) was detected in one or more samples in the laying flock. Positive laying flocks shall be counted only once, irrespective of the number of sampling and testing operations and only be reported in the first year of detection. Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are it shall be accounted for as an infected laying flock for the purpose of the Community target.

Diagnostic/analytical methods used

Laying hens: Day-old chicks

Bacteriological method: STN EN ISO 6579/A1:2008

Laying hens: Rearing period

Bacteriological method: STN EN ISO 6579/A1:2008

Laying hens: Production period

Bacteriological method: STN EN ISO 6579/A1:2008

Laying hens: Before slaughter at farm

Bacteriological method: STN EN ISO 6579/A1:2008

Laying hens: At slaughter

Bacteriological method: STN EN ISO 6579/A1:2008

Eggs at packing centre (flock based approach)

Bacteriological method: STN EN ISO 6579/A1:2008

Vaccination policy

Laying hens flocks

Use of vaccines and antimicrobials in the framework of this programme must be realized according to Commission Regulation (EC) No. 1177/2006 of 1. August 2006 implementing Regulation (EC) No. 2160/2003 as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry.

Vaccination programme against *Salmonella enteritidis* shall be applied in 2011 at least during rearing phase to all laying hens.

Vaccination is allowed in laying hens in the Slovak Republic using death or live marked vaccines registered by the Institute for the State Control of Veterinary Biological and Medicaments in Nitra. Live salmonella vaccines for which the manufacturer does not provide an appropriate method to distinguish bacteriological wild – type strains of salmonella from vaccine strains shall not be used. Application of live attenuated vaccines to laying hens during the laying phase is prohibited. Vaccination in laying hens of *Gallus gallus* will be mandatory in 2011 in the Slovak Republic.

Other preventive measures than vaccination in place

Laying hens flocks

Movement of poultry shall be carried out only in compliance with the classification of holdings which is performed for purposes of the prevention and control of infectious diseases and according to the health situation in the holding in relation to this disease. Movement is subject to the veterinary control and is carried out in compliance with the Ordinance No 297/2003 Coll. and movement from third countries in compliance with Ordinance No 216/2009 Coll.

Control program/mechanisms

The control program/strategies in place

Laying hens flocks

The legal basis of the control programme is:

Act No. 39/2007 Coll. on veterinary care

Regulation of the European Parliament and of the Council No 2160/2003/EC of 17. November 2003 on the control of salmonella and other specified food-borne zoonotic agents, on the basis of which must Member States draw up national programmes for control of salmonellae

Ordinance of the Government of the Slovak Republic No 626/2004 Coll., on the monitoring of zoonoses and zoonotic agents

Commission Regulation (EC) No. 517/2011 of 25 May 2011 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Union target for the reduction of the prevalence of certain Salmonella serotypes in laying hens of Gallus gallus and amending Regulation (EC) No 2160/2003 and Commission Regulation (EU) No 200/2010

Commission Regulation (EC) No 1177/2006 of 1. August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry
Commission Regulation (EC) No 1237/2007 of 23. October 2007 amending Regulation (EC) No 2160/2003 and Decision with regard to placing on the market of eggs from salmonella infected flocks of laying hens

Recent actions taken to control the zoonoses

National control programme for Salmonella infections in laying hens Gallus Gallus in Slovak Republic in 2013

Control of movement of poultry and hatching eggs

Vaccination

Measures in case of positive finding described below

Measures in case of the positive findings or single cases

Laying hens flocks

The measures must comply with the following minimum requirements:

- 1) no bird may leave the house concerned unless the competent authority has authorized the slaughter and safe destruction under supervision or slaughter in a slaughterhouse designated by the competent authority.
- 2) When birds from infected flocks are slaughtered or destroyed, steps must be taken to reduce the risk of spreading zoonoses as far as possible. Slaughtering must be carried out in accordance with Community legislation on food hygiene. Products derived from such birds may be placed on the market for human

consumption in accordance with community legislation on food. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No. 1774/2002.

3) A thorough cleansing and disinfection must be carried out after slaughtering or destruction from infected flocks, including safe disposal of manure or litter, in accordance with procedure laid down by the competent veterinary administration authority.

4) After cleaning and disinfection must be performed the effectiveness check

5) Eggs originating from flocks with unknown health status, that are suspected of being infected or from infected flocks

- may be used for human consumption only if treated in a manner that guarantees the elimination of all salmonella serotypes with public health significance;

- Labelled according legislation

Notification system in place

Owner or holder of broilers is obliged to notify the suspicion and outbreak of Salmonella infection without any delay, according to § 37 of the Act No. 39/2007 Coll. In case of breaking the law an owner or holder committed an offence according to § 48 of the Act No. 39/2007 Coll. and administrative infringement according to the § 50.

The state veterinary laboratories in the Slovak Republic notify the results of all examinations of rearing and adult laying flocks to the competent District Veterinary and Food Administrations, to farmer and private veterinarian. The District Veterinary and Food Administrations notify in the stated date the monthly report on the results to the State Veterinary and Food Administration of the Slovak Republic (they send the notification for information to the Regional Veterinary and Food Administration).

Where as a result of monitoring carried out the presence of Salmonella enteritidis, Salmonella typhimurium is detected in a laying flock, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock notify the results to the competent District Veterinary and Food Administration. District Veterinary and Food Administration take measures in holding and without delay inform State Veterinary and Food Administration of the Slovak Republic.

Results of the investigation

See relevant table.

Relevance of the findings in animals to findings in foodstuffs and to human cases (as a source of infection)

D. Salmonella spp. in turkey - breeding flocks and meat production flocks

Monitoring system

Sampling strategy

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

In the Slovak Republic is currently less than 100 fattening turkey flocks and less than 100 breeding flocks of turkeys, the target is to not more than one flock for each of these categories turkeys during the year was positive for invasive salmonella.

The control programme is yearly evaluated.

Flocks of turkeys shall be sampled:

sampling on the initiative of the food business operator

sampling by the competent authority (official sampling)

The sampling frame shall cover all flocks of fattening and breeding turkeys covered by the scope of Regulation (EC) No 2160/2003.

Sampling of flocks of breeding turkeys on the initiative of the food business operator shall take place within three weeks before the birds are moved to the slaughterhouse. The results remain only valid until maximum six weeks after sampling and therefore repeated sampling of the same flock might be required.

Additionally, sampling of flocks of breeding turkeys on the initiative of the food business operator shall take place:

- in rearing flocks: at day-old, at four weeks of age and two weeks before moving to the laying phase or laying unit,
- in adult flocks: at least every 4th week during the laying period at the holding or at the hatchery.

Sampling by the competent authority shall include at least:

In breeding turkeys:

- once a year, all flocks on 10 % of holdings with at least 250 adult breeding turkeys between 30 and 45 weeks of age
- district veterinary and food administrations with 10 or less broiler holdings in competence must perform official sampling in at least one holding and all flocks within holding must be sampled,
- district veterinary and food administrations with 11 or more broiler holdings in competence must perform official sampling at least in 2 holdings and all flocks within holding must be sampled.
- in any case all holdings where *Salmonella enteritidis* or *Salmonella typhimurium* was detected during the previous 12 months
- all holdings with elite, great grand parents and grand parent breeding turkeys;
- all flocks on holdings in case of detection of *Salmonella enteritidis* or *Salmonella typhimurium* from samples taken at the hatchery by food business operators or within the frame of official controls, to investigate the origin of infection;

A sampling carried out by the competent authority may replace the sampling on the initiative of the food business operator.

Meat production flocks

In the Slovak Republic is currently less than 100 fattening turkey flocks and less than 100 breeding flocks

of turkeys, the target is to not more than one flock for each of these categories turkeys during the year was positive for invasive salmonella.

The control programme is yearly evaluated.

Flocks of turkeys shall be sampled:

sampling on the initiative of the food business operator

sampling by the competent authority (official sampling)

The sampling frame shall cover all flocks of fattening and breeding turkeys covered by the scope of Regulation (EC) No 2160/2003.

Sampling of flocks of fattening turkeys on the initiative of the food business operator shall take place within three weeks before the birds are moved to the slaughterhouse. The results remain only valid until maximum six weeks after sampling and therefore repeated sampling of the same flock might be required.

Additionally, sampling of flocks of fattening tukeys:

- once a year, one flock on 10 % of the holdings with at least 500 fattening turkeys, but in any case: district veterinary and food administrations with 10 or less broiler holdings in competence must perform official sampling in at least one holding and all flocks within holding must be sampled, district veterinary and food administrations with 11 or more broiler holdings in competence must perform official sampling at least in 2 holdings and all flocks within holding must be sampled.
- all flocks on the holding when one flock tested positive for *Salmonella enteritidis* or *Salmonella typhimurium* in samples taken by the food business operator, unless the meat of the turkeys in the flocks is destined for industrial heat treatment or another treatment to eliminate salmonella
- all flocks on the holding when one flock tested positive for *Salmonella enteritidis* or *Salmonella typhimurium* during the previous round in samples taken by the food business operator;
- each time the competent authority considers it necessary.

A sampling carried out by the competent authority may replace the sampling on the initiative of the food business operator.

Frequency of the sampling

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period
at four weeks of age and two weeks before moving to the laying phase

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period
every third week during the laying period at the holding or at the hatchery.

Meat production flocks: Rearing period

At the age of 4 weeks

Meat production flocks: Before slaughter at farm

3 weeks prior to slaughter

Type of specimen taken

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks
hatcher basket liners or broken eggshells

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period
Faeces

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

boot/sock swabs, dust, faeces

Meat production flocks: Day-old chicks

hatcher basket liners or broken eggshells

Meat production flocks: Rearing period

Faeces

Meat production flocks: Before slaughter at farm

boot/sock swabs, dust, faeces

Methods of sampling (description of sampling techniques)

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

For each breeding flock, the sample shall consist of a minimum of one composite sample of visibly soiled hatcher basket liners taken at random from five separate hatcher baskets or locations in the hatcher, to reach a total of at least 1 m². If the hatching eggs from a breeding flock occupy more than one incubator, then one such composite sample shall be taken from each incubator.

In cases where hatcher basket liners are not used, 10 g broken eggshells shall be taken from 25 separate hatcher baskets, crushed, mixed and a 25 g sub sample taken.

That procedure shall be followed for sampling at the initiative of the operator as well as for official sampling.

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

Routine sampling at the initiative of the operator

Sampling shall primarily consist of faecal samples and shall aim to detect a 1 % within flock prevalence, with 95 % confidence limit. To that effect, the samples shall comprise one of the following:

(a) Pooled faeces made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from a number of sites in the building in which the birds are kept, or where the birds have free access to more than one building on a particular holding, from each group of buildings on the holding in which the birds are kept. Faeces may be pooled for analysis up to a minimum of two pools.

(b) Five pairs of boot swabs:

Boot swabs used shall be sufficiently absorptive to soak up moisture. Tubegauze "socks" are also acceptable.

The surface of the boot swab shall be moistened using appropriate diluent (such as 0,8 % sodium chloride, 0,1 % peptone in sterile deionised water, or sterile water).

Walking around shall be done in a manner which will sample representatively all parts of the sector, including littered and slatted areas when slats are safe to walk on. All separate pens within a house shall be included in the sampling. On completion of sampling in the chosen sector, boot swabs must be removed carefully so as not to dislodge adherent material.

The boot swabs may be pooled for analysis into a minimum of two pools.

(c) In cage breeding flocks, sampling may consist of naturally mixed faeces from dropping belts, scrapers or deep pits, depending on the type of house. Two samples of at least 150 g shall be collected to be tested individually:

i. droppings belts beneath each tier of cages which are run regularly and discharged into an auger or conveyor system;

ii. droppings pit system in which deflectors beneath the cages are scraped into a deep pit beneath the house;

iii. droppings pit system in a step cage house when cages are offset and faeces fall directly into the pit.

There are normally several stacks of cages within a house. Pooled faeces from each stack shall be represented in the overall pooled sample. Two pooled samples shall be taken from each flock as

described below.

In systems where there are belts or scrapers, these shall be run on the day of the sampling before sampling is carried out. In systems where there are deflectors beneath cages and scrapers, pooled faeces which has lodged on the scraper after it has been run, shall be collected.

In step-cage systems where there is no belt or scraper system it is necessary to collect pooled faeces from the deep pit.

Droppings belt systems: pooled faecal material from the discharge ends of the belts shall be collected.

Official sampling

(a) Routine sampling shall be the same as routine sampling by operator.

(b) Confirmatory sampling following detection of relevant salmonella from sampling at the hatchery shall be carried out as follows.

In addition to the sampling as described in point a), the sampling may include a sample of birds taken at random from within each house of birds on the farm, normally up to five birds per house, unless the authority deems necessary to sample a higher number of birds. The examination shall consist in a test for research of anti-microbials or of bacterial growth inhibitory effect in samples. A test is considered failed if a positive is found in any of the birds.

In case the presence of relevant salmonella is not detected but anti-microbials or bacterial growth inhibitory effect are, sampling of the flock for relevant salmonella and bacterial growth inhibitory effect shall be repeated until no bacterial growth inhibitory effect is detected, or the breeding flock is destroyed.

In the latter case, the breeding flock shall be accounted for as an infected breeding flock for the purpose of the Community target.

(c) Suspect cases

In exceptional cases where the competent authority has reasons to suspect false negative results at the first official sampling at the holding, a secondary official confirmatory sampling may be performed, composed of faeces or birds (for the detection of salmonella in organs).

In exceptional cases where the competent authority has reasons to suspect false positive sampling performed at the initiative of the operator at the holding, follow-up official sampling may be performed.

Meat production flocks: Rearing period

At least two pairs of boot/sock swabs shall be taken. For free range flocks of turkeys, samples shall only be collected in the area inside the house. All boot/sock swabs must be pooled into one sample.

In flocks with less than 100 turkeys, where it is not possible to use boot/sock swabs as access to the houses is not possible, they may be replaced by hand drag swabs, where the boot swabs or socks are worn over gloved hands and rubbed over surfaces contaminated with fresh faeces, or if not feasible, by other sampling techniques for faeces fit for the intended purpose.

Before putting on the boot/sock swabs, their surface shall be moistened with maximum recovery diluents (MRD: 0,8 % sodium chloride, 0,1 % peptone in sterile deionised water), or sterile water or any other diluent approved by the national reference laboratory.

The use of farm water containing antimicrobials or additional disinfectants shall be prohibited. The recommended way to moisten boot swabs shall be to pour the liquid inside before putting them on.

Alternatively, boot swabs or socks may be autoclaved with diluents within autoclave bags or jars before use. Diluents may also be applied after boots are put on using a spray or wash bottle.

It shall be ensured that all sections in a house are represented in the sampling in a proportionate way.

Each pair should cover about 50 % of the area of the house.

Alternatively, the competent authority may decide that one pair of boot swabs shall be taken, covering 100 % of the area of the house if combined with a dust sample, collected from multiple places throughout the house from surfaces with visible presence of dust.

On completion of sampling the boot/sock swabs shall be carefully removed so as not to dislodge adherent material. Boot swabs may be inverted to retain material. They shall be placed in a bag or pot and labelled.

In the case of sampling by the competent authority because of suspicion salmonella infection in a flock on

that holding and in any other case considered appropriate, the competent authority shall satisfy itself by conducting further tests as appropriate so that the results of examinations for salmonella in flocks of turkeys are not affected by the use of antimicrobials in those flocks.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected it shall be considered as an infected flock of turkeys

Meat production flocks: Before slaughter at farm

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target

Case definition

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target.

Monitoring system

Case definition

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target

Meat production flocks: Day-old chicks

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target

Meat production flocks: Rearing period

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target

Meat production flocks: Before slaughter at farm

A flock of turkeys shall be considered positive for the purpose of verifying the achievement of the Community target, where the presence of *Salmonella enteritidis* and/or *Salmonella typhimurium* (other than vaccine strains) was detected in the flock at any occasion.

Positive flocks of turkeys shall be counted only once per round, irrespective of the number of sampling and testing operations and only be reported in the year of the first positive sampling.

Where the presence of *Salmonella enteritidis* and *Salmonella typhimurium* is not detected but antimicrobials or bacterial growth inhibitory effect are detected, it shall be considered as an infected flock of turkeys for the purpose of the Community target

Diagnostic/analytical methods used

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

Bacteriological method: STN EN ISO 6579/A1:2008

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

Bacteriological method: STN EN ISO 6579/A1:2008

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

Bacteriological method: STN EN ISO 6579/A1:2008

Meat production flocks: Day-old chicks

Bacteriological method: STN EN ISO 6579/A1:2008

Meat production flocks: Rearing period

Bacteriological method: STN EN ISO 6579/A1:2008

Meat production flocks: Before slaughter at farm

Bacteriological method: STN EN ISO 6579/A1:2008

Meat production flocks: At slaughter (flock based approach)

Bacteriological method: STN EN ISO 6579/A1:2008

Other preventive measures than vaccination in place

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

Movement of poultry and hatching eggs shall be carried out for purposes of the prevention and control of infectious diseases and according to the health situation in the holding in relation to this disease.

Movement is subject to the veterinary control and is carried out in compliance with the Decree of the Slovak Government No 297/2003 Coll. and movement from third countries in compliance with Ordinance No 216/2009 Coll.

Meat production flocks

Movement of poultry and hatching eggs shall be carried out for purposes of the prevention and control of infectious diseases and according to the health situation in the holding in relation to this disease.

Movement is subject to the veterinary control and is carried out in compliance with the Decree of the Slovak Government No 297/2003 Coll. and movement from third countries in compliance with Ordinance No 216/2009 Coll.

Control program/mechanisms

The control program/strategies in place

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

The legal basis of the control programme is:

Act No. 39/2007 Coll. on veterinary care

Regulation of the European Parliament and of the Council No 2160/2003/EC of 17. November 2003 on the control of salmonella and other specified food-borne zoonotic agents, on the basis of which must Member States draw up national programmes for control of salmonellae

Ordinance of the Government of the Slovak Republic No 626/2004 Coll., on the monitoring of zoonoses and zoonotic agents

Commission Regulation (EC) No 584/2008 of 20 June 2008 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Community target for the reduction of the prevalence of *Salmonella enteritidis* and *Salmonella typhimurium* in turkeys

Commission Regulation (EC) No 1177/2006 of 1. August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry

Commission Decision 771/2009 of 20 October 2009 approving certain national programmes for the control of salmonella in turkeys

Commission Regulation (EC) No 199/2009 of 13 March 2009 laying down a transitional measure derogating from Regulation (EC) No 2160/2003 of the European Parliament and of the Council, as regards direct supply of small quantities of fresh meat derived from flocks of broilers and turkeys

Meat production flocks

The legal basis of the control programme is:

Act No. 39/2007 Coll. on veterinary care

Regulation of the European Parliament and of the Council No 2160/2003/EC of 17. November 2003 on the control of salmonella and other specified food-borne zoonotic agents, on the basis of which must Member States draw up national programmes for control of salmonellae

Ordinance of the Government of the Slovak Republic No 626/2004 Coll., on the monitoring of zoonoses

and zoonotic agents

Commission Regulation (EC) No 584/2008 of 20 June 2008 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Community target for the reduction of the prevalence of *Salmonella enteritidis* and *Salmonella typhimurium* in turkeys

Commission Regulation (EC) No 1177/2006 of 1. August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry

Commission Decision 771/2009 of 20 October 2009 approving certain national programmes for the control of salmonella in turkeys

Commission Regulation (EC) No 199/2009 of 13 March 2009 laying down a transitional measure derogating from Regulation (EC) No 2160/2003 of the European Parliament and of the Council, as regards direct supply of small quantities of fresh meat derived from flocks of broilers and turkeys

Recent actions taken to control the zoonoses

- National control programme for *Salmonella* infections in turkeys in Slovak Republic in 2013
- Control of movement of poultry and hatching eggs
- Vaccination
- Measures in case of positive finding : movement prohibition, birds, non-incubated eggs produced by the birds in the house, eggs for hatching , all poultry in the positive flock, including one – day chicks, must be slaughtered or destroyed so as to reduce as much as possible the risk of spreading salmonella, antibiotics may be used in accordance with legislation

Measures in case of the positive findings or single cases

When invasive serovars are confirmed in broiler flock the relevant district veterinary and food administration starts to carry out the epizootological investigation in order to detect the source of contamination.

The measures must comply with the following minimum requirements:

4.After slaughtering of infected flocks safe disposal of manure or litter must be carried out in accordance with procedure laid down by the competent veterinary administration authority.

5.A thorough cleansing and disinfection must be carried out of the building.

6.After cleaning and disinfection must be performed the effectiveness check by taking of swabs from the superficies of the house, which are designated for bacteriological investigation to the NRL. Houses can be restocked only when results of bacteriological investigation of control swabs are negative for invasive salmonella.

Notification system in place

Owner or holder of broilers is obliged to notify the suspicion and outbreak of *Salmonella* infection without any delay, according to § 37 of the Act No. 39/2007 Coll. In case of breaking the law an owner or holder committed an offence according to § 48 of the Act No. 39/2007 Coll. and administrative infringement according to the § 50.

The state veterinary laboratories in the Slovak Republic notify the results of all examinations of broiler flocks to the relevant district veterinary and food administrations, owners and private veterinarians.

Where as a result of monitoring carried out the presence of *Salmonella enteritidis*, *Salmonella typhimurium* is detected in a broiler flock, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock notify the results to the relevant district veterinary and food administration.

The District Veterinary and Food Administrations notify results in the annual report to the State Veterinary and Food Administration of the Slovak Republic (they send the notification for information to the Regional Veterinary and Food Administration).

Results of the investigation

See relevant tables.

E. Salmonella spp. in animal

Monitoring system

Sampling strategy

In animals are samples for salmonella collected by the indication, in samples of dead and diseased animals in the national control programs relating primarily poultry.

The method used was the programs ISO 6579/A1: 2008 (Annex D), other samples from clinical specimens were examined by the standard method according to EN ISO 6579, OIE and Bergey's Manual. Within national control programs are sampling and investigation carried out according respective guidelines.

Frequency of the sampling

Animals at farm

In the case of suspicion of the disease occurrence, according control programs

Type of specimen taken

Animals at farm

The rectal swabs, excrements, carcasses or organs from dead animals are sent for the investigation. according control programs

Diagnostic/analytical methods used

Animals at farm

EN ISO 6579, OIE and Bergey's Manual

Control program/mechanisms

The control program/strategies in place

According relevant legislation there are performed poultry control programmes.

Monitoring of Salmonella in other animals has not been performed in Slovak Republic. Owner or farmer at own charge took samples in case of suspicion of disease.

Results of the investigation

See relevant tables.

National evaluation of the recent situation, the trends and sources of infection

Table Salmonella in breeding flocks of Gallus gallus

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Gallus gallus (fowl) - breeding flocks, unspecified - adult - Control and eradication programmes	170	SVFI, SVI	Census	Official and industry sampling			yes	Flock	163	0	
	S. Hadar	S. Infantis	S. Typhimurium	S. Virchow	S. 1,4,[5],12:i:-	Salmonella spp., unspecified					
Gallus gallus (fowl) - breeding flocks, unspecified - adult - Control and eradication programmes											

Table Salmonella in other birds

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Guinea fowl - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		herd/flock	5	0			
Guinea fowl - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	2	1		1	
Ostriches - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	4	0			
Ostriches - Farm - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	10	0			

Table Salmonella in other birds

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Pheasants - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		herd/flock	2	0			
Pheasants - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > eggshells		herd/flock	1	0			
Pheasants - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		herd/flock	19	0			
Pigeons - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	24	2		2	
Pigeons - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	15	3		3	

Table Salmonella in other birds

	Salmonella spp., unspecified
Guinea fowl - Farm - Clinical investigations	
Guinea fowl - Farm - Clinical investigations	
Ostriches - Farm - Clinical investigations	
Ostriches - Farm - Monitoring	
Pheasants - Farm - Clinical investigations	
Pheasants - Farm - Clinical investigations	
Pheasants - Farm - Clinical investigations	
Pigeons - Unknown - Clinical investigations	
Pigeons - Unknown - Clinical investigations	

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
African wild dog - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	5	0			
All animals - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	23	2			
All animals - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	23	0			
Cats - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	47	3		1	

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	68	1		1	
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	24	0			
Cattle (bovine animals) - adult cattle over 2 years - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > organ/tissue		Animal	34	1		1	
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	93	3	1	2	
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	65	1	1		

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Chinchillas - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	1	0			
Dogs - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	18	0			
Dogs - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	215	4	1	1	
Ferrets - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	1	0			
Fish - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	1	1	1		

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Goats - animals over 1 year - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	11	0			
Guinea pigs - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	3	0			
Mice - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	1	0			
Pigs - breeding animals - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	8	1			
Pigs - breeding animals - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	25	0			

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Pigs - fattening pigs - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	43	1		1	
Pigs - fattening pigs - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	43	2	1	1	
Pigs - fattening pigs - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > organ/tissue		Animal	55	0			
Rabbits - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	7	2	1		
Reptiles - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	29	2			

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Reptiles - zoo animal - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	31	3			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	35	0			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	2	1		1	
Sheep - milk ewes - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	21	0			
Snakes - zoo animal - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	11	1			

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Solipeds, domestic - horses - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	1	0			
Solipeds, domestic - horses - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue		Animal	5	0			
Turtles - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces		Animal	12	3			
	Salmonella spp., unspecified	S. Blijdorp	S. Braenderup	S. Fluntern	S. Indiana	S. Midway	S. Monschaui	S. Nessziona	S. Saintpaul	S. Schwerin	S. Stanley
African wild dog - Farm - Clinical investigations											
All animals - zoo animals - Zoo - Clinical investigations									1		
All animals - zoo animals - Zoo - Clinical investigations											

Table Salmonella in other animals

	Salmonella spp., unspecified	S. Blijdorp	S. Braenderup	S. Fluntern	S. Indiana	S. Midway	S. Monschau	S. Nessziona	S. Saintpaul	S. Schwerin	S. Stanley
Cats - Unknown - Clinical investigations			1								1
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations											
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations											
Cattle (bovine animals) - adult cattle over 2 years - Slaughterhouse - Surveillance											
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations											
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations											
Chinchillas - Farm - Clinical investigations											
Dogs - Unknown - Clinical investigations											
Dogs - Unknown - Clinical investigations				1	1						
Ferrets - pet animals - Unknown - Clinical investigations											
Fish - Unknown - Clinical investigations											
Goats - animals over 1 year - Farm - Clinical investigations											
Guinea pigs - Unknown - Clinical investigations											
Mice - Unknown - Clinical investigations											
Pigs - breeding animals - Farm - Clinical investigations											

Table Salmonella in other animals

	Salmonella spp., unspecified	S. Blijdorp	S. Braenderup	S. Fluntern	S. Indiana	S. Midway	S. Monschau	S. Nessziona	S. Saintpaul	S. Schwerin	S. Stanley
Pigs - breeding animals - Farm - Clinical investigations											
Pigs - fattening pigs - Farm - Clinical investigations											
Pigs - fattening pigs - Farm - Clinical investigations											
Pigs - fattening pigs - Slaughterhouse - Surveillance											
Rabbits - Farm - Clinical investigations									1		
Reptiles - Unknown - Clinical investigations		1									
Reptiles - zoo animal - Zoo - Clinical investigations						1	1			1	
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations											
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations											
Sheep - milk ewes - Farm - Clinical investigations											
Snakes - zoo animal - Zoo - Clinical investigations											
Solipeds, domestic - horses - Farm - Clinical investigations											
Solipeds, domestic - horses - Farm - Clinical investigations											

Table Salmonella in other animals

	Salmonella spp., unspecified	S. Blijdorp	S. Braenderup	S. Fluntern	S. Indiana	S. Midway	S. Monschau	S. Nessziona	S. Saintpaul	S. Schwerin	S. Stanley
Turtles - Zoo - Clinical investigations								1			
	S. Telelkebir	S. Typhimurium, monophasic	S. enterica subsp. diarizonae	S. enterica subsp. enterica	S. enterica subsp. houtenae	S. enterica subsp. salamae					
African wild dog - Farm - Clinical investigations											
All animals - zoo animals - Zoo - Clinical investigations					1						
All animals - zoo animals - Zoo - Clinical investigations											
Cats - Unknown - Clinical investigations											
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations											
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations											
Cattle (bovine animals) - adult cattle over 2 years - Slaughterhouse - Surveillance											
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations											
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations											
Chinchillas - Farm - Clinical investigations											
Dogs - Unknown - Clinical investigations											

Table Salmonella in other animals

	S. Telelkebir	S. Typhimurium, monophasic	S. enterica subsp. diarizonae	S. enterica subsp. enterica	S. enterica subsp. houtenae	S. enterica subsp. salamae
Dogs - Unknown - Clinical investigations						
Ferrets - pet animals - Unknown - Clinical investigations						
Fish - Unknown - Clinical investigations						
Goats - animals over 1 year - Farm - Clinical investigations						
Guinea pigs - Unknown - Clinical investigations						
Mice - Unknown - Clinical investigations						
Pigs - breeding animals - Farm - Clinical investigations		1				
Pigs - breeding animals - Farm - Clinical investigations						
Pigs - fattening pigs - Farm - Clinical investigations						
Pigs - fattening pigs - Farm - Clinical investigations						
Pigs - fattening pigs - Slaughterhouse - Surveillance						
Rabbits - Farm - Clinical investigations						
Reptiles - Unknown - Clinical investigations	1					
Reptiles - zoo animal - Zoo - Clinical investigations						

Table Salmonella in other animals

	S. Telelkebir	S. Typhimurium, monophasic	S. enterica subsp. diarizonae	S. enterica subsp. enterica	S. enterica subsp. houtenae	S. enterica subsp. salamae
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations						
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations						
Sheep - milk ewes - Farm - Clinical investigations						
Snakes - zoo animal - Zoo - Clinical investigations			1			
Solipeds, domestic - horses - Farm - Clinical investigations						
Solipeds, domestic - horses - Farm - Clinical investigations						
Turtles - Zoo - Clinical investigations				1		1

Table Salmonella in other poultry

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Gallus gallus (fowl) - laying hens - adult - Farm - Control and eradication programmes	410		Census	Official and industry sampling			yes	Flock	396	5	1
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes			Census	Official sampling			yes	Flock			
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes			Census	Industry sampling			yes				
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes	2389		Census	Official and industry sampling			yes	Flock	2282	48	2
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes	33		Census	Official and industry sampling			yes	Flock	33	0	
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes			Census	Industry sampling			yes				
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes				Official sampling			yes				
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes	15		Census	Official and industry sampling			yes	Flock	15	3	1
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes			Census	Industry sampling			yes				
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes				Official sampling			yes				

Table Salmonella in other poultry

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	Other serovars	S. Agona	S. Cerro	S. Infantis	S. Lille	S. Mbandaka	S. Montevideo	S. Newport
Gallus gallus (fowl) - laying hens - adult - Farm - Control and eradication programmes						1	2				
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes											
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes											
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes	2			4	5		27	1	1	2	1
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes											
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes											
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes											
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes											2
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes											
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes											

Table Salmonella in other poultry

	S. Orion	S. enterica subsp. enterica	Salmonella spp.
Gallus gallus (fowl) - laying hens - adult - Farm - Control and eradication programmes	1		
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes			
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes			
Gallus gallus (fowl) - broilers - before slaughter - Farm - Control and eradication programmes		2	1
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes			
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes			
Turkeys - breeding flocks, unspecified - adult - Farm - Control and eradication programmes			
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes			
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes			
Turkeys - fattening flocks - before slaughter - Farm - Control and eradication programmes			

2.1.4 Salmonella in feedingstuffs

A. Salmonella spp. in feed

National evaluation of the recent situation, the trends and sources of infection

Recent actions taken to control the zoonoses

Official controls at feed level is taken:

- The Central Control and Testing Institute of Agriculture in co-operation with the State Veterinary and Food Administration of the Slovak Republic elaborates the yearly National Plan on Feed Control, covering competences and priorities for feed control in the respective year in accordance with national and EU legislation (Council Directive 95/53/EC).
- The State Veterinary and Food Administration of the Slovak Republic elaborates the yearly Plan of official control and VPO (plan of veterinary prevention and protection) of feed for DVFA (District Veterinary and Food Administration) inspectors in accordance with veterinary EU legislation.

In case, when confirmation samples are positive for invasive salmonella the competent authority starts to carry out an investigation in order to:

- identify the source of contamination, in particular by means of official samples taken at different stages of production,
- examine the application of rules and controls concerning the disposal and processing of animal waste and in particular those which are mentioned in accordance with the special rule,
- establish procedures for good manufacturing practices and ensure compliance with recognized procedures.

Samples intended for bacteriological testing for salmonella presence were taken within the frame of official controls of farm animal feed manufacturing, as well as controls on animal farms and within inspections of plants approved in accordance with Regulation of the European Parliament and of the Council (EC) No 1774/ 2002 laying down health rules concerning animal byproducts not intended for human consumption. The samples were tested in the State Veterinary and Food Institutes, using the method STN ISO 6579.

Table Salmonella in compound feedingstuffs

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Compound feedingstuffs for cattle - final product - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	21	0		
Compound feedingstuffs for pigs - final product - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	8	0		
Compound feedingstuffs for poultry - laying hens - final product - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	6	0		
Compound feedingstuffs for poultry - broilers - final product - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	3	0		
Compound feedingstuffs for cattle - final product - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	26	0		
Compound feedingstuffs for fish - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	1	0		
Compound feedingstuffs for pigs - final product - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	18	0		
Compound feedingstuffs for poultry - breeders - final product - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	1	0		

Table Salmonella in compound feedingstuffs

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Compound feedingstuffs for poultry - broilers - final product - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	10	0		
Compound feedingstuffs for poultry - laying hens - final product - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	14	0		
Compound feedingstuffs for rabbits - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	1	0		
Compound feedingstuffs for sheep - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	3	0		
Compound feedingstuffs, not specified - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	1	0		
	S. 1,4,[5],12:i:-	Salmonella spp., unspecified									
Compound feedingstuffs for cattle - final product - Feed mill - Surveillance											
Compound feedingstuffs for pigs - final product - Feed mill - Surveillance											
Compound feedingstuffs for poultry - laying hens - final product - Feed mill - Surveillance											

Table Salmonella in compound feedingstuffs

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified
Compound feedingstuffs for poultry - broilers - final product - Feed mill - Surveillance		
Compound feedingstuffs for cattle - final product - Farm - Surveillance		
Compound feedingstuffs for fish - Feed mill - Surveillance		
Compound feedingstuffs for pigs - final product - Farm - Surveillance		
Compound feedingstuffs for poultry - breeders - final product - Farm - Surveillance		
Compound feedingstuffs for poultry - broilers - final product - Farm - Surveillance		
Compound feedingstuffs for poultry - laying hens - final product - Farm - Surveillance		
Compound feedingstuffs for rabbits - Farm - Surveillance		
Compound feedingstuffs for sheep - Feed mill - Surveillance		
Compound feedingstuffs, not specified - Retail - Surveillance		

Table Salmonella in feed material of animal origin

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Feed material of land animal origin - dairy products - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	79	0		
Feed material of land animal origin - meat and bone meal - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	15	0		
Feed material of land animal origin - greaves - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	2	0		
Feed material of land animal origin - poultry offal meal - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	10	1	1	
Feed material of land animal origin - blood meal - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	5	0		
Feed material of land animal origin - animal fat - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	21	0		
Feed material of marine animal origin - fish meal - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Imported from outside EU	Batch	25 Gram	1	0		
Feed material of land animal origin - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	11	0		

Table Salmonella in feed material of animal origin

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Feed material of land animal origin - meat meal - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	20	0		
Feed material of land animal origin - poultry offal meal - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	1	0		
Feed material of marine animal origin - fish meal - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	10	0		
	S. 1,4,[5],12:i:-	Salmonella spp., unspecified									
Feed material of land animal origin - dairy products - Feed mill - Surveillance											
Feed material of land animal origin - meat and bone meal - Feed mill - Surveillance											
Feed material of land animal origin - greaves - Feed mill - Surveillance											
Feed material of land animal origin - poultry offal meal - Feed mill - Surveillance											
Feed material of land animal origin - blood meal - Feed mill - Surveillance											
Feed material of land animal origin - animal fat - Feed mill - Surveillance											

Table Salmonella in feed material of animal origin

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified
Feed material of marine animal origin - fish meal - Feed mill - Surveillance		
Feed material of land animal origin - Feed mill - Surveillance		
Feed material of land animal origin - meat meal - Retail - Surveillance		
Feed material of land animal origin - poultry offal meal - Retail - Surveillance		
Feed material of marine animal origin - fish meal - Feed mill - Surveillance		

Table Salmonella in other feed matter

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Feed material of cereal grain origin - barley derived - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	4	0		
Feed material of cereal grain origin - wheat derived - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	4	0		
Feed material of cereal grain origin - other cereal grain derived - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	4	0		
Feed material of cereal grain origin - maize derived - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	1	0		
Other feed material - forages and roughages - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	6	0		
Feed material of cereal grain origin - barley derived - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	1	0		
Feed material of cereal grain origin - maize derived - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	3	0		
Feed material of cereal grain origin - wheat derived - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	9	0		

Table Salmonella in other feed matter

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Other feed material - forages and roughages - Farm - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	19	0		
Pet food - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	5	0		
Pet food - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	4	0		
Pet food - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	21	0		
Pet food - dog snacks (pig ears, chewing bones) - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	25	0		
Pet food - dog snacks (pig ears, chewing bones) - Feed mill - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	58	1		
Pet food - dog snacks (pig ears, chewing bones) - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Batch	25 Gram	28	1		
Pet food - dog snacks (pig ears, chewing bones) - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	feed sample	Domestic	Single	25 Gram	8	0		

Table Salmonella in other feed matter

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Rissen
Feed material of cereal grain origin - barley derived - Feed mill - Surveillance				
Feed material of cereal grain origin - wheat derived - Feed mill - Surveillance				
Feed material of cereal grain origin - other cereal grain derived - Feed mill - Surveillance				
Feed material of cereal grain origin - maize derived - Feed mill - Surveillance				
Other feed material - forages and roughages - Feed mill - Surveillance				
Feed material of cereal grain origin - barley derived - Farm - Surveillance				
Feed material of cereal grain origin - maize derived - Farm - Surveillance				
Feed material of cereal grain origin - wheat derived - Farm - Surveillance				
Other feed material - forages and roughages - Farm - Surveillance				
Pet food - Feed mill - Surveillance				
Pet food - Retail - Surveillance				
Pet food - Retail - Surveillance				
Pet food - dog snacks (pig ears, chewing bones) - Feed mill - Surveillance				

Table Salmonella in other feed matter

	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Derby	S. Rissen
Pet food - dog snacks (pig ears, chewing bones) - Feed mill - Surveillance				1
Pet food - dog snacks (pig ears, chewing bones) - Retail - Surveillance			1	
Pet food - dog snacks (pig ears, chewing bones) - Retail - Surveillance				

2.1.5 Antimicrobial resistance in Salmonella isolates

A. Antimicrobial resistance in Salmonella in pigs

Notification system in place

B. Antimicrobial resistance in Salmonella in poultry

Laboratory methodology used for identification of the microbial isolates

Notification system in place

C. Antimicrobial resistance in Salmonella in foodstuff derived from cattle

Notification system in place

D. Antimicrobial resistance of *Salmonella* spp. in animal

Sampling strategy used in monitoring

Frequency of the sampling

The sampling is random from the diseased or dead animals at farm and from subclinical cases at slaughterhouses (cattle, pigs).

The sampling is performed according to Slovak National control programme for *Salmonella* (poultry). For details see the part *Salmonella* in animals.

Type of specimen taken

It is described in part *Salmonella* spp. in animals.

Methods of sampling (description of sampling techniques)

Strains isolated during year were sent from regional state veterinary laboratories to NRL for *Salmonella* for serotyping and determination of antimicrobial resistance. It is mandatory that at least one isolate from each notified incident of *Salmonella* is confirmed at NRL.

Procedures for the selection of isolates for antimicrobial testing

The selection for antimicrobial susceptibility testing are carried out from all the isolates at NRL for *Salmonella*. Only one isolate from each serotype per holding and year (cattle, pigs) and only one isolate from positive flock (poultry) is examined.

Methods used for collecting data

All the susceptibility tests for monitoring antimicrobial resistance are performed at NRL for *Salmonella* and the results are stored in an appropriate database. Tested isolates are stored at NRL minimal 2 years, isolates from baseline surveys minimal 5 years

Laboratory methodology used for identification of the microbial isolates

Isolation of *Salmonella* was done based on ISO 6579 including Annex D. The *Salmonella* isolates were serotyped following the Kauffmann-White scheme.

Antimicrobial susceptibility was tested by a dilution method in cation adjusted Muller-Hinton broth. The tests were performed following the standards for microdilution of the NCCLS/CLSI, ISO, WHO - GSS protocol and the manufacturers guidelines. Microplate Sensititre EUMVS2 from Trek were used for susceptibility testing.

As quality control, strain *Escherichia coli* ATCC 25922 was included. The NRL participate in EQAS proficiency tests organised by DTU/DFVF Copenhagen regularly yearly.

Laboratory used for detection for resistance

Antimicrobials included in monitoring

Antimicrobials recommended by EFSA and European Commission plus additional antimicrobials. For details on antimicrobials included in monitoring and ranges see the respective tables.

Cut-off values used in testing

As breakpoints in antimicrobial resistance monitoring were used epidemiological cut-off values recommended by EFSA, EC and European Committee on Antimicrobial Susceptibility Testing (EUCAST), when were available. For details see breakpoints and quantitative tables.

Control program/mechanisms

The control program/strategies in place

Results of the investigation

The occurrence of *Salmonella* isolates decreased in comparison to previous years. It was noted a change of *Salmonella* serovars too. While in previous years was dominated serovar *S. Enteritidis* in the most categories, now it is *S. Infantis* the most frequent serovar in broilers.

The overall antimicrobial resistance situation in *S. Enteritidis* isolates is favourable. Only sporadic resistance to ciprofloxacin and nalidixic acid was noted.

Isolation of the same serovars with similar resistance in one day chicken and in broilers pointing out probably source of *Salmonella* contamination.

Occurrence of pentaresistant *S. Typhimurium* was recorded in pigs as in previous years.

All the pentaresistant strains *S. Typhimurium* isolated up to now in calves and pigs came from clinical samples. The another resistant *S. Typhimurium* clones including ASSuT resistance were isolated from clinical samples and pig meat.

At first from year 2004 was isolated presumptive phenotype *S. Typhimurium* from cattle by clinical investigation.

In serovars *S. Enteritidis* and *S. Typhimurium* was recorded MIC for Colistine >2 microg/ml sporadically. Besides multiresistent *S. Infantis* was noted a occurrence of another multiresistant serovars as *S. Saintpaul* and *S. Newport* in the last months.

National evaluation of the recent situation, the trends and sources of infection

The occurrence of *Salmonella* isolates decreased in comparison to previous years. It is noted a change of *Salmonella* serovars too. May be possible increasing some multiresistent serovars *S. Infantis*, *S. Kentucky*, *S. Newport*, etc.

E. Antimicrobial resistance of *Salmonella* spp. in food

Sampling strategy used in monitoring

Frequency of the sampling

The sampling is performed according to Plan for sampling and laboratory examination of products of animal origin for official controls. Samples of foodstuffs were taken at all stages of food chain.

Type of specimen taken

It is described in part *Salmonella* spp. in foodstuffs.

Methods of sampling (description of sampling techniques)

Strains isolated during year were sent from regional state veterinary laboratories to NRL for *Salmonella* for serotyping and determination of antimicrobial resistance. It is mandatory that at least one isolate from each notified incident of *Salmonella* is confirmed at NRL.

Procedures for the selection of isolates for antimicrobial testing

The selection for antimicrobial susceptibility testing are carried out from all the isolates at NRL for *Salmonella*. Only one isolate from each serotype per batch is examined.

Methods used for collecting data

All the susceptibility tests for monitoring antimicrobial resistance are performed at NRL for *Salmonella* and the results are stored in an appropriate database. Tested isolates are stored at NRL minimal 2 years, isolates from baseline surveys minimal 5 years.

Laboratory methodology used for identification of the microbial isolates

Isolation of *Salmonella* was done based on ISO 6579 including Annex D. The *Salmonella* isolates were serotyped following the Kauffmann-White scheme.

Antimicrobial susceptibility was tested by a dilution method in cation adjusted Muller-Hinton broth. The tests were performed following the standards for microdilution of the NCCLS/CLSI, ISO, WHO - GSS protocol and the manufacturers guidelines. Microplate Sensititre EUMVS2 from Trek were used for susceptibility testing.

As quality control, strain *Escherichia coli* ATCC 25922 was included. The NRL participate in EQAS proficiency tests organised by DTU/DFVF Copenhagen regularly yearly.

Laboratory used for detection for resistance

Antimicrobials included in monitoring

Antimicrobials recommended by EFSA and European Commission plus additional antimicrobials. For details on antimicrobials included in monitoring and ranges see the respective tables.

Cut-off values used in testing

As breakpoints in antimicrobial resistance monitoring were used epidemiological cut-off values recommended by EFSA, EC and European Committee on Antimicrobial Susceptibility Testing (EUCAST), when were available. For details see breakpoints and quantitative tables.

Results of the investigation

The limited number of isolates allowed a limited evaluation of the resistance level in food category only. The overall antimicrobial resistance situation in food is similar to situation in animal. There is now multiresistant serovar *S. Infantis* more frequent serovar in meat from broilers than *S. Enteritidis* too.

National evaluation of the recent situation, the trends and sources of infection

The occurrence of *Salmonella* isolates in Food is sporadically. It is noted a change of *Salmonella* serovars too. May be possible increasing some multiresistant serovars *S. Infantis*, *S. Kentucky*, etc.

Table Antimicrobial susceptibility testing of Salmonella in Cattle (bovine animals)

Salmonella Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	S. Typhimurium		S. 1,4,[5],12:i:-		S. Dublin		S. Infantis		Salmonella spp.	
	no									
	2									
	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	2	0								
Aminoglycosides - Kanamycin	2	0								
Aminoglycosides - Streptomycin	2	0								
Amphenicols - Chloramphenicol	2	0								
Amphenicols - Florfenicol	2	0								
Fluoroquinolones - Ciprofloxacin	2	0								
Penicillins - Ampicillin	2	1								
Quinolones - Nalidixic acid	2	0								
Sulfonamides	2	0								
Tetracyclines - Tetracycline	2	0								
Trimethoprim	2	0								
Fully sensitive	2	1								
Resistant to 1 antimicrobial	2	0								
Resistant to 2 antimicrobials	2	0								
Resistant to 3 antimicrobials	2	1								
Resistant to 4 antimicrobials	2	0								
Resistant to >4 antimicrobials	2	0								
Number of multiresistant S. Typhimurium - with penta resistance	2	0								
Cephalosporins - Cefotaxime	2	1								

Table Antimicrobial susceptibility testing of Salmonella in Cattle (bovine animals)

Salmonella	S. Typhimurium		S. 1,4,[5],12:i:-		S. Dublin		S. Infantis		Salmonella spp.	
Isolates out of a monitoring program (yes/no)	no									
Number of isolates available in the laboratory	2									
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Cephalosporins - Ceftazidime	2	1								
Polymyxins - Colistin	2	0								

Footnote:

Cattle:

S. Typhimurium: Fully sensitive - 1 x; Ampicillin, Cefotaxime, Ceftazidim resistance – 1 x.

Table Antimicrobial susceptibility testing of Salmonella in Pigs

Salmonella Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	S. Typhimurium		S. 1,4,[5],12:i:-		S. Derby		S. Agona		Salmonella spp.	
	no		no							
	2		1							
	N	n	N	n	N	n	N	n	N	n
Antimicrobials:										
Aminoglycosides - Gentamicin	2	0	1	0						
Aminoglycosides - Kanamycin	2	0	1	0						
Aminoglycosides - Streptomycin	2	1	1	1						
Amphenicols - Chloramphenicol	2	1	1	0						
Amphenicols - Florfenicol	2	1	1	0						
Fluoroquinolones - Ciprofloxacin	2	0	1	0						
Penicillins - Ampicillin	2	1	1	1						
Quinolones - Nalidixic acid	2	0	1	0						
Sulfonamides	2	1	1	1						
Tetracyclines - Tetracycline	2	1	1	1						
Trimethoprim	2	0	1	0						
Fully sensitive	2	1	1	0						
Resistant to 1 antimicrobial	2	0	1	0						
Resistant to 2 antimicrobials	2	0	1	0						
Resistant to 3 antimicrobials	2	0	1	0						
Resistant to 4 antimicrobials	2	0	1	1						
Resistant to >4 antimicrobials	2	1	1	0						
Number of multiresistant S. Typhimurium - with penta resistance	2	1								
Number of multiresistant S. Typhimurium - resistant to other antimicrobials	2	1								

Table Antimicrobial susceptibility testing of Salmonella in Pigs

Salmonella	S. Typhimurium		S. 1,4,[5],12:i:-		S. Derby		S. Agona		Salmonella spp.	
Isolates out of a monitoring program (yes/no)	no		no							
Number of isolates available in the laboratory	2		1							
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Cephalosporins - Cefotaxime	2	0								
Cephalosporins - Ceftazidime	2	0								
Polymyxins - Colistin	2	0								

Footnote:

Pigs:

S. Typhimurium: ACSSuTF resistance - 1 x; Fully sensitive - 1 x.

S. 1,4,[5],12:i:- :ASSuT resistance – 1 x.

Table Antimicrobial susceptibility testing of Salmonella in meat from pig

Salmonella Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	S. Typhimurium		S. 1,4,[5],12:i:-		S. Derby		S. Agona		Salmonella spp.	
			yes		yes					
			1							
	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin			1	0	1	0				
Aminoglycosides - Kanamycin			1	0	1	0				
Aminoglycosides - Streptomycin			1	1	1	0				
Amphenicols - Chloramphenicol			1	0	1	0				
Amphenicols - Florfenicol			1	0	1	0				
Fluoroquinolones - Ciprofloxacin			1	0	1	0				
Penicillins - Ampicillin			1	1	1	0				
Quinolones - Nalidixic acid			1	0	1	0				
Sulfonamides			1	1	1	0				
Tetracyclines - Tetracycline			1	1	1	0				
Trimethoprim			1	0	1	0				
Fully sensitive			1	0	1	1				
Resistant to 1 antimicrobial			1	0	1	0				
Resistant to 2 antimicrobials			1	0	1	0				
Resistant to 3 antimicrobials			1	0	1	0				
Resistant to 4 antimicrobials			1	1	1	0				
Resistant to >4 antimicrobials			1	0	1	0				
Cephalosporins - Cefotaxime			1	0	1	0				
Cephalosporins - Ceftazidime			1	0	1	0				

Table Antimicrobial susceptibility testing of Salmonella in meat from pig

Salmonella	S. Typhimurium		S. 1,4,[5],12:i:-		S. Derby		S. Agona		Salmonella spp.	
Isolates out of a monitoring program (yes/no)			yes		yes					
Number of isolates available in the laboratory			1							
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Polymyxins - Colistin			1	0	1	0				

Footnote:

Meat from pig:

S. 1,4,[5],12:i:- :ASSuT resistance – 1 x.

S. Derby: Fully sensitive – 1 x.

Table Antimicrobial susceptibility testing of Salmonella in meat from broilers (Gallus gallus)

Salmonella Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Java		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		Other serovars	
	yes																yes				yes	
	3																6				6	
	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	3	0															6	0			6	0
Aminoglycosides - Kanamycin	3	0															6	0			6	0
Aminoglycosides - Streptomycin	3	0															6	1			6	0
Amphenicols - Chloramphenicol	3	0															6	0			6	0
Amphenicols - Florfenicol	3	0															6	0			6	0
Fluoroquinolones - Ciprofloxacin	3	2															6	6			6	3
Penicillins - Ampicillin	3	0															6	2			6	0
Quinolones - Nalidixic acid	3	2															6	6			6	3
Sulfonamides	3	0															6	6			6	2
Tetracyclines - Tetracycline	3	0															6	6			6	2
Trimethoprim	3	0															6	0			6	0
Fully sensitive	3	1															6	0			6	3
Resistant to 1 antimicrobial	3	0															6	0			6	0
Resistant to 2 antimicrobials	3	2															6	0			6	1
Resistant to 3 antimicrobials	3	0															6	0			6	0
Resistant to 4 antimicrobials	3	0															6	4			6	2
Resistant to >4 antimicrobials	3	0															6	2			6	0
Cephalosporins - Cefotaxime	3	0															6	0			6	0
Cephalosporins - Ceftazidime	3	0															6	0			6	0

Table Antimicrobial susceptibility testing of Salmonella in meat from broilers (Gallus gallus)

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Java		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		Other serovars	
	Isolates out of a monitoring program (yes/no)																yes				yes	
	Number of isolates available in the laboratory																6				6	
	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Antimicrobials:																						
Polymyxins - Colistin	3	2															6	0			6	0

Footnote:

Meat from broilers:

S. Enteritidis: Fully sensitive - 1 x, Nx Cp resistance - 2 x. Note to Colistine: MIC >2 microg/ml – 2 x.

S. Infantis: ASSuTNxCp resistance - 1 x; A(S)SuTNxCp resistance - 1 x, (S)SuTNxCp resistance - 4 x. Note to (S): MIC = 32 microg/ml.

Other serovars:

S. Indiana: Nx Cp resistance - 1 x; Fully sensitive - 2 x.

S. Newport: SuTNxCp resistance - 2 x.

S. Ohio: Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of Salmonella in Turkey

Salmonella Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Agona		S. Kentucky		S. Newport		S. Saintpaul		Salmonella spp.	
	yes		yes								yes					
	1		1								4					
	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	1	0	1	0							4	0				
Aminoglycosides - Kanamycin	1	0	1	0							4	0				
Aminoglycosides - Streptomycin	1	0	1	0							4	0				
Amphenicols - Chloramphenicol	1	0	1	0							4	0				
Amphenicols - Florfenicol	1	0	1	0							4	0				
Fluoroquinolones - Ciprofloxacin	1	0	1	0							4	1				
Penicillins - Ampicillin	1	1	1	0							4	4				
Quinolones - Nalidixic acid	1	0	1	0							4	1				
Sulfonamides	1	0	1	0							4	0				
Tetracyclines - Tetracycline	1	0	1	0							4	4				
Trimethoprim	1	0	1	0							4	0				
Fully sensitive	1	0	1	1							4	0				
Resistant to 1 antimicrobial	1	1	1	0							4	0				
Resistant to 2 antimicrobials	1	0	1	0							4	3				
Resistant to 3 antimicrobials	1	0	1	0							4	0				
Resistant to 4 antimicrobials	1	0	1	0							4	1				
Resistant to >4 antimicrobials	1	0	1	0							4	0				
Cephalosporins - Cefotaxime	1	0	1	0							4	0				
Cephalosporins - Ceftazidime	1	0	1	0							4	0				

Table Antimicrobial susceptibility testing of Salmonella in Turkeys

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Agona		S. Kentucky		S. Newport		S. Saintpaul		Salmonella spp.	
Isolates out of a monitoring program (yes/no)	yes		yes								yes					
Number of isolates available in the laboratory	1		1								4					
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Polymyxins - Colistin	1	0	1	0							4	0				

Footnote:

Turkeys:

S. Enteritidis: A resistance - 1 x.

S. Typhimurium: Fully sensitive - 1 x.

S. Newport: ATNx Cp resistance - 1 x, AT resistance - 3 x.

Table Antimicrobial susceptibility testing of Salmonella in meat from other poultry species

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		S. Saintpaul	
	Isolates out of a monitoring program (yes/no)																yes		yes	
	Number of isolates available in the laboratory																2		1	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin																	2	0	1	0
Aminoglycosides - Kanamycin																	2	0	1	0
Aminoglycosides - Streptomycin																	2	1	1	0
Amphenicols - Chloramphenicol																	2	1	1	0
Amphenicols - Florfenicol																	2	0	1	0
Fluoroquinolones - Ciprofloxacin																	2	1	1	0
Penicillins - Ampicillin																	2	0	1	1
Quinolones - Nalidixic acid																	2	1	1	0
Sulfonamides																	2	0	1	1
Tetracyclines - Tetracycline																	2	0	1	1
Trimethoprim																	2	0	1	0
Fully sensitive																	2	1	1	0
Resistant to 1 antimicrobial																	2	0	1	0
Resistant to 2 antimicrobials																	2	0	1	0
Resistant to 3 antimicrobials																	2	1	1	0
Resistant to 4 antimicrobials																	2	0	1	1
Resistant to >4 antimicrobials																	2	0	1	0
Cephalosporins - Cefotaxime																	2	0	1	0
Cephalosporins - Ceftazidime																	2	0	1	0

Table Antimicrobial susceptibility testing of Salmonella in meat from other poultry species

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		S. Saintpaul	
Isolates out of a monitoring program (yes/no)																	yes		yes	
Number of isolates available in the laboratory																	2		1	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Polymyxins - Colistin																	2	0	1	0

Footnote:

Meat from turkey:

S. Saintpaul: A(S)SuT resistance - 1 x. Note to (S): MIC = 32 microg/ml.

Other serovars:

S. Kiambu: CSNx Cp resistance - 1 x.

S. Tennessee: Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - laying hens

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		Other serovars	
	yes														yes				yes	
	2														2				3	
	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Isolates out of a monitoring program (yes/no)																				
Number of isolates available in the laboratory																				
Antimicrobials:																				
Aminoglycosides - Gentamicin	2	0													2	0			3	0
Aminoglycosides - Kanamycin	2	0													2	0			3	0
Aminoglycosides - Streptomycin	2	0													2	0			3	0
Amphenicols - Chloramphenicol	2	0													2	0			3	0
Amphenicols - Florfenicol	2	0													2	0			3	0
Fluoroquinolones - Ciprofloxacin	2	0													2	0			3	1
Penicillins - Ampicillin	2	0													2	0			3	0
Quinolones - Nalidixic acid	2	0													2	0			3	1
Sulfonamides	2	0													2	0			3	0
Tetracyclines - Tetracycline	2	0													2	0			3	0
Trimethoprim	2	0													2	0			3	0
Fully sensitive	2	2													2	2			3	2
Resistant to 1 antimicrobial	2	0													2	0			3	0
Resistant to 2 antimicrobials	2	0													2	0			3	1
Resistant to 3 antimicrobials	2	0													2	0			3	0
Resistant to 4 antimicrobials	2	0													2	0			3	0
Resistant to >4 antimicrobials	2	0													2	0			3	0
Cephalosporins - Cefotaxime	2	0													2	0			3	0
Cephalosporins - Ceftazidime	2	0													2	0			3	0

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - laying hens

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		Other serovars	
	Isolates out of a monitoring program (yes/no)														yes				yes	
	Number of isolates available in the laboratory														2				3	
	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Antimicrobials:																				
Polymyxins - Colistin	2	1													2	0			3	0

Footnote:

Laying hens:

S. Enteritidis: Fully sensitive - 2 x. Note to Colistine: MIC >2 microg/ml – 1 x.

S. Infantis: Fully sensitive - 2 x.

Others serovars:

S. Cerro: Fully sensitive - 1 x.

S. Orion: Fully sensitive - 1 x.

S. Newport: Nx Cp resistance - 1 x.

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - broilers

Salmonella Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Java		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		Other serovars	
	yes		yes						yes								yes				yes	
	10		6						4								32				9	
	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	10	0	6	0					4	0							32	0			9	0
Aminoglycosides - Kanamycin	10	0	6	0					4	0							32	0			9	0
Aminoglycosides - Streptomycin	10	0	6	0					4	0							32	10			9	0
Amphenicols - Chloramphenicol	10	0	6	0					4	0							32	0			9	0
Amphenicols - Florfenicol	10	0	6	0					4	0							32	0			9	0
Fluoroquinolones - Ciprofloxacin	10	1	6	0					4	0							32	31			9	1
Penicillins - Ampicillin	10	0	6	0					4	4							32	2			9	1
Quinolones - Nalidixic acid	10	1	6	0					4	0							32	31			9	1
Sulfonamides	10	0	6	0					4	0							32	31			9	0
Tetracyclines - Tetracycline	10	0	6	0					4	0							32	31			9	4
Trimethoprim	10	0	6	0					4	0							32	0			9	0
Fully sensitive	10	9	6	6					4	0							32	1			9	4
Resistant to 1 antimicrobial	10	0	6	0					4	4							32	0			9	3
Resistant to 2 antimicrobials	10	1	6	0					4	0							32	0			9	2
Resistant to 3 antimicrobials	10	0	6	0					4	0							32	0			9	0
Resistant to 4 antimicrobials	10	0	6	0					4	0							32	19			9	0
Resistant to >4 antimicrobials	10	0	6	0					4	0							32	12			9	0
Cephalosporins - Cefotaxime	10	0	6	0					4	0							32	0			9	0
Cephalosporins - Ceftazidime	10	0	6	0					4	0							32	0			9	0

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - broilers

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Java		S. Agona		S. Virchow		S. Hadar		S. Kentucky		S. Infantis		Salmonella spp.		Other serovars	
Isolates out of a monitoring program (yes/no)	yes		yes						yes								yes				yes	
Number of isolates available in the laboratory	10		6						4								32				9	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Polymyxins - Colistin	10	3	6	0					4	0							32	0			9	0

Footnote:

Broilers:

S. Enteritidis: Fully sensitive - 9 x, Nx Cp resistance - 1 x. Note to Colistine: MIC >2 microg/ml – 3 x.

S. Typhimurium: Fully sensitive - 6 x.

S. Infantis: A(S)SuTNxCp resistance - 2 x; SSuTNxCp resistance - 10 x; (S)SuTNxCp resistance - 19 x; Fully sensitive - 1 x. Note to (S): MIC = 32 microg/ml.

S. Agona: A resistance - 4 x.

Other serovars:

S. Abony: Fully sensitive - 1 x.

S. Arizonae: Fully sensitive - 1 x.

S. Kottbus: AT resistance - 1 x.

S. Mbandaka: T resistance - 3 x.

S. Montevideo: Fully sensitive - 2 x.

S. Newport: Nx Cp resistance - 1 x.

Table Antimicrobial susceptibility testing of S. Enteritidis in Meat from broilers (Gallus gallus) - in total - Surveillance - quantitative data
[Dilution method]

S. Enteritidis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Meat from broilers (Gallus gallus) - in total - Surveillance																											
		yes																											
		3																											
Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096				
Aminoglycosides - Gentamicin	2	3	0								3																		
Aminoglycosides - Kanamycin	8	3	0												3														
Aminoglycosides - Streptomycin	32	3	0											3															
Amphenicols - Chloramphenicol	16	3	0												3														
Amphenicols - Florfenicol	16	3	0												3														
Cephalosporins - Cefotaxime	0.5	3	0						1	2																			
Fluoroquinolones - Ciprofloxacin	0.064	3	2					1			2																		
Penicillins - Ampicillin	8	3	0											3															
Quinolones - Nalidixic acid	16	3	2												1					2									
Sulfonamides	256	3	0																3										
Tetracyclines - Tetracycline	8	3	0										2	1															
Trimethoprim	2	3	0									3																	
Cephalosporins - Ceftazidime	2	3	0								3																		
Polymyxins - Colistin	2	3	2											1	2														

Table Antimicrobial susceptibility testing of S. Enteritidis in Meat from broilers (Gallus gallus) - in total - Surveillance - quantitative data
[Dilution method]

S. Enteritidis	Meat from broilers (Gallus gallus) - in total - Surveillance	
	Isolates out of a monitoring program (yes/no)	
	yes	
	Number of isolates available in the laboratory	
Antimicrobials:	3	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Enteritidis: Fully sensitive - 1 x, Nx Cp resistance -2 x. Note to Colistine: MIC >2 microg/ml – 2 x.

Table Antimicrobial susceptibility testing of S. Infantis in Meat from broilers (Gallus gallus) - in total - Surveillance - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Infantis	Meat from broilers (Gallus gallus) - in total - Surveillance																											
	Isolates out of a monitoring program (yes/no)																											
	yes																											
	Number of isolates available in the laboratory																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	6	0									5	1															
Aminoglycosides - Kanamycin	8	6	0													6												
Aminoglycosides - Streptomycin	32	6	1																5	1								
Amphenicols - Chloramphenicol	16	6	0													2	4											
Amphenicols - Florfenicol	16	6	0													2	4											
Cephalosporins - Cefotaxime	0.5	6	0								5	1																
Fluoroquinolones - Ciprofloxacin	0.064	6	6										2	2		2												
Penicillins - Ampicillin	8	6	2												1	3				2								
Quinolones - Nalidixic acid	16	6	6																		6							
Sulfonamides	256	6	6																						6			
Tetracyclines - Tetracycline	8	6	6																		6							
Trimethoprim	2	6	0										6															
Cephalosporins - Ceftazidime	2	6	0										5	1														
Polymyxins - Colistin	2	6	0												6													

Table Antimicrobial susceptibility testing of *S. Infantis* in Meat from broilers (*Gallus gallus*) - in total - Surveillance - quantitative data [Dilution method]

S. Infantis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Meat from broilers (<i>Gallus gallus</i>) - in total - Surveillance	
	yes	
	6	
	lowest	highest
Antimicrobials:		
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Infantis: ASSuTNxCp resistance - 1 x; A(S)SuTNxCp resistance - 1 x; (S)SuTNxCp resistance - 4 x. Note to (S): MIC = 32 microg/ml.

Table Antimicrobial susceptibility testing of Other serovars in Meat from broilers (Gallus gallus) - in total - Surveillance - quantitative data
[Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

Other serovars	Meat from broilers (Gallus gallus) - in total - Surveillance																											
	yes																											
	6																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	6	0									6																
Aminoglycosides - Kanamycin	8	6	0													6												
Aminoglycosides - Streptomycin	32	6	0														3	3										
Amphenicols - Chloramphenicol	16	6	0													6												
Amphenicols - Florfenicol	16	6	0													6												
Cephalosporins - Cefotaxime	0.5	6	0							5	1																	
Fluoroquinolones - Ciprofloxacin	0.064	6	3						3			2	1															
Penicillins - Ampicillin	8	6	0											6														
Quinolones - Nalidixic acid	16	6	3													3					3							
Sulfonamides	256	6	2																4						2			
Tetracyclines - Tetracycline	8	6	2											2	2						2							
Trimethoprim	2	6	0										6															
Cephalosporins - Ceftazidime	2	6	0									5	1															
Polymyxins - Colistin	2	6	0												6													

Table Antimicrobial susceptibility testing of Other serovars in Meat from broilers (Gallus gallus) - in total - Surveillance - quantitative data
[Dilution method]

Other serovars	Meat from broilers (Gallus gallus) - in total - Surveillance	
	Isolates out of a monitoring program (yes/no)	
	Number of isolates available in the laboratory	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	025	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

Other serovars:

S. Indiana: Nx Cp resistance - 1 x; Fully sensitive - 2 x.

S. Newport: SuTNx Cp resistance - 2 x.

S. Ohio: Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of S. Saintpaul in Meat from turkey - in total - Surveillance - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Saintpaul Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory			Meat from turkey - in total - Surveillance																											
			yes																											
			1																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096				
Aminoglycosides - Gentamicin	2	1	0									1																		
Aminoglycosides - Kanamycin	8	1	0													1														
Aminoglycosides - Streptomycin	32	1	0																1											
Amphenicols - Chloramphenicol	16	1	0													1														
Amphenicols - Florfenicol	16	1	0													1														
Cephalosporins - Cefotaxime	0.5	1	0								1																			
Fluoroquinolones - Ciprofloxacin	0.064	1	0						1																					
Penicillins - Ampicillin	8	1	1																		1									
Quinolones - Nalidixic acid	16	1	0													1														
Sulfonamides	256	1	1																							1				
Tetracyclines - Tetracycline	8	1	1																		1									
Trimethoprim	2	1	0										1																	
Cephalosporins - Ceftazidime	2	1	0									1																		
Polymyxins - Colistin	2	1	0												1															

Table Antimicrobial susceptibility testing of *S. Saintpaul* in Meat from turkey - in total - Surveillance - quantitative data [Dilution method]

S. Saintpaul Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Meat from turkey - in total - Surveillance	
	yes	
	1	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Saintpaul: A(S)SuT resistance - 1 x. Note to (S): MIC = 32 microg/ml.

Table Antimicrobial susceptibility testing of Other serovars in Meat from turkey - in total - Surveillance - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
Other serovars	Meat from turkey - in total - Surveillance																										
	Isolates out of a monitoring program (yes/no)																										
	yes																										
	Number of isolates available in the laboratory																										
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096	
Aminoglycosides - Gentamicin	2	2	0										2														
Aminoglycosides - Kanamycin	8	2	0													2											
Aminoglycosides - Streptomycin	32	2	1														1					1					
Amphenicols - Chloramphenicol	16	2	1														1				1						
Amphenicols - Florfenicol	16	2	0												1	1											
Cephalosporins - Cefotaxime	0.5	2	0								2																
Fluoroquinolones - Ciprofloxacin	0.064	2	1						1			1															
Penicillins - Ampicillin	8	2	0										1		1												
Quinolones - Nalidixic acid	16	2	1													1					1						
Sulfonamides	256	2	0																1	1							
Tetracyclines - Tetracycline	8	2	0												2												
Trimethoprim	2	2	0										2														
Cephalosporins - Ceftazidime	2	2	0										2														
Polymyxins - Colistin	2	2	0												2												

Table Antimicrobial susceptibility testing of Other serovars in Meat from turkey - in total - Surveillance - quantitative data [Dilution method]

Other serovars	Meat from turkey - in total - Surveillance	
	Isolates out of a monitoring program (yes/no)	
	Number of isolates available in the laboratory	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

Other serovars:

S. Kiambu: CSNx Cp resistance - 1 x.

S. Tennessee: Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of S. 1,4,[5],12:i:- in Meat from pig - in total - Surveillance - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
S. 1,4,[5],12:i:- Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Meat from pig - in total - Surveillance																										
	yes																										
	1																										
	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096	
Aminoglycosides - Gentamicin	2	1	0								1																
Aminoglycosides - Kanamycin	8	1	0												1												
Aminoglycosides - Streptomycin	32	1	1																		1						
Amphenicols - Chloramphenicol	16	1	0												1												
Amphenicols - Florfenicol	16	1	0												1												
Cephalosporins - Cefotaxime	0.5	1	0							1																	
Fluoroquinolones - Ciprofloxacin	0.064	1	0						1																		
Penicillins - Ampicillin	8	1	1																	1							
Quinolones - Nalidixic acid	16	1	0												1												
Sulfonamides	256	1	1																						1		
Tetracyclines - Tetracycline	8	1	1																		1						
Trimethoprim	2	1	0									1															
Cephalosporins - Ceftazidime	2	1	0								1																
Polymyxins - Colistin	2	1	0											1													

Table Antimicrobial susceptibility testing of S. 1,4,[5],12:i:- in Meat from pig - in total - Surveillance - quantitative data [Dilution method]

S. 1,4,[5],12:i:- Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Meat from pig - in total - Surveillance	
	yes	
	1	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. 1,4,[5],12:i:- :ASSuT resistance – 1 x.

Table Antimicrobial susceptibility testing of S. Derby in Meat from pig - in total - Surveillance - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Derby	Meat from pig - in total - Surveillance																										
	yes																										
	1																										
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096	
Aminoglycosides - Gentamicin	2	1	0										1														
Aminoglycosides - Kanamycin	8	1	0													1											
Aminoglycosides - Streptomycin	32	1	0														1										
Amphenicols - Chloramphenicol	16	1	0													1											
Amphenicols - Florfenicol	16	1	0													1											
Cephalosporins - Cefotaxime	0.5	1	0								1																
Fluoroquinolones - Ciprofloxacin	0.064	1	0						1																		
Penicillins - Ampicillin	8	1	0											1													
Quinolones - Nalidixic acid	16	1	0													1											
Sulfonamides	256	1	0																1								
Tetracyclines - Tetracycline	8	1	0												1												
Trimethoprim	2	1	0										1														
Cephalosporins - Ceftazidime	2	1	0										1														
Polymyxins - Colistin	2	1	0												1												

Table Antimicrobial susceptibility testing of S. Derby in Meat from pig - in total - Surveillance - quantitative data [Dilution method]

S. Derby	Meat from pig - in total - Surveillance	
	yes	
	1	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Derby: Fully sensitive – 1 x.

Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Typhimurium	Gallus gallus (fowl) - broilers - Farm - Monitoring																											
	yes																											
	6																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	6	0									3	3															
Aminoglycosides - Kanamycin	8	6	0													6												
Aminoglycosides - Streptomycin	32	6	0														5	1										
Amphenicols - Chloramphenicol	16	6	0													6												
Amphenicols - Florfenicol	16	6	0													6												
Cephalosporins - Cefotaxime	0.5	6	0							3	3																	
Fluoroquinolones - Ciprofloxacin	0.064	6	0						6																			
Penicillins - Ampicillin	8	6	0											3	3													
Quinolones - Nalidixic acid	16	6	0													6												
Sulfonamides	256	6	0																2	4								
Tetracyclines - Tetracycline	8	6	0												6													
Trimethoprim	2	6	0										6															
Cephalosporins - Ceftazidime	2	6	0									6																
Polymyxins - Colistin	2	6	0												6													

Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Typhimurium	Gallus gallus (fowl) - broilers - Farm - Monitoring	
	Isolates out of a monitoring program (yes/no)	
	yes	
Antimicrobials:	Number of isolates available in the laboratory	
	6	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:
 S. Typhimurium: Fully sensitive - 6 x.

Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Enteritidis	Gallus gallus (fowl) - broilers - Farm - Monitoring																											
	yes																											
	10																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	10	0									7	3															
Aminoglycosides - Kanamycin	8	10	0													10												
Aminoglycosides - Streptomycin	32	10	0												1	9												
Amphenicols - Chloramphenicol	16	10	0													10												
Amphenicols - Florfenicol	16	10	0													10												
Cephalosporins - Cefotaxime	0.5	10	0							3	6	1																
Fluoroquinolones - Ciprofloxacin	0.064	10	1				1		8			1																
Penicillins - Ampicillin	8	10	0												10													
Quinolones - Nalidixic acid	16	10	1													9					1							
Sulfonamides	256	10	0																5	5								
Tetracyclines - Tetracycline	8	10	0											10														
Trimethoprim	2	10	0										10															
Cephalosporins - Ceftazidime	2	10	0									9	1															
Polymyxins - Colistin	2	10	3												7	3												

Table Antimicrobial susceptibility testing of *S. Enteritidis* in *Gallus gallus* (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Enteritidis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Gallus gallus (fowl) - broilers - Farm - Monitoring	
	yes	
	10	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Enteritidis: Fully sensitive - 9 x, Nx Cp resistance - 1 x. Note to Colistine: MIC >2 microg/ml – 3 x.

Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - laying hens - Farm - quantitative data [Dilution method]

S. Enteritidis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Gallus gallus (fowl) - laying hens - Farm																											
		yes																											
		2																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096			
Aminoglycosides - Gentamicin	2	2	0									1	1																
Aminoglycosides - Kanamycin	8	2	0													2													
Aminoglycosides - Streptomycin	32	2	0												1	1													
Amphenicols - Chloramphenicol	16	2	0													2													
Amphenicols - Florfenicol	16	2	0													2													
Cephalosporins - Cefotaxime	0.5	2	0								2																		
Fluoroquinolones - Ciprofloxacin	0.064	2	0						2																				
Penicillins - Ampicillin	8	2	0												1	1													
Quinolones - Nalidixic acid	16	2	0													2													
Sulfonamides	256	2	0																2										
Tetracyclines - Tetracycline	8	2	0											1	1														
Trimethoprim	2	2	0										2																
Cephalosporins - Ceftazidime	2	2	0									1	1																
Polymyxins - Colistin	2	2	1												1	1													

Table Antimicrobial susceptibility testing of *S. Enteritidis* in *Gallus gallus* (fowl) - laying hens - Farm - quantitative data [Dilution method]

S. Enteritidis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Gallus gallus (fowl) - laying hens - Farm	
	yes	
	2	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Enteritidis: Fully sensitive - 2 x. Note to Colistine: MIC >2 microg/ml – 1 x.

Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - laying hens - Farm - Monitoring - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Infantis			Gallus gallus (fowl) - laying hens - Farm - Monitoring																										
			yes																										
			2																										
Antimicrobials:			Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096	
Aminoglycosides - Gentamicin			2	2	0									1	1														
Aminoglycosides - Kanamycin			8	2	0													2											
Aminoglycosides - Streptomycin			32	2	0														2										
Amphenicols - Chloramphenicol			16	2	0													2											
Amphenicols - Florfenicol			16	2	0													2											
Cephalosporins - Cefotaxime			0.5	2	0							1	1																
Fluoroquinolones - Ciprofloxacin			0.064	2	0						2																		
Penicillins - Ampicillin			8	2	0												1		1										
Quinolones - Nalidixic acid			16	2	0														2										
Sulfonamides			256	2	0																1	1							
Tetracyclines - Tetracycline			8	2	0												1	1											
Trimethoprim			2	2	0										2														
Cephalosporins - Ceftazidime			2	2	0									1	1														
Polymyxins - Colistin			2	2	0												2												

Table Antimicrobial susceptibility testing of *S. Infantis* in Gallus gallus (fowl) - laying hens - Farm - Monitoring - quantitative data [Dilution method]

S. Infantis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Gallus gallus (fowl) - laying hens - Farm - Monitoring	
	yes	
	2	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Infantis: Fully sensitive - 2 x.

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - laying hens - Farm - Monitoring - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

Other serovars	Gallus gallus (fowl) - laying hens - Farm - Monitoring																											
	yes																											
	3																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	3	0									1	2															
Aminoglycosides - Kanamycin	8	3	0													3												
Aminoglycosides - Streptomycin	32	3	0														2	1										
Amphenicols - Chloramphenicol	16	3	0													3												
Amphenicols - Florfenicol	16	3	0												1	2												
Cephalosporins - Cefotaxime	0.5	3	0							1	2																	
Fluoroquinolones - Ciprofloxacin	0.064	3	1						2			1																
Penicillins - Ampicillin	8	3	0											1	2													
Quinolones - Nalidixic acid	16	3	1													2					1							
Sulfonamides	256	3	0																2	1								
Tetracyclines - Tetracycline	8	3	0											2	1													
Trimethoprim	2	3	0										3															
Cephalosporins - Ceftazidime	2	3	0									1	2															
Polymyxins - Colistin	2	3	0												3													

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - laying hens - Farm - Monitoring - quantitative data [Dilution method]

Other serovars	Gallus gallus (fowl) - laying hens - Farm - Monitoring	
	Isolates out of a monitoring program (yes/no)	
	yes	
Antimicrobials:	Number of isolates available in the laboratory	
	3	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Cerro: Fully sensitive - 1 x.

S. Orion: Fully sensitive - 1 x.

S. Newport: Nx Cp resistance - 1 x.

Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Infantis		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Gallus gallus (fowl) - broilers - Farm - Monitoring																											
		yes																											
		32																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096			
Aminoglycosides - Gentamicin	2	32	0									25	7																
Aminoglycosides - Kanamycin	8	32	0													32													
Aminoglycosides - Streptomycin	32	32	10														1		21	10									
Amphenicols - Chloramphenicol	16	32	0													7	23	2											
Amphenicols - Florfenicol	16	32	0													13	19												
Cephalosporins - Cefotaxime	0.5	32	0								18	14																	
Fluoroquinolones - Ciprofloxacin	0.064	32	31						1				20	9		2													
Penicillins - Ampicillin	8	32	2											3	21	6				2									
Quinolones - Nalidixic acid	16	32	31													1					31								
Sulfonamides	256	32	31																1							31			
Tetracyclines - Tetracycline	8	32	31												1						31								
Trimethoprim	2	32	0										32																
Cephalosporins - Ceftazidime	2	32	0									1	25	6															
Polymyxins - Colistin	2	32	0												32														

Table Antimicrobial susceptibility testing of *S. Infantis* in *Gallus gallus* (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Infantis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Gallus gallus (fowl) - broilers - Farm - Monitoring	
	yes	
	32	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Infantis: A(S)SuTNxCp resistance - 2 x; SSuTNxCp resistance - 10 x; (S)SuTNxCp resistance - 19 x; Fully sensitive - 1 x. Note to (S): MIC = 32 microg/ml.

Table Antimicrobial susceptibility testing of S. Agona in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Agona Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Gallus gallus (fowl) - broilers - Farm - Monitoring																											
		yes																											
		4																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096			
Aminoglycosides - Gentamicin	2	4	0									4																	
Aminoglycosides - Kanamycin	8	4	0													4													
Aminoglycosides - Streptomycin	32	4	0													1	3												
Amphenicols - Chloramphenicol	16	4	0													3	1												
Amphenicols - Florfenicol	16	4	0													4													
Cephalosporins - Cefotaxime	0.5	4	0								4																		
Fluoroquinolones - Ciprofloxacin	0.064	4	0						4																				
Penicillins - Ampicillin	8	4	4																	4									
Quinolones - Nalidixic acid	16	4	0													4													
Sulfonamides	256	4	0																2	2									
Tetracyclines - Tetracycline	8	4	0												4														
Trimethoprim	2	4	0										4																
Cephalosporins - Ceftazidime	2	4	0										4																
Polymyxins - Colistin	2	4	0												4														

Table Antimicrobial susceptibility testing of *S. Agona* in *Gallus gallus* (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Agona Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Gallus gallus (fowl) - broilers - Farm - Monitoring	
	yes	
	4	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Agona: A resistance - 4 x.

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

Other serovars	Gallus gallus (fowl) - broilers - Farm - Monitoring																											
	yes																											
	9																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	9	0									6	2	1														
Aminoglycosides - Kanamycin	8	9	0													9												
Aminoglycosides - Streptomycin	32	9	0													2	6	1										
Amphenicols - Chloramphenicol	16	9	0												2	5	2											
Amphenicols - Florfenicol	16	9	0												2	7												
Cephalosporins - Cefotaxime	0.5	9	0							5	4																	
Fluoroquinolones - Ciprofloxacin	0.064	9	1				5		3			1																
Penicillins - Ampicillin	8	9	1											5	3					1								
Quinolones - Nalidixic acid	16	9	1													8					1							
Sulfonamides	256	9	0														6	3										
Tetracyclines - Tetracycline	8	9	4											4	1						4							
Trimethoprim	2	9	0										9															
Cephalosporins - Ceftazidime	2	9	0									6	3															
Polymyxins - Colistin	2	9	0												9													

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

Other serovars	Gallus gallus (fowl) - broilers - Farm - Monitoring	
	Isolates out of a monitoring program (yes/no)	
	yes	
Antimicrobials:	Number of isolates available in the laboratory	
	9	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

Other serovars:

S. Abony: Fully sensitive - 1 x.

S. Arizonae:: Fully sensitive - 1 x

S. Kottbus: AT resistance - 1 x

S. Mbandaka: T resistance - 3 x.

S. Montevideo: Fully sensitive - 2 x

Table Antimicrobial susceptibility testing of Other serovars in Gallus gallus (fowl) - broilers - Farm - Monitoring - quantitative data [Dilution method]

S. Newport: Nx Cp resistance - 1 x.

Table Antimicrobial susceptibility testing of S. Enteritidis in Turkeys - fattening flocks - Farm - Monitoring - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Enteritidis	Turkeys - fattening flocks - Farm - Monitoring																											
	yes																											
	1																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	1	0									1																
Aminoglycosides - Kanamycin	8	1	0													1												
Aminoglycosides - Streptomycin	32	1	0													1												
Amphenicols - Chloramphenicol	16	1	0													1												
Amphenicols - Florfenicol	16	1	0													1												
Cephalosporins - Cefotaxime	0.5	1	0								1																	
Fluoroquinolones - Ciprofloxacin	0.064	1	0				1																					
Penicillins - Ampicillin	8	1	1																	1								
Quinolones - Nalidixic acid	16	1	0													1												
Sulfonamides	256	1	0																1									
Tetracyclines - Tetracycline	8	1	0											1														
Trimethoprim	2	1	0										1															
Cephalosporins - Ceftazidime	2	1	0										1															
Polymyxins - Colistin	2	1	0												1													

Table Antimicrobial susceptibility testing of S. Enteritidis in Turkeys - fattening flocks - Farm - Monitoring - quantitative data [Dilution method]

S. Enteritidis	Turkeys - fattening flocks - Farm - Monitoring	
	Isolates out of a monitoring program (yes/no)	
	yes	
	Number of isolates available in the laboratory	
Antimicrobials:	1	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Enteritidis: A resistance - 1 x.

Table Antimicrobial susceptibility testing of S. Newport in Turkeys - fattening flocks - Farm - Monitoring - quantitative data [Dilution method]

S. Newport Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Turkeys - fattening flocks - Farm - Monitoring																											
		yes																											
		4																											
Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096				
Aminoglycosides - Gentamicin	2	4	0								2	2																	
Aminoglycosides - Kanamycin	8	4	0												4														
Aminoglycosides - Streptomycin	32	4	0													4													
Amphenicols - Chloramphenicol	16	4	0												3	1													
Amphenicols - Florfenicol	16	4	0												3	1													
Cephalosporins - Cefotaxime	0.5	4	0						1	3																			
Fluoroquinolones - Ciprofloxacin	0.064	4	1				2		1			1																	
Penicillins - Ampicillin	8	4	4																4										
Quinolones - Nalidixic acid	16	4	1												3					1									
Sulfonamides	256	4	0															2	2										
Tetracyclines - Tetracycline	8	4	4																	4									
Trimethoprim	2	4	0									4																	
Cephalosporins - Ceftazidime	2	4	0								3	1																	
Polymyxins - Colistin	2	4	0											4															

Table Antimicrobial susceptibility testing of *S. Newport* in Turkeys - fattening flocks - Farm - Monitoring - quantitative data [Dilution method]

S. Newport Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Turkeys - fattening flocks - Farm - Monitoring	
	yes	
	4	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Newport: ATNx Cp resistance - 1 x; AT resistance - 3 x.

Table Antimicrobial susceptibility testing of S. Typhimurium in Turkeys - breeding flocks, unspecified - Farm - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Typhimurium	Turkeys - breeding flocks, unspecified - Farm																											
	yes																											
	1																											
	Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096	
Aminoglycosides - Gentamicin	2	1	0										1															
Aminoglycosides - Kanamycin	8	1	0													1												
Aminoglycosides - Streptomycin	32	1	0														1											
Amphenicols - Chloramphenicol	16	1	0													1												
Amphenicols - Florfenicol	16	1	0													1												
Cephalosporins - Cefotaxime	0.5	1	0							1																		
Fluoroquinolones - Ciprofloxacin	0.064	1	0						1																			
Penicillins - Ampicillin	8	1	0											1														
Quinolones - Nalidixic acid	16	1	0													1												
Sulfonamides	256	1	0																	1								
Tetracyclines - Tetracycline	8	1	0												1													
Trimethoprim	2	1	0										1															
Cephalosporins - Ceftazidime	2	1	0									1																
Polymyxins - Colistin	2	1	0												1													

Table Antimicrobial susceptibility testing of *S. Typhimurium* in Turkeys - breeding flocks, unspecified - Farm - quantitative data [Dilution method]

S. Typhimurium Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Turkeys - breeding flocks, unspecified - Farm	
	yes	
	1	
	lowest	highest
Antimicrobials:		
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Typhimurium: Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of S. 1,4,5,12:i:- in Pigs - fattening pigs - Farm - Clinical investigations - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
S. 1,4,5,12:i:- Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Pigs - fattening pigs - Farm - Clinical investigations																										
	no																										
	1																										
	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096	
Aminoglycosides - Gentamicin	2	1	0								1																
Aminoglycosides - Kanamycin	8	1	0												1												
Aminoglycosides - Streptomycin	32	1	1																		1						
Amphenicols - Chloramphenicol	16	1	0												1												
Amphenicols - Florfenicol	16	1	0												1												
Cephalosporins - Cefotaxime	0.5	1	0						1																		
Fluoroquinolones - Ciprofloxacin	0.064	1	0					1																			
Penicillins - Ampicillin	8	1	1																1								
Quinolones - Nalidixic acid	16	1	0												1												
Sulfonamides	256	1	1																					1			
Tetracyclines - Tetracycline	8	1	1																	1							
Trimethoprim	2	1	0									1															
Cephalosporins - Ceftazidime	2	1	0								1																
Polymyxins - Colistin	2	1	0											1													

Table Antimicrobial susceptibility testing of S. 1,4,5,12:i:- in Pigs - fattening pigs - Farm - Clinical investigations - quantitative data [Dilution method]

S. 1,4,5,12:i:- Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Pigs - fattening pigs - Farm - Clinical investigations	
	no	
	1	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. 1,4,[5],12:i:- :ASSuT resistance – 1 x.

Table Antimicrobial susceptibility testing of S. Typhimurium in Pigs - fattening pigs - Farm - Clinical investigations - quantitative data [Dilution method]

S. Typhimurium Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Pigs - fattening pigs - Farm - Clinical investigations																											
		no																											
		2																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096			
Aminoglycosides - Gentamicin	2	2	0										2																
Aminoglycosides - Kanamycin	8	2	0													2													
Aminoglycosides - Streptomycin	32	2	1														1					1							
Amphenicols - Chloramphenicol	16	2	1													1					1								
Amphenicols - Florfenicol	16	2	1													1					1								
Cephalosporins - Cefotaxime	0.5	2	0							1	1																		
Fluoroquinolones - Ciprofloxacin	0.064	2	0						2																				
Penicillins - Ampicillin	8	2	1												1					1									
Quinolones - Nalidixic acid	16	2	0													2													
Sulfonamides	256	2	1																1						1				
Tetracyclines - Tetracycline	8	2	1											1							1								
Trimethoprim	2	2	0										2																
Cephalosporins - Ceftazidime	2	2	0									2																	
Polymyxins - Colistin	2	2	0												2														

Table Antimicrobial susceptibility testing of S. Typhimurium in Pigs - fattening pigs - Farm - Clinical investigations - quantitative data [Dilution method]

S. Typhimurium Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Pigs - fattening pigs - Farm - Clinical investigations	
	no	
	2	
	lowest	highest
Antimicrobials:		
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Typhimurium: ACSSuTF resistance - 1 x; Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of S. Typhimurium in Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Typhimurium Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory			Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations																											
			no																											
			2																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096				
Aminoglycosides - Gentamicin	2	2	0									1		1																
Aminoglycosides - Kanamycin	8	2	0													2														
Aminoglycosides - Streptomycin	32	2	0														1	1												
Amphenicols - Chloramphenicol	16	2	0													2														
Amphenicols - Florfenicol	16	2	0												1	1														
Cephalosporins - Cefotaxime	0.5	2	1								1						1													
Fluoroquinolones - Ciprofloxacin	0.064	2	0						2																					
Penicillins - Ampicillin	8	2	1												1					1										
Quinolones - Nalidixic acid	16	2	0													2														
Sulfonamides	256	2	0																1	1										
Tetracyclines - Tetracycline	8	2	0											1	1															
Trimethoprim	2	2	0										2																	
Cephalosporins - Ceftazidime	2	2	1									1							1											
Polymyxins - Colistin	2	2	0												2															

Table Antimicrobial susceptibility testing of *S. Typhimurium* in Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations - quantitative data [Dilution method]

S. Typhimurium Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	
	no	
	2	
	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	64
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Typhimurium: Fully sensitive - 1 x; Ampicillin, Cefotaxime, Ceftazidim resistance – 1 x.

Table Antimicrobial susceptibility testing of S. Typhimurium in Sheep - mixed herds - Farm - Clinical investigations - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Typhimurium	Sheep - mixed herds - Farm - Clinical investigations																											
	no																											
	1																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096		
Aminoglycosides - Gentamicin	2	1	0										1															
Aminoglycosides - Kanamycin	8	1	0													1												
Aminoglycosides - Streptomycin	32	1	0														1											
Amphenicols - Chloramphenicol	16	1	0													1												
Amphenicols - Florfenicol	16	1	0													1												
Cephalosporins - Cefotaxime	0.5	1	0							1																		
Fluoroquinolones - Ciprofloxacin	0.064	1	0						1																			
Penicillins - Ampicillin	8	1	0												1													
Quinolones - Nalidixic acid	16	1	0													1												
Sulfonamides	256	1	0																1									
Tetracyclines - Tetracycline	8	1	0											1														
Trimethoprim	2	1	0										1															
Cephalosporins - Ceftazidime	2	1	0									1																
Polymyxins - Colistin	2	1	0												1													

Table Antimicrobial susceptibility testing of S. Typhimurium in Sheep - mixed herds - Farm - Clinical investigations - quantitative data [Dilution method]

S. Typhimurium	Sheep - mixed herds - Farm - Clinical investigations	
	no	
	1	
Antimicrobials:	lowest	highest
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Typhimurium: Fully sensitive - 1 x.

Table Antimicrobial susceptibility testing of S. Saintpaul in Geese - mixed flocks/holdings - Farm - Clinical investigations - quantitative data
[Dilution method]

S. Saintpaul Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Geese - mixed flocks/holdings - Farm - Clinical investigations																											
		no																											
		1																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096			
Aminoglycosides - Gentamicin	2	1	0										1																
Aminoglycosides - Kanamycin	8	1	0													1													
Aminoglycosides - Streptomycin	32	1	1																		1								
Amphenicols - Chloramphenicol	16	1	0													1													
Amphenicols - Florfenicol	16	1	0													1													
Cephalosporins - Cefotaxime	0.5	1	0								1																		
Fluoroquinolones - Ciprofloxacin	0.064	1	0				1																						
Penicillins - Ampicillin	8	1	1																	1									
Quinolones - Nalidixic acid	16	1	0													1													
Sulfonamides	256	1	1																						1				
Tetracyclines - Tetracycline	8	1	1																	1									
Trimethoprim	2	1	1																	1									
Cephalosporins - Ceftazidime	2	1	0									1																	
Polymyxins - Colistin	2	1	0												1														

Table Antimicrobial susceptibility testing of S. Saintpaul in Geese - mixed flocks/holdings - Farm - Clinical investigations - quantitative data
[Dilution method]

S. Saintpaul	Geese - mixed flocks/holdings - Farm - Clinical investigations	
	no	
	1	
	lowest	highest
Antimicrobials:		
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Saintpaul: ASSuTW resistance – 1 x.

Table Antimicrobial susceptibility testing of S. Infantis in Geese - mixed flocks/holdings - Farm - Clinical investigations - quantitative data
[Dilution method]

S. Infantis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory		Concentration (µg/ml), number of isolates with a concentration of inhibition equal to																											
		Geese - mixed flocks/holdings - Farm - Clinical investigations																											
		no																											
		1																											
Antimicrobials:	Cut-off value	N	n	<=0.002	<=0.004	0.008	0.015	0.016	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>4096			
Aminoglycosides - Gentamicin	2	1	0									1																	
Aminoglycosides - Kanamycin	8	1	0													1													
Aminoglycosides - Streptomycin	32	1	0																1										
Amphenicols - Chloramphenicol	16	1	0														1												
Amphenicols - Florfenicol	16	1	0													1													
Cephalosporins - Cefotaxime	0.5	1	0								1																		
Fluoroquinolones - Ciprofloxacin	0.064	1	1										1																
Penicillins - Ampicillin	8	1	0												1														
Quinolones - Nalidixic acid	16	1	1																		1								
Sulfonamides	256	1	1																						1				
Tetracyclines - Tetracycline	8	1	1																		1								
Trimethoprim	2	1	0										1																
Cephalosporins - Ceftazidime	2	1	0										1																
Polymyxins - Colistin	2	1	0												1														

Table Antimicrobial susceptibility testing of *S. Infantis* in Geese - mixed flocks/holdings - Farm - Clinical investigations - quantitative data
[Dilution method]

S. Infantis Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	Geese - mixed flocks/holdings - Farm - Clinical investigations	
	no	
	1	
	lowest	highest
Antimicrobials:		
Aminoglycosides - Gentamicin	0.25	32
Aminoglycosides - Kanamycin	4	128
Aminoglycosides - Streptomycin	2	128
Amphenicols - Chloramphenicol	2	64
Amphenicols - Florfenicol	2	64
Cephalosporins - Cefotaxime	0.05	4
Fluoroquinolones - Ciprofloxacin	0.008	8
Penicillins - Ampicillin	0.5	32
Quinolones - Nalidixic acid	4	64
Sulfonamides	8	1024
Tetracyclines - Tetracycline	1	64
Trimethoprim	0.5	32
Cephalosporins - Ceftazidime	0.25	16
Polymyxins - Colistin	2	4

Footnote:

S. Infantis: (S)SuTNxCp resistance - 1 x. Note to (S): MIC = 32 microg/ml.

Table Cut-off values for antibiotic resistance testing of Salmonella in Animals

Test Method Used		Standard methods used for testing		
Broth dilution		NCCLS/CLSI WHO/GSS/GFN ISO EUCAST		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Kanamycin		8	
	Streptomycin	EFSA	32	
Amphenicols	Chloramphenicol	EFSA	16	
	Florfenicol		16	
Cephalosporins	Cefotaxime	EFSA	0.5	
	Ceftazidime	EFSA	2	
Fluoroquinolones	Ciprofloxacin	EFSA	0.064	
Penicillins	Ampicillin	EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Sulfonamides	Sulfonamides	EFSA	256	
Tetracyclines	Tetracycline	EFSA	8	
Trimethoprim	Trimethoprim	EFSA	2	

Table Cut-off values for antibiotic resistance testing of Salmonella in Animals

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Polymyxins	Colistin		2	

Table Cut-off values for antibiotic resistance testing of Salmonella in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		32	
Amphenicols	Chloramphenicol		16	
Cephalosporins	Cefotaxime		0.5	
	Ceftazidime		2	
Fluoroquinolones	Ciprofloxacin		0.064	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfonamides		256	
Tetracyclines	Tetracycline		8	
Trimethoprim	Trimethoprim		2	

Table Cut-off values for antibiotic resistance testing of Salmonella in Food

Test Method Used		Standard methods used for testing		
Broth dilution		NCCLS/CLSI ISO WHO/GSS/GFN EUCAST		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Kanamycin		8	
	Streptomycin	EFSA	32	
Amphenicols	Chloramphenicol	EFSA	16	
	Florfenicol		16	
Cephalosporins	Cefotaxime	EFSA	0.5	
	Ceftazidime	EFSA	2	
Fluoroquinolones	Ciprofloxacin	EFSA	0.064	
Penicillins	Ampicillin	EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Sulfonamides	Sulfonamides	EFSA	256	
Tetracyclines	Tetracycline	EFSA	8	
Trimethoprim	Trimethoprim	EFSA	2	

Table Cut-off values for antibiotic resistance testing of Salmonella in Food

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Polymyxins	Colistin		2	

2.2 CAMPYLOBACTERIOSIS

2.2.1 General evaluation of the national situation

A. Thermophilic Campylobacter general evaluation

National evaluation of the recent situation, the trends and sources of infection

Recent actions taken to control the zoonoses

Samples of foodstuffs are taken and investigated according multi-annual plan of official controls. Samples in animals are tested in case of suspicion and clinical symptoms.

Selective monitoring of Campylobacter and antimicrobial resistance was carried out in 2013 in chilled poultry meat. Results see in table.

2.2.2 Campylobacter in foodstuffs

Table Campylobacter in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	13	0		
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Batch	25 Gram	9	1		1
Eggs - table eggs - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Fish - smoked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	2	0		
Meat from bovine animals - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	2	0		
Meat from bovine animals - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	3	0		
Meat from bovine animals - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	10	0		
Meat from pig - fresh - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	5	0		
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	6	0		

Table Campylobacter in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Meat from pig - fresh - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Meat from pig - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	0		
Meat from pig - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Meat from pig - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	0		
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	66	0		
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	6	0		
Meat from pig - meat preparation - intended to be eaten cooked - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	9	0		
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Meat from pig - meat products - unspecified, ready-to-eat - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		
Milk, cows' - raw milk - intended for direct human consumption - Farm - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		

Table Campylobacter in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Other processed food products and prepared dishes - noodles - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other processed food products and prepared dishes - sandwiches - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	9	0		
Other processed food products and prepared dishes - sandwiches - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	38	0		
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	3	0		
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	20	0		
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	7	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Other processed food products and prepared dishes - unspecified - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	220	0		

Table Campylobacter in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	90	0		
Other processed food products and prepared dishes - unspecified - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	6	0		
Other processed food products and prepared dishes - unspecified - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	13	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	166	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	16	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	222	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	12	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	21	0		

Table Campylobacter in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - chilled - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	5	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - frozen - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	3	0		
	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified							
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance											
Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - Processing plant - Surveillance											
Eggs - table eggs - Catering - Surveillance											
Fish - smoked - Retail - Surveillance											
Meat from bovine animals - fresh - Catering - Surveillance											
Meat from bovine animals - fresh - Processing plant - Surveillance											
Meat from bovine animals - meat preparation - intended to be eaten cooked - Catering - Monitoring											

Table Campylobacter in other food

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Meat from pig - fresh - Catering - Monitoring				
Meat from pig - fresh - Catering - Surveillance				
Meat from pig - fresh - Catering - Surveillance				
Meat from pig - fresh - Hospital or medical care facility - Monitoring				
Meat from pig - fresh - Processing plant - Surveillance				
Meat from pig - fresh - Retail - Surveillance				
Meat from pig - fresh - Retail - Surveillance				
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from pig - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from pig - meat preparation - intended to be eaten cooked - Hospital or medical care facility - Monitoring				
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring				
Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Monitoring				
Meat from pig - meat products - unspecified, ready-to-eat - Processing plant - Monitoring				

Table Campylobacter in other food

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Milk, cows' - raw milk - intended for direct human consumption - Farm - Surveillance				
Other processed food products and prepared dishes - noodles - Catering - Monitoring				
Other processed food products and prepared dishes - sandwiches - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Monitoring				
Other processed food products and prepared dishes - sandwiches - with meat - Catering - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance				
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring				
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring				

Table Campylobacter in other food

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Other processed food products and prepared dishes - unspecified - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - Processing plant - Surveillance				
Other processed food products and prepared dishes - unspecified - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance				

Table Campylobacter in other food

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - chilled - Retail - Surveillance				
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - frozen - Retail - Surveillance				

Table Campylobacter in poultry meat

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	10	0		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	4	0		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	4	2		2
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	3	0		
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Single	25 Gram	4	0		
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	2	0		
Meat from broilers (Gallus gallus) - fresh - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	22	8	4	4
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	12	1		1
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	30	0		
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	10	0		
Meat from geese - fresh - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		

Table Campylobacter in poultry meat

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Meat from poultry, unspecified - fresh - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	15	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	6	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	64	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Processing plant - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	4	0		
Meat from turkey - fresh - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	9	3	2	1
Meat from turkey - minced meat - intended to be eaten cooked - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	2	1		

Table Campylobacter in poultry meat

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Retail - Monitoring				
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance				
Meat from broilers (Gallus gallus) - fresh - Retail - Surveillance				
Meat from geese - fresh - Retail - Monitoring				
Meat from poultry, unspecified - fresh - Catering - Monitoring				

Table Campylobacter in poultry meat

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring				
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Processing plant - Monitoring				
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Retail - Monitoring				
Meat from turkey - fresh - Retail - Monitoring				
Meat from turkey - minced meat - intended to be eaten cooked - Retail - Surveillance				1

2.2.3 Campylobacter in animals

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
All animals - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	8	1		1	
All animals - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal	3	0			
All animals - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	2	0			
Cats - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal	10	0			

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Cats - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	29	1			
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal	38	0			
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	5	0			
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	20	0			
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample	Domestic	Animal	8	0			

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	41	2			
Cattle (bovine animals) - dairy cows - young cattle (1-2 years) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	8	0			
Chinchillas - farmed - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	1	0			
Deer - zoo animals - fallow deer - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	2	0			
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal	95	3	1	2	

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	33	2		1	
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	11	0			
Gallus gallus (fowl) - laying hens - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > cloacal swab	Domestic	Animal	2	0			
Goats - animals over 1 year - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	5	0			
Guinea pigs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	1	0			

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Pigs - breeding animals - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	22	0			
Pigs - breeding animals - unspecified - gilts - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	1	0			
Pigs - fattening pigs - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	20	2			
Rabbits - farmed - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	1	0			
Rabbits - farmed - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	6	0			

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Reptiles - zoo animal - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal	1	0			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	12	0			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal	1	0			
Sheep - milk ewes - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	19	1			
Solipeds, domestic - horses - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	5	0			

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Solipeds, domestic - horses - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	1	0			
Turtles - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal	1	0			
	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified								
All animals - zoo animals - Zoo - Clinical investigations											
All animals - zoo animals - Zoo - Clinical investigations											
All animals - zoo animals - Zoo - Clinical investigations											
Cats - pet animals - Unknown - Clinical investigations											
Cats - pet animals - Unknown - Clinical investigations											1

Table Campylobacter in animals

	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations			
Cattle (bovine animals) - adult cattle over 2 years - Farm - Clinical investigations			
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations			
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations			
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations			2
Cattle (bovine animals) - dairy cows - young cattle (1-2 years) - Farm - Clinical investigations			
Chinchillas - farmed - Farm - Clinical investigations			
Deer - zoo animals - fallow deer - Zoo - Clinical investigations			
Dogs - pet animals - Unknown - Clinical investigations			
Dogs - pet animals - Unknown - Clinical investigations			1
Dogs - pet animals - Unknown - Clinical investigations			
Gallus gallus (fowl) - laying hens - Farm - Clinical investigations			

Table Campylobacter in animals

	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Goats - animals over 1 year - Farm - Clinical investigations			
Guinea pigs - pet animals - Unknown - Clinical investigations			
Pigs - breeding animals - Farm - Clinical investigations			
Pigs - breeding animals - unspecified - gilts - Farm - Clinical investigations			
Pigs - fattening pigs - Farm - Clinical investigations			2
Rabbits - farmed - Farm - Clinical investigations			
Rabbits - farmed - Farm - Clinical investigations			
Reptiles - zoo animal - Zoo - Clinical investigations			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations			
Sheep - milk ewes - Farm - Clinical investigations			1
Solipeds, domestic - horses - Farm - Clinical investigations			
Solipeds, domestic - horses - Farm - Clinical investigations			

Table Campylobacter in animals

	C. upsaliensis	Thermophilic Campylobacter spp., unspecified	Campylobacter spp., unspecified
Turtles - zoo animals - Zoo - Clinical investigations			

2.2.4 Antimicrobial resistance in Campylobacter isolates

A. Antimicrobial resistance of Campylobacter spp., unspecified in animal

National evaluation of the recent situation, the trends and sources of infection

The monitoring system for Antimicrobial resistance in Campylobacter in the Slovak republic has not been adopted. The positive isolates have formed the testing collection and were obtained according to the instructions of Slovak Veterinary and Food Authority No.2189/2013-370 "Monitoring of Campylobacter spp. in poultry meat and No.203/2013-333 "Targeted inspection for the presence of RIL in poultry meat" and from sick animals on the basis of infection history. The situation in Slovakia from Campylobacter point of view is relative good and represents 2% positive prevalence. But the question remains, however, whether the decrease in positivity is a true reflection of campylobacter in Slovak holdings, since the nearby is still a growing trend. The situation regarding antimicrobial resistance is not alarming and follows the global trend of high levels of resistance to fluoroquinolone in Campylobacter isolates originating from poultry.

B. Antimicrobial resistance of *Campylobacter* spp., unspecified in food

National evaluation of the recent situation, the trends and sources of infection

The monitoring of antimicrobial resistance of *Campylobacter* spp in Slovak republic is not adopted. The positive isolates have formed the testing collection and were obtained according to the instructions of Slovak Veterinary and Food Authority No.2189/2013-370 "Monitoring of *Campylobacter* spp. in poultry meat and No.203/2013-333 "Targeted inspection for the presence of RIL in poultry meat" and from sick animals on the basis of infection history. The situation in Slovakia from *Campylobacter* point of view is relative good and represents 2% positive prevalence. But the question remains, however, whether the decrease in positivity is a true reflection of *Campylobacter* in Slovak holdings, since the nearby is still a growing trend. The situation regarding antimicrobial resistance is not alarming and follows the global trend of high levels of resistance to fluoroquinolone in *Campylobacter* isolates originating from poultry.

Table Antimicrobial susceptibility testing of Campylobacter in Meat from broilers (Gallus gallus)

Campylobacter Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	C. coli		C. jejuni		Campylobacter spp., unspecified	
	no		no			
	4		4			
Antimicrobials:	N	n	N	n	N	n
Aminoglycosides - Gentamicin	4	0	4	0		
Fluoroquinolones - Ciprofloxacin	4	4	4	2		
Macrolides - Erythromycin	4	0	4	0		
Quinolones - Nalidixic acid	4	2	4	2		
Tetracyclines - Tetracycline	4	3	4	0		
Fully sensitive			4	2		
Resistant to 2 antimicrobials	4	2	4	2		
Resistant to 3 antimicrobials	4	2				

Table Antimicrobial susceptibility testing of Campylobacter in Meat from other poultry species

Campylobacter Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory Antimicrobials:	C. coli		C. jejuni		Campylobacter spp., unspecified	
	no		no			
	1		1			
	N	n	N	n	N	n
Aminoglycosides - Gentamicin	1	0	1	0		
Fluoroquinolones - Ciprofloxacin	1	1	1	0		
Macrolides - Erythromycin	1	0	1	0		
Quinolones - Nalidixic acid	1	1	1	0		
Tetracyclines - Tetracycline	1	1	1	0		
Fully sensitive			1	0		
Resistant to 3 antimicrobials	1	1				

Table Cut-off values used for antimicrobial susceptibility testing of *C. coli* in Animals

Test Method Used		Standard methods used for testing		
Broth dilution		NCCLS/CLSI		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	EFSA	4	
Fluoroquinolones	Ciprofloxacin	EFSA	0.5	
Macrolides	Erythromycin	EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Tetracyclines	Tetracycline	EFSA	2	

Table Cut-off values used for antimicrobial susceptibility testing of *C. coli* in Feed

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
Fluoroquinolones	Ciprofloxacin		0.5	
Macrolides	Erythromycin		8	
Quinolones	Nalidixic acid		16	
Tetracyclines	Tetracycline		2	

Table Cut-off values used for antimicrobial susceptibility testing of *C. coli* in Food

Test Method Used		Standard methods used for testing		
Broth dilution		NCCLS/CLSI		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	EFSA	4	
Fluoroquinolones	Ciprofloxacin	EFSA	0.5	
Macrolides	Erythromycin	EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Tetracyclines	Tetracycline	EFSA	2	

Table Cut-off values used for antimicrobial susceptibility testing of *C. jejuni* in Animals

Test Method Used		Standard methods used for testing		
Broth dilution		NCCLS/CLSI		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	EFSA	4	
Fluoroquinolones	Ciprofloxacin	EFSA	0.5	
Macrolides	Erythromycin	EFSA	4	
Quinolones	Nalidixic acid	EFSA	16	
Tetracyclines	Tetracycline	EFSA	1	

Table Cut-off values used for antimicrobial susceptibility testing of *C. jejuni* in Feed

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
Fluoroquinolones	Ciprofloxacin		0.5	
Macrolides	Erythromycin		4	
Quinolones	Nalidixic acid		16	
Tetracyclines	Tetracycline		1	

Table Cut-off values used for antimicrobial susceptibility testing of *C. jejuni* in Food

Test Method Used		Standard methods used for testing		
Agar dilution		NCCLS/CLSI		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	EFSA	4	
Fluoroquinolones	Ciprofloxacin	EFSA	0.5	
Macrolides	Erythromycin	EFSA	4	
Quinolones	Nalidixic acid	EFSA	16	
Tetracyclines	Tetracycline	EFSA	1	

2.3 LISTERIOSIS

2.3.1 General evaluation of the national situation

A. Listeriosis general evaluation

National evaluation of the recent situation, the trends and sources of infection

Recent actions taken to control the zoonoses

Samples of foodstuffs are taken and investigated according Regulation 2073/2005 and multi-annual plan of official controls or in case of suspicion or consumers incentive.

Samples in animals are tested in case of suspicion and clinical symptoms. There is obligatory notification of abortions in cattle, sheep and goats and according Plan of veterinary prevention and protection of state territory in 2013 are samples of stillbirth and placenta bacteriologically tested for listeriosis.

2.3.2 Listeria in foodstuffs

A. Listeria in Food

Monitoring system

Sampling strategy

All obtained data were collected from the State Veterinary and Food Institutes, the State Veterinary Institute, Public Health Authorities in Slovakia.

The samples comprised of official samples taken by inspectors of the Veterinary and Food Administrations according direction of State Veterinary and Food Administration "Plan for sampling and laboratory examination if products of animal origin for official controls", according Regulation (EC) No 2073/2005..

The Public Health Authority of the Slovak Republic (PHA of the SR) and Regional Health Authorities in the Slovak Republic (RHA in the SR) performed the sampling of foodstuffs and raw materials in compliance with the multi-annual national plan of the official control carried out by public health authorities and according Regulation (EC) No 2073/2005.

Samples are taken also in case of suspicion or consumers incentive.

All samples were tested in accordance with standardized international methods for Listeria presence (STN EN ISO 11290-1) or Listeria counts (STN EN ISO 11290-2) by single or batch system according to applicant's requirements and amount of a taken sample. The sample weight was 25g (detection method) or 10g (quantification method).

Frequency of the sampling

At the production plant

according sampling plan

At retail

according sampling plan

Definition of positive finding

At the production plant

According Regulation (EC) No 2073/2005.

Diagnostic/analytical methods used

At the production plant

Listeria presence (STN EN ISO 11290-1) , Listeria counts (STN EN ISO 11290-2)

At retail

Listeria presence (STN EN ISO 11290-1), Listeria counts (STN EN ISO 11290-2)

Measures in case of the positive findings or single cases

According Regulation (EC) No 2073/2005.

Notification system in place

Rapid Alert System

Results of the investigation

see tables

Table *Listeria monocytogenes* in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Milk, cows' - pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Millilitre	4	0	4	0
Milk, cows' - pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Millilitre	3	0		
Milk, goats' - pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Single	25 Millilitre	3	0	3	0
Milk, sheep's - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Single	25 Millilitre	4	0	4	0
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	8	0	8	0
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	80	1	80	1
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	42	0		
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	19	0	19	0

Table *Listeria monocytogenes* in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	22	0	22	0
Cheeses made from cows' milk - hard - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	15	0		
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	8	0	8	0
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	3	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	244	4	244	4
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	15	0		
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	5	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	5	0	5	0
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	3	0		

Table *Listeria monocytogenes* in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Dairy products (excluding cheeses) - cream - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0	4	0
Dairy products (excluding cheeses) - cream - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Millilitre	8	0		
Cheeses made from cows' milk - curd - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	7	0	7	0
Cheeses made from cows' milk - hard - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	16	0		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	29	0		
Cheeses made from cows' milk - unspecified - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0	2	0
Cheeses made from cows' milk - unspecified - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	7	0		
Cheeses, made from mixed milk from cows, sheep and/or goats - unspecified - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	35	3	35	3

Table *Listeria monocytogenes* in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Cheeses, made from mixed milk from cows, sheep and/or goats - unspecified - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	12	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	12	0		
Dairy products (excluding cheeses) - dairy desserts - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	10	0	10	0
Dairy products (excluding cheeses) - dairy desserts - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	11	0		
Dairy products (excluding cheeses) - dairy desserts - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	20	0		
Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	6	0	6	0
Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	10	0		
Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	5	0		
Dairy products (excluding cheeses) - dairy products, not specified - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	4	0		

Table *Listeria monocytogenes* in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	11	0	11	0
Dairy products (excluding cheeses) - fermented dairy products - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	10	0		
Dairy products (excluding cheeses) - fermented dairy products - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	23	0		
Dairy products (excluding cheeses) - ice-cream - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0	2	0
Dairy products (excluding cheeses) - ice-cream - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	15	0		
Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Millilitre	4	0		
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	5	0	5	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	65	0	65	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	10	0	10	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	49	0	49	0

Table *Listeria monocytogenes* in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	61	0	61	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	85	0	85	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	State Veterinary and Food Institutes, Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	39	0		
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	22	0	22	0
Milk, cows' - pasteurised milk - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Millilitre	12	0		

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	<i>L. monocytogenes</i> > 100 cfu/g
Milk, cows' - pasteurised milk - Processing plant - Surveillance			
Milk, cows' - pasteurised milk - Retail - Surveillance	3	0	0
Milk, goats' - pasteurised milk - Processing plant - Surveillance			

Table *Listeria monocytogenes* in milk and dairy products

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Milk, sheep's - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - Processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	42	0	0
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - Retail - Surveillance	15	0	0
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	3	0	0

Table *Listeria monocytogenes* in milk and dairy products

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Retail - Surveillance	15	0	0
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	5	0	0
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Retail - Surveillance	3	0	0
Dairy products (excluding cheeses) - cream - made from pasteurised milk - Processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from pasteurised milk - Retail - Surveillance	8	0	0
Cheeses made from cows' milk - curd - Processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - Retail - Surveillance	16	0	0
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Surveillance	29	0	0

Table *Listeria monocytogenes* in milk and dairy products

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Cheeses made from cows' milk - unspecified - made from pasteurised milk - Processing plant - Surveillance			
Cheeses made from cows' milk - unspecified - made from pasteurised milk - Retail - Surveillance	7	0	0
Cheeses, made from mixed milk from cows, sheep and/or goats - unspecified - made from raw or low heat-treated milk - Processing plant - Surveillance			
Cheeses, made from mixed milk from cows, sheep and/or goats - unspecified - made from raw or low heat-treated milk - Retail - Surveillance	12	0	0
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Retail - Surveillance	12	0	0
Dairy products (excluding cheeses) - dairy desserts - chilled - Processing plant - Surveillance			
Dairy products (excluding cheeses) - dairy desserts - chilled - Retail - Surveillance	11	0	0
Dairy products (excluding cheeses) - dairy desserts - chilled - Retail - Surveillance	20	0	0
Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Processing plant - Surveillance			

Table *Listeria monocytogenes* in milk and dairy products

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Retail - Surveillance	10	0	0
Dairy products (excluding cheeses) - dairy products, not specified - made from pasteurised milk - Retail - Surveillance	5	0	0
Dairy products (excluding cheeses) - dairy products, not specified - ready-to-eat - Retail - Surveillance	4	0	0
Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Surveillance			
Dairy products (excluding cheeses) - fermented dairy products - Retail - Surveillance	10	0	0
Dairy products (excluding cheeses) - fermented dairy products - Retail - Surveillance	23	0	0
Dairy products (excluding cheeses) - ice-cream - Processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - Retail - Surveillance	15	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Surveillance	4	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Monitoring	5	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Monitoring	65	0	0

Table *Listeria monocytogenes* in milk and dairy products

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Monitoring	10	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	49	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance			
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	85	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	39	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Surveillance	22	0	0
Milk, cows' - pasteurised milk - Retail - Surveillance	12	0	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Meat from broilers (<i>Gallus gallus</i>) - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	3	0	3	0
Meat from broilers (<i>Gallus gallus</i>) - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	8	0		
Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	196	3	196	3
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	60	0		
Fish - smoked - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	7	0	7	0
Fish - smoked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	14	0		
Infant formula - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	10	0	10	0
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	24	0	24	0
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	4	0		

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	2	0		
Bakery products - pastry - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0	4	0
Coconut - coconut products - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	2	0		
Confectionery products and pastes - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	52	0	52	0
Confectionery products and pastes - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	67	0		
Fish - raw - frozen - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	2	0		
Fishery products, unspecified - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	7	0	7	0
Fishery products, unspecified - ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	18	0	16	0
Fishery products, unspecified - ready-to-eat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	25	0	25	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Fishery products, unspecified - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	3	0		
Fishery products, unspecified - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	3	0		
Fishery products, unspecified - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	5	0		
Fishery products, unspecified - ready-to-eat - chilled - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	3	0		
Fruits - non-pre-cut - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	3	0		
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	3	0		
Infant formula - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	43	0	43	0
Infant formula - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	23	0	23	0
Infant formula - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0	2	0
Infant formula - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	45	0	45	0
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0	4	0
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	8	0	8	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	52	0	52	0
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	10	0	10	0
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0	4	0
Meat from broilers (<i>Gallus gallus</i>) - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	4	0		
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	2	0		
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	17	0		
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	3	0		
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	4	0		
Meat from pig - meat products - raw but intended to be eaten cooked - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	9	0	9	0
Meat from pig - meat products - raw but intended to be eaten cooked - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	25 Gram	2	0	2	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	56	3	54	3
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	56	0		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	2	0		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	18	0		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - fermented sausages - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	18	1	18	1
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - fermented sausages - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	18	0		
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - fermented sausages - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	30	0		

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Molluscan shellfish - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	2	0		
Nuts and nut products - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	8	0		
Nuts and nut products - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	2	0		
Other processed food products and prepared dishes - sandwiches - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	55	0	55	0
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	3	0		
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0	3	0
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	16	0	16	0
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	5	0	5	0
Other processed food products and prepared dishes - sandwiches - non-meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	2	0	2	0
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	16	0	16	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	10	0	10	0
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0	2	0
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	52	0		
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	10	0	10	0
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	5	0	5	0
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	3	0	3	0
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	3	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	13	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Selective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	2	0	2	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	60	0	60	0
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	3	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	13	0		
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Batch	10 Gram	3	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	3	0		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	22	0	22	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0	5	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	2	0		
Ready-to-eat salads - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	40	0	40	0
Ready-to-eat salads - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	18	0	18	0

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Ready-to-eat salads - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	15	0	15	0
Ready-to-eat salads - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	26	0	26	0
Ready-to-eat salads - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	10	0	10	0
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	9	0	9	0
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	4	0		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	7	0		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	17	0		
Soups - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	3	0		
Spices and herbs - dried - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	16	0		
Spices and herbs - dried - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	16	0	8	0
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	13	0		
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	11	0		

Table *Listeria monocytogenes* in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for <i>L. monocytogenes</i>	Units tested with detection method	<i>Listeria monocytogenes</i> presence in x g
Spices and herbs - dried - Retail - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	7	0		
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0	5	0
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	2	0		
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	7	0		
Vegetables - pre-cut - ready-to-eat - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	3	0	3	0
Vegetables - pre-cut - ready-to-eat - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	4	0	4	0
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	5	0	5	0
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	22	0	22	0
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	18	0	18	0

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Meat from broilers (<i>Gallus gallus</i>) - meat products - cooked, ready-to-eat - Processing plant - Surveillance			
Meat from broilers (<i>Gallus gallus</i>) - meat products - cooked, ready-to-eat - Retail - Surveillance	8	0	0
Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Surveillance			
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	60	0	0
Fish - smoked - Processing plant - Surveillance			
Fish - smoked - Retail - Surveillance	14	0	0
Infant formula - Retail - Surveillance	10	0	0
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	24	0	0
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	4	0	0
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	2	0	0
Bakery products - pastry - Processing plant - Surveillance			
Coconut - coconut products - Retail - Surveillance	2	0	0
Confectionery products and pastes - Processing plant - Surveillance			

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Confectionery products and pastes - Processing plant - Surveillance	67	0	0
Fish - raw - frozen - Retail - Surveillance	2	0	0
Fishery products, unspecified - ready-to-eat - Catering - Surveillance	7	0	0
Fishery products, unspecified - ready-to-eat - Processing plant - Surveillance	2	0	0
Fishery products, unspecified - ready-to-eat - Retail - Monitoring	25	0	0
Fishery products, unspecified - ready-to-eat - Retail - Surveillance	3	0	0
Fishery products, unspecified - ready-to-eat - Retail - Surveillance	3	0	0
Fishery products, unspecified - ready-to-eat - Retail - Surveillance	5	0	0
Fishery products, unspecified - ready-to-eat - chilled - Retail - Surveillance	3	0	0
Fruits - non-pre-cut - Retail - Surveillance	3	0	0
Fruits - pre-cut - ready-to-eat - Retail - Surveillance	3	0	0
Infant formula - Processing plant - Surveillance	43	0	0
Infant formula - Retail - Surveillance	23	0	0
Infant formula - Retail - Surveillance	2	0	0

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Infant formula - Retail - Surveillance	45	0	0
Infant formula - dried - Retail - Surveillance			
Infant formula - dried - Retail - Surveillance			
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance			
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance			
Infant formula - dried - intended for infants below 6 months - Retail - Surveillance			
Meat from broilers (<i>Gallus gallus</i>) - meat products - cooked, ready-to-eat - Retail - Surveillance	4	0	0
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	2	0	0
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	17	0	0
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	3	0	0
Meat from pig - meat products - cooked, ready-to-eat - Retail - Surveillance	4	0	0
Meat from pig - meat products - raw but intended to be eaten cooked - Processing plant - Surveillance			
Meat from pig - meat products - raw but intended to be eaten cooked - Retail - Surveillance			

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Processing plant - Surveillance			
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Processing plant - Surveillance	2	0	0
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Retail - Surveillance	2	0	0
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - cooked, ready-to-eat - Retail - Surveillance	18	0	0
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - fermented sausages - Processing plant - Surveillance			
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - fermented sausages - Retail - Surveillance	18	0	0
Meat, red meat (meat from bovines, pigs, goats, sheep, horses, donkeys, bison and water buffalos) - meat products - fermented sausages - Retail - Surveillance	30	0	0
Molluscan shellfish - Retail - Surveillance	2	0	0

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Nuts and nut products - Retail - Surveillance	8	0	0
Nuts and nut products - Retail - Surveillance	2	0	0
Other processed food products and prepared dishes - sandwiches - Catering - Surveillance	55	0	0
Other processed food products and prepared dishes - sandwiches - Retail - Surveillance	3	0	0
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Monitoring	3	0	0
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance	16	0	0
Other processed food products and prepared dishes - sandwiches - non-meat - Processing plant - Surveillance			
Other processed food products and prepared dishes - sandwiches - non-meat - Retail - Monitoring	2	0	0
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Monitoring	16	0	0
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance			
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance			

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Other processed food products and prepared dishes - sandwiches - with meat - Processing plant - Surveillance	52	0	0
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	10	0	0
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Monitoring	5	0	0
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance			
Other processed food products and prepared dishes - sandwiches - with meat - Retail - Surveillance	3	0	0
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance	13	0	0
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance			
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Processing plant - Surveillance			
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	3	0	0

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	13	0	0
Other processed food products and prepared dishes - unspecified - containing raw egg - chilled - Retail - Surveillance	3	0	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	3	0	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Processing plant - Surveillance			
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Monitoring	5	0	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance	2	0	0
Ready-to-eat salads - Processing plant - Surveillance	40	0	0
Ready-to-eat salads - Retail - Surveillance	18	0	0
Ready-to-eat salads - Retail - Surveillance	15	0	0
Ready-to-eat salads - Retail - Surveillance	26	0	0
Ready-to-eat salads - Retail - Surveillance	10	0	0
Ready-to-eat salads - containing mayonnaise - Processing plant - Surveillance	9	0	0

Table *Listeria monocytogenes* in other foods

	Units tested with enumeration method	> detection limit but ≤ 100 cfu/g	L. monocytogen es > 100 cfu/g
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	4	0	0
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	7	0	0
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	17	0	0
Soups - ready-to-eat - Catering - Surveillance	3	0	0
Spices and herbs - dried - Processing plant - Surveillance	8	0	0
Spices and herbs - dried - Processing plant - Surveillance			
Spices and herbs - dried - Retail - Surveillance	13	0	0
Spices and herbs - dried - Retail - Surveillance	11	0	0
Spices and herbs - dried - Retail - Surveillance	7	0	0
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring	5	0	0
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	2	0	0
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	7	0	0
Vegetables - pre-cut - ready-to-eat - Processing plant - Monitoring	3	0	0
Vegetables - pre-cut - ready-to-eat - Processing plant - Surveillance			

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogen es > 100 cfu/g
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring	5	0	0
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	22	0	0
Vegetables - pre-cut - ready-to-eat - Retail - Surveillance	18	0	0

2.3.3 Listeria in animals

A. Listeria in Animals

Monitoring system

Sampling strategy

Animals are tested for Listeria in case of clinical signs or in case of suspicion.

According Plan of veterinary prevention and protection of state territory in 2013 all cases of abortion in cattle, sheep and goats are officially tested for presence of Listeria.

Frequency of the sampling

in case of abort

Type of specimen taken

brain-tissue samples, abortion material, blood

Results of the investigation

All results in table Listeria in animals.

Table Listeria in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Listeria	L. monocytogenes	Listeria spp., unspecified	L. innocua
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Objective sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	7	0			
Sheep - Farm - Monitoring	SVFI, SVI	Objective sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	8	0			
Cattle (bovine animals) - Farm - Clinical investigations	SVFI, SVI	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	22	0			
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Objective sampling	Not applicable	animal sample > faeces	Domestic	Animal	2	0			
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Objective sampling	Official sampling	animal sample > placental swab	Domestic	Animal	46	11	11		
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > placental swab	Domestic	Animal	83	2	2		
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	348	8	7		1
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	3	0			
Cattle (bovine animals) - Farm - Monitoring	SVFI, SVI	Objective sampling	Not applicable	animal sample > milk	Domestic	Animal	2	0			
Goats - animals over 1 year - Farm - Clinical investigations	SVFI, SVI	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	1	1	1		

Table Listeria in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Listeria	L. monocytogenes	Listeria spp., unspecified	L. innocua
Goats - animals over 1 year - Farm - Monitoring	SVFI, SVI	Objective sampling	Not applicable	animal sample > faeces	Domestic	Animal	1	0			
Goats - animals over 1 year - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	4	0			
Goats - animals over 1 year - Farm - Monitoring	SVFI, SVI	Objective sampling	Not applicable	animal sample > blood	Domestic	Animal	1	0			
Goats - animals over 1 year - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	12	2	2		
Sheep - Farm - Clinical investigations	SVFI, SVI	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	19	0			
Sheep - Farm - Clinical investigations	SVFI, SVI	Suspect sampling	Not applicable	animal sample > brain	Domestic	Animal	2	2	2		
Sheep - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal	19	1	1		
Sheep - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	4	0			
Sheep - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	169	7	7		
Sheep - Farm - Monitoring	SVFI, SVI	Suspect sampling	Official sampling	animal sample > placental swab	Domestic	Animal	39	2	2		

Table Listeria in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Listeria	L. monocytogenes	Listeria spp., unspecified	L. innocua
Sheep - Farm - Monitoring	SVFI, SVI	Objective sampling	Official sampling	animal sample > placental swab	Domestic	Animal	38	11	11		
Sheep - Farm - Monitoring	SVFI, SVI	Objective sampling	Not applicable	animal sample > faeces	Domestic	Animal	1	0			

2.4 E. COLI INFECTIONS

2.4.1 General evaluation of the national situation

A. Verotoxigenic Escherichia coli infections general evaluation

National evaluation of the recent situation, the trends and sources of infection

The monitoring system for Verotoxigenic E.coli in the Slovak republic has not been adopted.

In foodstuffs, mostly suspect samples were taken. Samples were tested for presence and for VTEC and presence of VT1, VT2 and eae genes.

Diagnostical method used : cultivation, VIDAS, PCR

2.4.2 Escherichia coli, pathogenic in foodstuffs

Table VT E. coli in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Analytical Method	Sampling unit	Sample weight	Units tested	Total units positive for Verotoxigenic E. coli (VTEC)	Verotoxigenic E. coli (VTEC) - VTEC O157
Meat from pig - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	2	0	
Beverages, non-alcoholic - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	22	0	
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	49	0	
Meat from bovine animals - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	ISO 16654:2001	Single	10 Gram	2	0	
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	ISO 16654:2001	Single	10 Gram	6	0	
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	ISO/PRF TS 13136	Single	10 Gram	2	0	
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	10	0	
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Unknown	ISO/PRF TS 13136	Single	10 Gram	3	0	
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	ISO/PRF TS 13136	Single	25 Gram	4	0	
Meat from pig - fresh - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Batch	25 Gram	10	0	
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Unknown	ISO/PRF TS 13136	Single	10 Gram	2	0	
Meat from pig - fresh - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	ISO/PRF TS 13136	Single	10 Gram	3	0	

Table VT E. coli in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Analytical Method	Sampling unit	Sample weight	Units tested	Total units positive for Verotoxigenic E. coli (VTEC)	Verotoxigenic E. coli (VTEC) - VTEC O157
Meat from pig - fresh - Hospital or medical care facility - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Batch	25 Gram	10	0	
Meat from pig - fresh - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	ISO/PRF TS 13136	Single	25 Gram	3	0	
Meat from pig - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	ISO/PRF TS 13136	Single	25 Gram	2	0	
Meat from pig - minced meat - Catering - Surveillance	Public Health Authorities	Selective sampling	Official sampling	food sample	Domestic	ISO/PRF TS 13136	Single	10 Gram	2	0	
Meat from poultry, unspecified - fresh - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Imported from outside EU	ISO/PRF TS 13136	Batch	25 Gram	15	0	
Meat from poultry, unspecified - meat products - raw but intended to be eaten cooked - chilled - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	ISO/PRF TS 13136	Single	25 Gram	4	0	
Meat from turkey - fresh - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	2	0	
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	ISO/PRF TS 13136	Single	25 Gram	96	0	
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	24	0	
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	28	0	
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	ISO/PRF TS 13136	Single	25 Gram	16	1	1

Table VT E. coli in food

	Verotoxigenic E. coli (VTEC) - VTEC non- O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Meat from pig - fresh - Retail - Surveillance		
Beverages, non-alcoholic - Retail - Surveillance		
Infant formula - dried - Retail - Surveillance		
Meat from bovine animals - fresh - Catering - Surveillance		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance		
Meat from broilers (Gallus gallus) - fresh - Catering - Surveillance		
Meat from broilers (Gallus gallus) - fresh - Processing plant - Surveillance		
Meat from pig - fresh - Catering - Monitoring		
Meat from pig - fresh - Catering - Surveillance		
Meat from pig - fresh - Catering - Surveillance		
Meat from pig - fresh - Hospital or medical care facility - Monitoring		
Meat from pig - fresh - Processing plant - Surveillance		
Meat from pig - fresh - Retail - Surveillance		

Table VT E. coli in food

	Verotoxigenic E. coli (VTEC) - VTEC non- O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Meat from pig - minced meat - Catering - Surveillance		
Meat from poultry, unspecified - fresh - Catering - Monitoring		
Meat from poultry, unspecified - meat products - raw but intended to be eaten cooked - chilled - Retail - Surveillance		
Meat from turkey - fresh - Retail - Surveillance		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance		
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Retail - Surveillance		
Ready-to-eat salads - containing mayonnaise - Retail - Surveillance		
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance		

2.5 TUBERCULOSIS, MYCOBACTERIAL DISEASES

2.5.1 General evaluation of the national situation

A. Tuberculosis general evaluation

History of the disease and/or infection in the country

In Europe the bovine tuberculosis belongs still to the serious disease in humans and animals. The disease situation in TBC occurrence, in pursuance of the definition of the International Animal Health Code OIE is a territory of the country free of bovine tuberculosis in cattle till the prevalence of infected herds does not exceed 0,2% of totally bred herds. This condition fulfilled also Slovakia as to 4.3.2005 (Commission Decision No. 2005/179/EC).

In Slovakia bovine tuberculosis was controlled within the national eradication programme in the second half of the last century. In the years 1990-1999 the decrease of bovine tuberculosis incidence in cattle was recorded in Slovakia. With the decreasing incidence of bovine tuberculosis in cattle also decrease of bovine tuberculosis in other animals was recorded in Slovakia.

The last occurrence of *M.bovis* in bovine animals in Slovakia was in year 1992, owner of agricultural cooperative Tupa, District Levice.

National evaluation of the recent situation, the trends and sources of infection

Slovakia is officially free of tuberculosis. Last occurrence of *M. bovis* in cattle was in 1992.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

Recent actions taken to control the zoonoses

Tuberculin test in cattle and pigs.

Bacteriological examination after slaughtering of positive reactors and in case of evidence of a significant changes indicating tuberculosis

2.5.2 Mycobacterium in animals

A. Mycobacterium bovis in bovine animals

Status as officially free of bovine tuberculosis during the reporting year

The entire country free

On the basis of Commission Decision 2005/179/EC Slovak Republic is officially free of tuberculosis.

Free regions

All regions in Slovak Republic are officially free of tuberculosis.

Monitoring system

Sampling strategy

Positive reagents in simple tuberculin test are examined by comparative test earliest in 6-8 weeks, repeatedly positively reacted animals for bovine tuberculin are slaughtered and their lymphnodes are additionally examined laboratory in the respective NRL for bovine tuberculosis. Tuberculosis changes identified in routine veterinary-hygienic examination of slaughtered bovine animals are also laboratory examined.

Frequency of the sampling

in case of positive intravital tests - reagents for tuberculin, TBC changes at slaughterhouses

Type of specimen taken

lymph nodes according to district competence, in valuable animals - lung lavage

Methods of sampling (description of sampling techniques)

3- packing, label, application form (accompanying report), cool 2-8 C°, or freezing, taking into so called sample, transport to NRL

Case definition

detailed description

Diagnostic/analytical methods used

1. pathological-anatomical examination

-Imprint preparation (Z-N)

-Sediment preparation (Z-N)

2. cultivation - macroscopic and microscopic control in 1st, 4th, 6th, 9th week.

In case of positive findings:

3. isolation

4. typing- biochemical typing, PCR, genotyping

Examinations are covered by state (Veterinary prevention and protection).

Vaccination policy

vaccination is not performed

Other preventive measures than vaccination in place

isolation of reagents, announcement of outbreak

Control program/mechanisms

The control program/strategies in place

- . control programmes, procedures on the spot : intravital diagnostics, isolation
- . current actions for the purpose of zoonosis control: surveillance

Recent actions taken to control the zoonoses

A) Single intradermal tuberculin test by mammalian tuberculin:

Examine

- once per year 25% of holdings in the district - all cattle over 24 months of age
- once per year new holding registered in 2013 – all cattle over 24 month
- once per year bulls in insemination centre and bulls used for natural breeding, tests should be performed up to 12 months since the last examination.
- young bulls before the basic selection,
- in holdings with evidence of a significant changes indicating tuberculosis within post mortem inspection (suspicion of the tuberculosis) is the officially tuberculosis-free herd status suspended and tuberculation of all animals over six weeks of age is performed (immediately in the case if minimum 42 days elapsed after the last tuberculation)
- in case of indiscriminated examinations in quarantine, feminine animals over 6 weeks of age intended for breeding and production and breeding bulls over 6 weeks of age (except slaughter) from third countries and tuberculosis non-free member states. Within examination take account to date of last tuberculation (over 42 days).

B) Intradermal comparative test by mammalian tuberculin and avian tuberculin used for intradermal comparative test:

a) in the holdings with presence of positive reactors to mammalian tuberculin in the single intradermal tuberculin test

- suspend the officially tuberculosis-free herd status
 - slaughter the positive reactor
 - carry out all prescribed examinations of the positive reagent
 - the status of the herd shall remain suspended until such time as all laboratory examinations have been completed - if the presence of tuberculosis is not confirmed by laboratory examinations, the suspension of the officially tuberculosis-free status may be lifted following an intradermal comparative test of all animals over six weeks of age with negative results at least 42 days after the removal of the reactor animal
- Or

2. if there is a suspicion of false positive test reaction or interference test reaction

- suspend the officially tuberculosis-free herd status
- isolate the positive reactor
- the officially tuberculosis-free status may be lifted following an intradermal comparative test of all animals over six weeks of age with negative results performed at least 42 days after single intradermal test performance

b) in the holdings with inconclusive reactors to single intradermal tuberculin test with mammalian tuberculin (also when last single intradermal tuberculin test was performed previous year and reasonable suspicion of false positive reaction or interference reaction is in place as result e.g. presence of different mycobacteriae, evidence M. avium subsp. M. paratuberculosis, etc.), further test to clarify the status of inconclusive reactors the intradermal comparative test have to be used.

Intradermal comparative test inconclusive reactors are subjected to repetitive test after at least 42 days. If the animals after repeated intradermal comparative test are not negative, shall be deemed to be positive

reactors - these animals are removed from the herd and after their slaughter, laboratory and epizootical examination is performed.

If tuberculosis is not confirmed, all animals over six weeks of age are subjected to another intradermal comparative test which is performed after at least 42 days from the removal of the positive reactor .

If the tuberculosis is confirmed, the officially tuberculosis-free status is to be withdrawn and the procedure of the Governmental ordinance 280/2003 Coll. on animal health problems affecting intra-Community trade in bovine animals and swine should be followed.

c) In the holdings with positive *M.bovis* or *M.avium* microbiological result and in the case of staff tuberculosis affection

C) Bacteriological examination

- after slaughtering of positive reactors

- case of evidence of a significant changes indicating tuberculosis

Measures in case of the positive findings or single cases

slaughtering, additional laboratory examination, notification from National Reference Laboratory to State Veterinary and Food Administration of the Slovak Republic and SVFA notify to EU

Measures in case of the positive findings or single cases

slaughtering, additional laboratory examination, notification from National Reference Laboratory to State Veterinary and Food Administration of the Slovak Republic and SVFA notify to EU

Notification system in place

District veterinarian or inspector notify suspect or positive findings to DVFA, RVFA and SVFA

Results of examinations: are notified from National Reference Laboratory to State Veterinary and Food Administration of the Slovak Republic.

Results of the investigation

See in relevant tables.

Table Tuberculosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Analytical Method	Sampling unit	Units tested	Total units positive for Mycobacterium	M. bovis	M. tuberculosis
Deer - farmed - red deer - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > lymph nodes	Domestic		Animal	1	0		
Pigs - mixed herds - unspecified - sows - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > lymph nodes	Domestic		Animal	1	0		
	Mycobacterium spp., unspecified										
Deer - farmed - red deer - Farm - Surveillance											
Pigs - mixed herds - unspecified - sows - Slaughterhouse - Surveillance											

Table Bovine tuberculosis in countries and regions that do not receive Community co-financing for eradication programmes

If present, the row "Total -1" refers to analogous data of the previous year.

Region	Total number of existing bovine		Officially free herds		Infected herds		Routine tuberculin testing		Number of tuberculin tests carried out before the introduction into the herds (Annex A(I)(2)(c) third indent (1) of Directive 64/432/EEC)	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological	Number of animals detected positive in bacteriological examination
	Herds	Animals	Number of herds	%	Number of herds	%	Interval between routine tuberculin tests	Number of animals tested			
Slovenská Republika	8608	480097	8608	100	0	0	every four years	52172	0	0	0
Total : ¹⁾	8608	480097	8608	100	0	0	N.A.	52172	0	0	0

Comments:

¹⁾ N.A.

2.6 BRUCELLOSIS

2.6.1 General evaluation of the national situation

A. Brucellosis general evaluation

History of the disease and/or infection in the country

Liquidation of brucellosis in the years 1959 - 1964 was mainly based on antibody proof. In the Slovak Republic the vaccination was never used in liquidation of brucellosis and it was proceeded only by radical or elimination method in recovering of the holding. In case of detection of suspicion on presence of bovine brucellosis, a respective veterinary administration authority immediately issued measures for the respective holding in order to confirm or exclude the disease in the holding, it mainly restricted movement from the holding, ordered separate stabling of infected animals or animals suspected from the disease, from healthy animals, ensured taking of suitable samples for laboratory examination.

Ordered measures were cancelled only after an official ruling out of bovine brucellosis in the holding – the negative result of the laboratory examination.

In case of confirmation of brucellosis the outbreak of the disease was defined and it was proceeded either using the radical or elimination method of eradication of the holding.

National evaluation of the recent situation, the trends and sources of infection

Slovakia is officially free of brucellosis (*B.melitensis*, *B. abortus*).

Recent actions taken to control the zoonoses

Within the framework of „Plan of veterinary prevention and protection of state territory in 2013“ continuous monitoring of epidemiological situation through monitoring of antibodies against *Brucella* in holdings was carried out in 2013. Detection of postinfection anti-brucella antibodies was performed within targeted intravital diagnostics in case of suspicion that abortions of female animals were caused by *Brucella* and within preventive diagnostics in holdings.

Except cattle, sheep and goats, plan of veterinary prevention and protection includes monitoring of brucellosis in pigs.

In the Slovak Republic there is obligatory to notify abort cases at which the suspicion from being happened due to the brucellosis occurrence exists, and such cases are examined by the competent veterinary administration authority. After abort there is obligation to examine animal in interval of 21 days. Stillbirths and placenta are tested bacteriologically for presence of *brucella*.

2.6.2 Brucella in animals

A. Brucella abortus in bovine animals

Status as officially free of bovine brucellosis during the reporting year

The entire country free

Slovakia is officially free of brucellosis based on Commission Decision 2005/179/ES.

Free regions

All regions are free of brucellosis.

Monitoring system

Sampling strategy

Samples are taken within the frame of monitoring system or in case of abort.

-Examination of blood samples serologically:

-once per year 25% of holdings in the district - all animals over 24 months of age

-once per year new holding registered in 2013 – all cattle over 24 month

-once per year bulls in insemination centre and bulls used for natural breeding and before basic selection of young breeding bulls, tests should be performed up to 12 months since the last examination.

-in case of undiscriminated examinations in quarantine, feminine animals over 12 months of age intended for breeding and production and breeding bulls over 12 months of age (except slaughter) from third countries and brucellosis non-free member states.

-in case of abort animals are tested serologically and bacteriologically

Frequency of the sampling

Samples are taken once per year within the frame of monitoring system.

In case of abort, cows are tested two times in interval of 21 days.

Type of specimen taken

Blood, foetus, placenta or other tissues for bacteriological identification

Case definition

An animal is considered to be infected with *Brucella* spp. in case of positive serological test results and the epidemiological situation of the herd indicates the possibility that a brucella infection has been introduced to the herd and in case bacteriological isolation of the agent.

Diagnostic/analytical methods used

Diagnostic methods used are presented in the Annex 4 of the Ordinance of the Government of the Slovak Republic No.280/2003 Coll. of 9 July 2003 on health problems affecting the trade with bovine animals and porcine animals – it is the full transposition of the Annex C of the Council Directive 64/ 432 / EEC

Serological tests: Serum agglutination test, Complement fixation test, Rose Bengal test, ELISA

Bacteriological tests: Cultivation, isolation and identification of bacteria genus *Brucella*

Identification of bacteria (biotype)

Biochemical tests

Agglutination in monospecific antisera

Typing with bacteriophages

Molecular tests: Real-time PCR

Vaccination policy

In SR the vaccination has been never used.

Control program/mechanisms

The control program/strategies in place

Slovak Republic free of brucellosis (*B.melitensis*) based on Commission Decision 2005/179/ES. For retention this status there is performing surveillance according Plan of veterinary prevention and protection of state territory in 2013“. Competent authority has to inform owners about requirements to retain status of official brucellosis free country and prophylactic and diagnostic actions. Owner is responsible to perform these actions. Registration of farm in Central Evidence of Animals is requirement for declaration of the status. New registered farms in Central Evidence of Animals retain status “unknown”, till fulfilling of requirements for declaration of status free of brucellosis or officially free of brucellosis. In case of significant discounts in identification and registration of animals in Central Evidence found within controls on spot is status of free of brucellosis or officially free of brucellosis suspended or withdrawal. The condition of movement between holdings on the territory of the Slovak Republic is issuing of an accompanying document on holding classification by official veterinarian in place of origin of animals. The condition of issuing of this document is the fulfilment of criteria for registration of farm and identification of animals, clinical investigation of breeding animals and animals for production and the fulfilment of criteria for retention of the officially free status

During the time of suspicion which lasts until the negative results of tests mentioned in the previous paragraph are obtained, in case of the herd of the origin or transit or the suspected animal and herds epizootologically connected with it, the status of officially recognized as brucellosis-free will be suspended. Bovine animals moved into the herd must originate from herds officially recognized as brucellosis-free status, and in case of bovine animals older than 12 months, it must have the titer of antibodies less than 30 IU agglutination for ml in given serum-agglutination test performed in compliance with Annex 4 of the Ordinance of the Government of the Slovak Republic No. 280/2003 Coll. on health problems affecting the trade with bovine animals and porcine animals, or they reacted negatively on each other test approved in accordance with EU requirements during 30 days before the date of introduction into the herd.

Recent actions taken to control the zoonoses

- continuous monitoring of epidemiological situation through monitoring of antibodies against *Brucella* in holdings
- obligatory notification of abort cases

Measures in case of the positive findings or single cases

Each bovine animal suspicious of brucellosis is subject to the official epizootological examination for brucellosis consisting of minimum 2 serological blood tests, including complement fixation test (CFT) and microbiological examination of appropriate samples.

During the time of suspicion which lasts until the negative results of tests mentioned in the previous paragraph are obtained, in case of the herd of the origin or transit or the suspected animal and herds epizootologically connected with it, the status of officially recognized as brucellosis-free will be suspended.

Notification system in place

In the Slovak Republic there is obligatory to notify abort cases at which the suspicion from being happened due to the brucellosis occurrence exists, and such cases are examined by the competent veterinary administration authority.

Each bovine animal suspicious of brucellosis infection shall be notified to the competent veterinary administration authority and is subject to the official epizootological examination for brucellosis consisting of minimum 2 serological blood tests, including complement fixation test (CFT) and microbiological examination of appropriate samples.

Results of the investigation

See tables.

B. Brucella melitensis in goats

Status as officially free of caprine brucellosis during the reporting year

The entire country free

The whole territory Slovak Republic is officially free of sheep and goat brucellosis in accordance with Commission Decision No. 97/232/ES.

The disease has never been found in the Slovak Republic.

Free regions

All regions are free of caprine brucellosis.

Monitoring system

Sampling strategy

Examination of individual blood samples serologically

- once a year there are investigated 5% of female animals from each herd over 6 months of age
- once a year all breeding he-goats
- in case of abort, animals are tested both serologically and bacteriologically

Frequency of the sampling

- once a year according to „Plan of veterinary prevention and protection of state territory in 2013"
- blood samples of the animals in case of abort are tested two times in interval of 21 days

Type of specimen taken

Blood, fetus, placenta

Case definition

An animal is considered to be infected with *Brucella* spp. in case of positive serological test results and the epidemiological situation of the herd indicates the possibility that a brucella infection has been introduced to the herd and in case bacteriological isolation of the agent.

Diagnostic/analytical methods used

According to Council Directive 64/432/EEC and OIE diagnostics techniques:

Serological tests: Serum agglutination test, Complement fixation test, Rose bengal test, ELISA

Bacteriological tests: Cultivation, isolation and identification of bacteria genus *Brucella*

Identification of bacteria (biotype)

Biochemical tests

Agglutination in monospecific antisera

Typing with bacteriophages

Real-time PCR

Vaccination policy

vaccination is not performed

Control program/mechanisms

The control program/strategies in place

National compulsory monitoring programme was organised by the competent authority - State Veterinary and Food Administration of Slovak republic according to „Plan of veterinary prevention and protection of state territory in 2013.“

Notification system in place

In the Slovak Republic there is obligatory to notify about cases at which the suspicion from being happened due to the brucellosis occurrence exists, and such cases are examined by the competent veterinary administration authority.

Results of the investigation

See tables.

National evaluation of the recent situation, the trends and sources of infection

The disease has never been found in the Slovak Republic.

C. Brucella melitensis in sheep

Status as officially free of ovine brucellosis during the reporting year

The entire country free

The whole territory Slovak Republic is officially free of sheep and goat brucellosis in accordance with Commission Decision No. 97/232/ES.

The disease has never been found in the Slovak Republic.

Free regions

All regions are free of ovine brucellosis.

Monitoring system

Sampling strategy

Examination of individual blood samples serologically

-once a year there are investigated 5% of female animals from each herd over 6 months of age

-once a year all breeding rams

-in case of abort, animals are tested both serologically and bacteriologically

Frequency of the sampling

-once a year according to „Plan of veterinary prevention and protection of state territory in 2013"

-blood samples of the animals in case of abort are tested two times in interval of 21 days

Type of specimen taken

Blood, foetus, placenta

Methods of sampling (description of sampling techniques)

Case definition

An animal is considered to be infected with *Brucella* spp. in case of positive serological test results and the epidemiological situation of the herd indicates the possibility that a brucella infection has been introduced to the herd and in case bacteriological isolation of the agent.

Diagnostic/analytical methods used

According to Council Directive 64/432/EEC and OIE diagnostics techniques:

Serological tests: Serum agglutination test, Complement fixation test, Rose bengal test, ELISA

Bacteriological tests: Cultivation, isolation and identification of bacteria genus *Brucella*

Identification of bacteria (biotype)

Biochemical tests

Agglutination in monospecific antisera

Typing with bacteriophages

Real-time PCR

Vaccination policy

Vaccination is not performed.

Control program/mechanisms

The control program/strategies in place

National compulsory monitoring programme was organised by the competent authority - State Veterinary and Food Administration of Slovak republic according to „Plan of veterinary prevention and protection of state territory in 2013“.

Notification system in place

In the Slovak Republic there is obligatory to notify about cases at which the suspicion from being happened due to the brucellosis occurrence exists, and such cases are examined by the competent veterinary administration authority.

Results of the investigation

See tables.

National evaluation of the recent situation, the trends and sources of infection

The disease has never been found in the Slovak Republic.

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
All animals - zoo animals - Zoo - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	13	0			
Bison - zoo animals - Zoo - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	1	0			
Cattle (bovine animals) - unspecified - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	3260	0			
Cattle (bovine animals) - unspecified - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	49729	0			

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
Cattle (bovine animals) - unspecified - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	414	0			
Deer - farmed - fallow deer - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	3	0			
Deer - farmed - red deer - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	107	0			
Dogs - pet animals - Unknown - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	16	0			
Goats - animals over 1 year - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	14	0			

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
Goats - animals over 1 year - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	1017	0			
Goats - animals over 1 year - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	87	0			
Hares - wild - Hunting - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	53	0			
Mouflons - wild - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	124	0			
Pigs - unspecified - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	931	0			

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
Pigs - unspecified - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	483	0			
Pigs - unspecified - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	117	0			
Sheep - animals over 1 year - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	1119	0			
Sheep - animals over 1 year - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	22656	0			
Sheep - animals over 1 year - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	184	0			

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
Solipeds, domestic - horses - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > foetus/stillbirth	Domestic	Animal	3	0			
Solipeds, domestic - horses - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > blood	Domestic	Animal	8	0			
Solipeds, domestic - horses - Farm - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	33	0			
Wild boars - wild - Hunting - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic	Animal	9	0			

Table Brucellosis in other animals

	Brucella spp., unspecified
All animals - zoo animals - Zoo - Surveillance	
Bison - zoo animals - Zoo - Surveillance	
Cattle (bovine animals) - unspecified - Farm - Surveillance	
Cattle (bovine animals) - unspecified - Farm - Surveillance	
Cattle (bovine animals) - unspecified - Farm - Surveillance	
Deer - farmed - fallow deer - Farm - Surveillance	
Deer - farmed - red deer - Farm - Surveillance	
Dogs - pet animals - Unknown - Surveillance	
Goats - animals over 1 year - Farm - Surveillance	
Goats - animals over 1 year - Farm - Surveillance	
Goats - animals over 1 year - Farm - Surveillance	
Hares - wild - Hunting - Surveillance	
Mouflons - wild - Farm - Surveillance	
Pigs - unspecified - Farm - Surveillance	
Pigs - unspecified - Farm - Surveillance	
Pigs - unspecified - Farm - Surveillance	
Sheep - animals over 1 year - Farm - Surveillance	

Table Brucellosis in other animals

	Brucella spp., unspecified
Sheep - animals over 1 year - Farm - Surveillance	
Sheep - animals over 1 year - Farm - Surveillance	
Solipeds, domestic - horses - Farm - Surveillance	
Solipeds, domestic - horses - Farm - Surveillance	
Solipeds, domestic - horses - Farm - Surveillance	
Wild boars - wild - Hunting - Surveillance	

Table Ovine or Caprine Brucellosis in countries and regions that do not receive Community co-financing for eradication programme

If present, the row "Total -1" refers to analogous data of the previous year.

Region	Total number of existing		Officially free herds		Infected herds		Surveillance			Investigations of suspect cases				
	Herds	Animals	Number of herds	%	Number of herds	%	Number of herds tested	Number of animals tested	Number of infected herds	Number of animals tested with serological blood tests	Number of animals positive serologically	Number of animals examined microbiologically	Number of animals positive microbiologically	Number of suspended herds
Slovenská Republika	4293	401738	4112	95.78	0	0	3529	23422	0	572	0	273	0	0
Total : ¹⁾	4293	401738	4112	95.78	0	0	3529	23422	0	572	0	273	0	0

Comments:

¹⁾ N.A.

Table Bovine brucellosis in countries and regions that do not receive Community co-financing for eradication programme

If present, the row "Total -1" refers to analogous data of the previous year.

	Total number of existing bovine		Officially free herds		Infected herds		Surveillance						Investigations of suspect cases								
							Serological tests			Examination of bulk milk			Information about			Epidemiological investigation					
	Herds	Animals	Number of herds	%	Number of herds	%	Number of bovine herds tested	Number of animals tested	Number of infected herds	Number of bovine herds tested	Number of animals or pools tested	Number of infected herds	Number of notified abortions whatever cause	Number of isolations of Brucella infection	Number of abortions due to Brucella abortus	Number of animals tested with serological blood tests	Number of suspended herds	Number of positive animals		Number of animals examined microbio logically	Number of animals positive microbio logically
Region																		Sero logically	BST		
Slovenská Republika	8608	480097	8608	100	0	0	1546	52844	0	0	0	0	1746	0	0	1746	0	0	0	312	0
Total : ¹⁾	8608	480097	8608	100	0	0	1546	52844	0	0	0	0	1746	0	0	1746	0	0	0	312	0

Comments:

¹⁾ N.A.

2.7 YERSINIOSIS

2.7.1 General evaluation of the national situation

A. Yersinia enterocolitica general evaluation

National evaluation of the recent situation, the trends and sources of infection

The monitoring system for Yersinia enterocolitica in the Slovak Republic has not been adopted.

In 2013 selective monitoring in pig meat, minced meat, meat products from pig meat and vegetable.
analytical method used: EN ISO 10273

In animals, suspect samples in pet animals were tested for Yersinia.

Results in tables.

2.7.2 Yersinia in foodstuffs

Table Yersinia in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Yersinia	Y. enterocolitica	Y. pseudotuberculosis
Meat from pig - fresh - chilled - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	19	2		
Meat from pig - fresh - chilled - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	10	0		
Meat from pig - meat preparation - intended to be eaten cooked - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	5	0		
Meat from pig - minced meat - intended to be eaten cooked - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	8	0		
Meat, mixed meat - meat products - fermented sausages - Processing plant - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	5	0		
Meat, mixed meat - meat products - fermented sausages - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	15	0		
Meat, mixed meat - meat products - fermented sausages - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	6	0		
Other processed food products and prepared dishes - sushi - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	1	0		

Table Yersinia in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Yersinia	Y. enterocolitica	Y. pseudotuberculosis
Vegetables - non-pre-cut - Processing plant - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	1	0		
Vegetables - non-pre-cut - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	16	0		
Vegetables - non-pre-cut - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	1	0		
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Single	25 Gram	2	0		
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	12	0		
	Yersinia spp., unspecified	Y. enterocolitica - O:3	Y. enterocolitica - O:9	Y. enterocolitica - unspecified	Y. intermedia						
Meat from pig - fresh - chilled - Retail - Monitoring	1				1						
Meat from pig - fresh - chilled - Retail - Monitoring											
Meat from pig - meat preparation - intended to be eaten cooked - Retail - Monitoring											

Table Yersinia in food

	Yersinia spp., unspecified	Y. enterocolitica - O:3	Y. enterocolitica - O:9	Y. enterocolitica - unspecified	Y. intermedia
Meat from pig - minced meat - intended to be eaten cooked - Retail - Monitoring					
Meat, mixed meat - meat products - fermented sausages - Processing plant - Monitoring					
Meat, mixed meat - meat products - fermented sausages - Retail - Monitoring					
Meat, mixed meat - meat products - fermented sausages - Retail - Monitoring					
Other processed food products and prepared dishes - sushi - Catering - Surveillance					
Vegetables - non-pre-cut - Processing plant - Monitoring					
Vegetables - non-pre-cut - Retail - Monitoring					
Vegetables - non-pre-cut - Retail - Monitoring					
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring					
Vegetables - pre-cut - ready-to-eat - Retail - Monitoring					

2.7.3 Yersinia in animals

Table Yersinia in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Yersinia	Y. enterocolitica	Y. pseudotuberculosis	Yersinia spp., unspecified
Cats - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample	Domestic	Animal	10	0			
Cats - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > faeces	Domestic	Animal	3	0			
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > faeces	Domestic	Animal	13	0			
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	11	0			

Table Yersinia in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Yersinia	Y. enterocolitica	Y. pseudotuberculosis	Yersinia spp., unspecified
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample	Domestic	Animal	95	0			
		Y. enterocolitica - O:3	Y. enterocolitica - O:9	Y. enterocolitica - unspecified							
Cats - pet animals - Unknown - Clinical investigations											
Cats - pet animals - Unknown - Clinical investigations											
Dogs - pet animals - Unknown - Clinical investigations											
Dogs - pet animals - Unknown - Clinical investigations											
Dogs - pet animals - Unknown - Clinical investigations											

2.8 TRICHINELLOSIS

2.8.1 General evaluation of the national situation

A. Trichinellosis general evaluation

National evaluation of the recent situation, the trends and sources of infection

Endemic areas of trichinellosis occurrence are East and Central Slovakia. In 2012 trichinellosis occurred also in West Slovakia after long time.

In 2012, except obligatory meat inspection and examination according Commission Regulation 2075/2005 also monitoring of trichinellosis in foxes was performed. For result see table Trichinellosis in animals.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

In finding of *Trichinella* spp. in meat of slaughtered animals, the animals carcasses are confiscated and processed in processing (rendering) plant. Upon import of meat in which larvae of trichinellae could have been present (pigs, horses, game), the import either frozen meat or certificate on its examination for trichinellosis are required.

Recent actions taken to control the zoonoses

Control of meat of slaughtered animals is provided in compliance with EU legislation Commission Regulation 2075/2005.

2.8.2 Trichinella in animals

A. Trichinella in horses

Monitoring system

Sampling strategy

For official Trichinella examination the samples as a part of post mortem inspection are systematically taken at a slaughterhouse from each carcass.

Frequency of the sampling

every slaughtered animal is sampled

Type of specimen taken

tongue or diaphragm muscle

Methods of sampling (description of sampling techniques)

taking over 10g of the specimen

Case definition

Positive results - in case of finding Trichinella spp

Diagnostic/analytical methods used

The method of magnetic mixing in digestion of pooled samples

Results of the investigation including the origin of the positive animals

See table Trichinella in animals

Control program/mechanisms

The control program/strategies in place

In the Slovak Republic the monitoring of trichinellosis is performed as a part of post mortem inspection in all solipeds on a slaughterhouse after slaughter. The samples are taken within official controls and in compliance with Regulation (EC) 854/2004 Annex I, Section IV, Chapter IX c. Point 2. and special legal rule for official controls of Trichinella in the meat with Commission Regulation 2075/2005.

Recent actions taken to control the zoonoses

Carcasses and parts of carcasses and slaughter by-products containing the striated musculature from carcasses from which the samples for Trichinella examination were taken, must not leave the premises prior to completion the examination with a negative result. The parts of carcasses not containing the striated musculature are not subject to restriction.

Measures in case of the positive findings or single cases

All positive carcasses and parts shall be judged as unfit for human consumption and removed as a by-product of Category II.

Notification system in place

The official veterinarian shall notify without any delay each confirmed or suspect finding of Trichinella to the competent DVFA and SVFA (notifiable disease).

National evaluation of the recent situation, the trends and sources of infection

At present no positive cases of trichinellosis in horses have been recorded.

Relevance of the findings in animals to findings in foodstuffs and to human cases (as a source of infection)

The meat from the animals infected with trichinella shall be judged as unfit for human consumption.

B. Trichinella in pigs

Monitoring system

Sampling strategy

General

For official *Trichinella* examination the samples as a part of post mortem inspection are systematically taken at a slaughterhouse from each carcass.

Sampling strategy is in compliance with Commission Regulation 2075/2005.

Frequency of the sampling

General

Every pig slaughtered at slaughterhouse in Slovak Republic is sampled in accredited laboratory according to Commission Regulation 2075/2005.

Every slaughtered wild boar intended to human consumption is sampled in compliance with Commission Decision 2075/2005. Samples are taken immediately after slaughter.

Type of specimen taken

General

Specimen taken is in compliance with Commission Regulation 2075/2005. Diaphragmatic pillar at the place of transition into tendinous part is taken. In case of absence of diaphragmatic pillar the tongue muscle, masseter muscle or abdominal muscle are taken.

Methods of sampling (description of sampling techniques)

General

From the sampling site the samples are taken in amount of at least 1g in fattening pigs from the diaphragmatic pillar at the place of transition into tendinous part and 2g in boars and sows from the equal place. If a predilection place is not available the alternative sample shall be taken. An alternative sample are 2g taken from the costal or sternal part of the diaphragm or from the masseter, tongue or abdominal muscles.

Case definition

General

Positive results - in case of finding *Trichinella* spp.

Diagnostic/analytical methods used

General

The method of magnetic mixing in digestion of pooled samples in compliance with Commission Regulation 2075/2005 is used.

Control program/mechanisms

The control program/strategies in place

In the Slovak Republic the monitoring of trichinellosis is performed as a part of post mortem inspection by taking the samples from the diaphragmatic pillar of each slaughter pig at a slaughterhouse after slaughter. The samples are taken within official controls and in compliance with Regulation (EC) 854/2004 Annex I, Section IV, Chapter IX c. Point 2. and special legal rule for official controls of *Trichinella* in the meat with Commission Regulation 2075/2005.

Recent actions taken to control the zoonoses

Carcasses and parts of carcasses and slaughter by-products containing the striated musculature from carcasses from which the samples for *Trichinella* examination were taken, must not leave the premises prior to completion the examination with a negative result. The parts of carcasses not containing the striated musculature are not subject to restriction.

In the year 2007 the reporting duty of performing home slaughters was introduced. Based on the risk assessment of trichinellosis occurrence in pigs slaughtered in a breeder for domestic consumption and based on results from the previous examinations and monitoring, including wild animals, the samplings were limited only to areas with a positive finding of *Trichinella* sp. in wild animals.

Measures in case of the positive findings or single cases

All positive carcasses and parts shall be judged as unfit for human consumption and removed as a by-product of Category II.

The contingency plan in place

Each DVFA worked out the contingency plan pursuant to Regulation (EC) No.2075/2005 with an overview of measures which shall be taken if the test for *Trichinella* reveals a positive result.

Notification system in place

The official veterinarian shall notify without any delay each confirmed or suspect finding of *Trichinella* to the competent DVFA and SVFA (notifiable disease).

Results of the investigation including description of the positive cases and the verification of the *Trichinella* species

See table Trichinellosis in animals

Positive or dubious results:

If the results examined by the reference method are positive or dubious, the further samples from each carcass that was in the original pooled sample shall be taken. These samples shall be mixed to pooled samples to doses 100g/ from 5 pigs. Following detection which pooled sample from 5 pigs is positive or dubious, they shall be taken from the individual pigs and each shall be examined individually by the standard reference digestion method.

The examination of samples is carried out in official laboratories of the District Veterinary and Food Administrations on approved slaughterhouses. All positive samples shall be sent in 90% ethanol into the National Reference Laboratory for PCR typing.

National evaluation of the recent situation, the trends and sources of infection

Occurrence of trichinellosis in domestic pigs is only sporadic in animal bred for the own need.

Relevance of the findings in animals to findings in foodstuffs and to human cases (as a

source of infection)

The meat from the animals infected with trichinella shall be judged as unfit for human consumption

Table Trichinella in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Trichinella	T. spiralis	Trichinella spp., unspecified	T. britovi
Solipeds, domestic - horses - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > organ/tissue	Unknown	Animal	2	0			
Bears - wild - Hunting - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	17	1			1
Cattle (bovine animals) - unspecified - Farm - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > organ/tissue	Unknown	Animal	2	0			
Foxes - wild - Hunting - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	358	38	3	4	31

Table Trichinella in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Trichinella	T. spiralis	Trichinella spp., unspecified	T. britovi
Pigs - breeding animals - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal	12753	0			
Pigs - fattening pigs - Farm - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal	50	0			
Pigs - fattening pigs - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal	615253	0			
Polecats - wild - Hunting - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > organ/tissue	Unknown	Animal	1	0			
Wild boars - wild - Game handling establishment - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal	2567	0			

Table Trichinella in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Units tested	Total units positive for Trichinella	T. spiralis	Trichinella spp., unspecified	T. britovi
Wild boars - wild - Hunting - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal	11170	10		2	

2.9 ECHINOCOCCOSIS

2.9.1 General evaluation of the national situation

A. Echinococcus spp. general evaluation

History of the disease and/or infection in the country

First cases of *Echinococcus multilocularis* in foxes occurred in 1999. Since 2000 monitoring of occurrence and spread of *E. multilocularis* in main host – foxes is carried out.

National evaluation of the recent situation, the trends and sources of infection

Comparing the previous years, *Echinococcus multilocularis* in foxes was geographically distributed to areas where did not occur in long term.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

The eggs of *Echinococcus* spp. are spread through definite hosts, dogs, foxes and other carnivora. Contaminated environment, forest fruits, vegetable and non-compliance with hygiene principles are the main risk factors of transmission of this zoonosis. Regular controls of carnivore faeces focused on detection of the presence of adult tapeworms and controls focused on the presence of larval forms in the meat of animals slaughtered in fresh meat establishments are important for determination of risk areas.

Recent actions taken to control the zoonoses

Meat of animals slaughtered in slaughterhouses is subject to the examination for the presence of *Echinococcus* larvocysts within the veterinary inspection in compliance with Regulation (EC) No 854/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption.

Routine diagnostics of dog and other carnivore faeces includes also the examination for the presence of adult tapeworm *Echinococcus*.

Monitoring of *E. multilocularis* in red foxes is carried out yearly.

Frequency of the sampling

All animals considered as intermediate hosts, slaughtered in slaughterhouses of the SR, are examined for the presence of *Echinococcus* larvocysts.

Type of specimen taken

Faeces or intestine of definite hosts, cysts from intermediate hosts.

Methods of sampling (description of sampling techniques)

Examination of the meat of animals slaughtered in slaughterhouses for the presence of larvocysts by adspection method.

Fox intestines are sent after the examination for rabies into a laboratory in a frozen state (at -18°C).

Fresh animal faeces is sent directly to a laboratory.

Case definition / definition of a positive finding

The sample is considered to be positive in case of finding tapeworms *Echinococcus* sp. in a definite host or *Echinococcus* larvocyst in intermediate host.

Diagnostic / analytical methods

The meat of slaughtered animals - by adspection method, microscopical examination of larvocyst content
Faeces (intestine content) of carnivora - microscopical examination, flotation examination, PCR

Measures in case of the positive findings or single cases

The meat of positive animals is excluded from the food chain.

2.9.2 Echinococcus in animals

Table Echinococcus in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Region	Units tested	Total units positive for Echinococcus	E. granulosus	E. multilocularis
Cats - pet animals - Veterinary clinics - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample	Domestic	Animal		315	0		
Dogs - pet animals - Veterinary clinics - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample	Domestic	Animal		1062	0		
Foxes - wild - Hunting - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal		363	81		81
Leopards - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample		Animal		1	0		

Table Echinococcus in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Region	Units tested	Total units positive for Echinococcus	E. granulosus	E. multilocularis
Other carnivores - zoo animals - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample		Animal		7	0		
Pigs - unspecified - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal		1	0		
Raccoon dogs - zoo animal - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample		Animal		1	0		
Sheep - animals over 1 year - Slaughterhouse - Surveillance	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Official sampling	animal sample > organ/tissue	Domestic	Animal		3	0		
Wolves - wild - Zoo - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Not applicable	animal sample		Animal		2	0		

Table Echinococcus in animals

	Echinococcus spp., unspecified
Cats - pet animals - Veterinary clinics - Clinical investigations	
Dogs - pet animals - Veterinary clinics - Clinical investigations	
Foxes - wild - Hunting - Monitoring	
Leopards - zoo animals - Zoo - Clinical investigations	
Other carnivores - zoo animals - Zoo - Clinical investigations	
Pigs - unspecified - Slaughterhouse - Surveillance	
Raccoon dogs - zoo animal - Zoo - Clinical investigations	
Sheep - animals over 1 year - Slaughterhouse - Surveillance	
Wolves - wild - Zoo - Clinical investigations	

2.10 TOXOPLASMOSIS

2.10.1 General evaluation of the national situation

A. Toxoplasmosis general evaluation

National evaluation of the recent situation, the trends and sources of infection

In the Slovak Republic, there is no official monitoring program for diagnostics of toxoplasmosis and this zoonosis is not under notifiable diseases. Since 2001, the percentage of infestation has increased and a considerable change in the pattern of samples has been recorded. In the past, most samples came from bovine and pig holdings, these categories of animals being gradually misplaced, resulting in a turnover in favour of testing pet animals and small ruminants.

Result see in table.

2.10.2 Toxoplasma in animals

Table Toxoplasma in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Analytical Method	Sampling unit	Units tested	Total units positive for Toxoplasma	T. gondii	Toxoplasma spp., unspecified
Cats - pet animals - Veterinary clinics - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	93	15	15	
Cats - pet animals - Veterinary clinics - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic		Animal	361	1	1	
Cattle (bovine animals) - unspecified - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	4	0		
Dogs - pet animals - Veterinary clinics - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	23	7	7	

Table Toxoplasma in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Analytical Method	Sampling unit	Units tested	Total units positive for Toxoplasma	T. gondii	Toxoplasma spp., unspecified
Goats - animals over 1 year - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	11	7	7	
Hares - wild - Hunting - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	53	0		

2.11 RABIES

2.11.1 General evaluation of the national situation

A. Rabies general evaluation

National evaluation of the recent situation, the trends and sources of infection

Rabies in the Slovak Republic is an endemic disease occurring in the silvatic form with decreasing occurrence and the main host and vector species is red fox. After period of 7 years free of rabies, 7 cases were detected in district Bardejov in the north-east of Slovakia near borders with Poland.

Results of investigation see in table Rabies in animals

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

Recent actions taken to control the zoonoses

National programme of rabies eradication in the Slovak Republic,
mandatory vaccination in domestic carnivores, oral antirabic vaccination in wildlife red fox,
identification and registration of pets,
movement control,

Laboratory diagnosis of each suspected domestic animal and control of fulfilment of National programme by veterinary database.

Laboratory diagnostics within targeted hunting for effectiveness check of vaccine

Laboratory examination of hunted or dead animals with abnormal behaviour

Indicated preventive vaccination of cattle, sheep and goats in rabies outbreaks in wildlife animals before cattle-run

2.11.2 Lyssavirus (rabies) in animals

A. Rabies in dogs

Monitoring system

Sampling strategy

The sampling is performed in suspected animals (showing abnormal behaviour), in animals which injured people, in animals found dead, in foxes submitted for control of oral vaccination.

Frequency of the sampling

Permanent sampling performed in indicated cases all year round.

Type of specimen taken

whole animal, head with first vertebra

Methods of sampling (description of sampling techniques)

Samples for examination are sent as soon as possible. Before sending it is necessary to store them at temperature up to 40 C, in order to be adequately cooled.

The sample of the whole animal is sent wrapped in PVC bag put into good closed, firm packing with sufficient amount of absorption material preventing leakage of the contents and accompanying with documentation are sent to the State Veterinary Institutes where the samples of brain are taken for investigation. Sample of the head with first vertebra is sent enwrapped into fabric moistened by 0,5% solution of formaline or vinegar. Such enwrapped sample is put into impermeable packing (PVC bag) and then into a firm packing with absorption material.

Case definition

- clinical signs of rabies in animal with anamnesis of contact with rabid animal or human, or unknown animal, which might be rabid, or without anamnesis and laboratory confirmation of rabies

A case of Rabies is defined as a detection of rabies virus antigen or the isolation of rabies virus in the brain of tested animal.

Diagnostic/analytical methods used

ELISA,FAVN,FAT,MIT,RT-PCR,isolation of agent, biological examination on mice

Vaccination policy

mandatory antirabic vaccination of domestic carnivores over three months of age with annual revaccination

Other preventive measures than vaccination in place

movement control system and system of shelters for stray animals

Control program/mechanisms

The control program/strategies in place

In 2013, National programme of rabies eradication in the Slovak Republic in 2013 was valid.

Main purpose of this control program is to retain status of country free of rabies. It's yearly elaborated and updated on the basis of analyses and evaluation of results from previous years.

Monitoring and prevention of rabies were performed according Plan of veterinary prevention and

protection of state territory in 2013.

- mandatory vaccination in domestic carnivores as well as oral antirabic vaccination in wildlife red fox,
- identification and registration of pets, movement control, laboratory diagnosis of each suspected domestic
- animal and control of fulfilment of National programme by veterinary database.

The sampling is performed: in suspected animals (showing abnormal behaviour), in animals which injured people, in animals found dead, in foxes submitted for control of oral vaccination.

Recent actions taken to control the zoonoses

mandatory notification of cases and suspicions, mandatory antirabic vaccination and movement control and co-operation between animal health and human health authorities

Suggestions to the European Union for the actions to be taken

establishing Community register of pet animals for which the Pet Passport has been issued, by which will be the competent authorities able to verify validity of Pet Passport and antirabic vaccination maybe similar to Slovak central register of pets

Measures in case of the positive findings or single cases

The measures are ordered by the District Veterinary and Food Administration in compliance with the Â§ 8, para 3, letter e) of the Act No. 39/2007 Coll.

The respective DVFA at suspicion of rabies occurrence in domestic animals orders to natural and legal persons the measures for control of animal diseases and determines the date for their fulfilment, by which

a) it orders

1. catching of stray animals by professionally eligible natural or legal persons which means a person who following passing an examination before board of examiners finished the training Catching of stray or lost animals at the Institute for Postgraduate Studies in Kosice and obtained a Certificate on Professional eligibility for the performance of catching of lost, abandoned and stray animals or by other person performing this activity under the supervision of professionally eligible natural or legal person,
2. disinfection of the place of killing or death of rabid animal and also thorough disinfection and incineration of all items which could have come into contact with rabid animal,
3. safe disposal of dead and killed animals by rendering plant,
4. isolation and monitoring of all susceptible animals which came or could have come into contact with an animal suspicious of rabies,
5. safe disposal of milk obtained from cows suspicious of rabies and prohibition of the use of products of warm-blooded animals for human consumption and for feeding purposes if these animal came or could have come into contact with an animal suspicious of rabies,
6. obligation to report each case of exposition of people and animals, behaviour changes in domestic animals, death of wildlife in an outbreak and in its nearness,

b) it prohibits

1. movement and collection of susceptible animal species,
2. free movement of susceptible animals in an outbreak,

The respective District Veterinary and Food Administration in case of non-confirmation of rabies occurrence lifts the measures for disease control.

The respective District Veterinary and Food Administration at confirmation of rabies occurrence in domestic animals extends the previous measures for disease control by further measures for disease control and determines to the natural and legal persons the date for their fulfilment by which

a) it defines an rabies outbreak,

b) it orders in an outbreak

1. its marking with warning tables with writing „CAUTION RABIES !“
2. killing of susceptible animals which came into contact with an animal positive to the presence of rabies antigen,

3. to perform the registration of dogs and cats and protective vaccination of dogs, cats and other carnivore over 3 months of age which have not been vaccinated against rabies so far or since the last antirabic vaccination the period longer than 1 year elapsed, provided that they did not come into contact or they did not have the possibility to come into contact with an animal positive to the presence of rabies antigen,
4. to perform protective vaccination of susceptible domestic animals; it will permit to use milk and other products obtained from them for the human consumption and feeding purposes only following gaining the immunity (this period will be stated based on the date of vaccine manufacturer).

Notification system in place

Based on the Act No. 39/2007 Coll. II. each natural or legal person authorized to dispose of live animals is obliged to notify without delay to the veterinary administration authority any suspicion of the disease and death of any animal and to allow examination of such animal.

In case of failing to report any suspicion of the disease, an animals death or failing to allow its examination, is committed.

Results of the investigation

see table

National evaluation of the recent situation, the trends and sources of infection

Rabies in the Slovak Republic is an endemic disease occurring in the silvatic form with decreasing occurrence and the main host and vector species is red fox. After period of 7 years free of rabies, 2 positive dogs were found in district Bardejov in the north-east of Slovakia near borders with Poland.

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Badgers - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		10	0		
Bats - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		3	0		
Cats - pet animals - Farm - Clinical investigations		Suspect sampling	Official sampling	animal sample > brain		Animal		100	0		
Cattle (bovine animals) - unspecified - Farm - Clinical investigations		Suspect sampling	Official sampling	animal sample > brain		Animal		2	0		
Deer - wild - red deer - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		4	0		
Deer - wild - roe deer - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		2	0		
Dogs - pet animals - Unknown - Clinical investigations		Suspect sampling	Official sampling	animal sample > brain		Animal		164	2	2	
Foxes - wild - Unknown - Control and eradication programmes		Objective sampling	Official sampling	animal sample > brain		Animal		3152	0		
Foxes - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		439	4	4	
Hamsters - pet animals - Unknown - Clinical investigations		Suspect sampling	Official sampling	animal sample > brain		Animal		2	0		
Hares - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		1	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Hedgehogs - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		1	0		
Lynx - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		1	0		
Marten - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		10	1	1	
Mice - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		1	0		
Rabbits - farmed - Farm - Clinical investigations		Suspect sampling	Official sampling	animal sample > brain		Animal		2	0		
Raccoon dogs - wild - Unknown - Surveillance		Objective sampling	Official sampling	animal sample > brain		Animal		5	0		
Rats - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		14	0		
Rodents - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		3	0		
Squirrels - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		2	0		
Wild boars - wild - Unknown - Surveillance		Suspect sampling	Official sampling	animal sample > brain		Animal		7	0		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Badgers - wild - Unknown - Surveillance		
Bats - wild - Unknown - Surveillance		
Cats - pet animals - Farm - Clinical investigations		
Cattle (bovine animals) - unspecified - Farm - Clinical investigations		
Deer - wild - red deer - Unknown - Surveillance		
Deer - wild - roe deer - Unknown - Surveillance		
Dogs - pet animals - Unknown - Clinical investigations		
Foxes - wild - Unknown - Control and eradication programmes		
Foxes - wild - Unknown - Surveillance		
Hamsters - pet animals - Unknown - Clinical investigations		
Hares - wild - Unknown - Surveillance		
Hedgehogs - wild - Unknown - Surveillance		
Lynx - wild - Unknown - Surveillance		
Marten - wild - Unknown - Surveillance		
Mice - wild - Unknown - Surveillance		
Rabbits - farmed - Farm - Clinical investigations		
Raccoon dogs - wild - Unknown - Surveillance		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Rats - wild - Unknown - Surveillance		
Rodents - wild - Unknown - Surveillance		
Squirrels - wild - Unknown - Surveillance		
Wild boars - wild - Unknown - Surveillance		

2.12 STAPHYLOCOCCUS INFECTION

2.12.1 General evaluation of the national situation

2.12.2 Staphylococcus in animals

A. Staphylococcus in Animals

Monitoring system

Sampling strategy

The monitoring system for Staphylococcus in the Slovak Republic has not been adopted.

Samples were tested for presence of Staphylococcus aureus. During testing the antimicrobial profile of positive isolates of Staphylococcus aureus is also tested antibiotic ceftiofur, as the main indicator of resistance to methicillin. In the case of a positive response to the level of phenotype isolate is then tested for the presence of mecA and MECCA genes encoding resistance to methicillin.

Table Staphylococcus in Animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcus	S. aureus, meticillin resistant (MRSA)	S. aureus, meticillin resistant (MRSA) - spa-type t011
Cats - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal		87	18	0	
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal		4	1	0	
Cattle (bovine animals) - dairy cows - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > milk	Domestic	Animal		2052	296	0	
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > milk	Domestic	Animal		2	1	0	

Table Staphylococcus in Animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcus	S. aureus, meticillin resistant (MRSA)	S. aureus, meticillin resistant (MRSA) - spa-type t011
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > faeces	Domestic	Animal		13	2	0	
Dogs - pet animals - Unknown - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal		513	195	0	
Gallus gallus (fowl) - laying hens - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	herd/flock		2	1	0	
Goats - animals over 1 year - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > milk	Domestic	Animal		63	11	0	
Pigeons - meat production flocks - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	herd/flock		17	1	0	

Table Staphylococcus in Animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcus	S. aureus, meticillin resistant (MRSA)	S. aureus, meticillin resistant (MRSA) - spa-type t011
Pigs - unspecified - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal		22	5	0	
Rabbits - farmed - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample	Domestic	Animal		6	6	0	
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > organ/tissue	Domestic	Animal		14	4	0	
Sheep - milk ewes - Farm - Clinical investigations	State Veterinary and Food Institutes, State Veterinary Institute	Suspect sampling	Not applicable	animal sample > milk	Domestic	Animal		36	9	0	

Table Staphylococcus in Animals

	S. aureus, meticillin resistant (MRSA) - spa -type t108	S. aureus, meticillin resistant (MRSA) - spa -type t034	S. aureus, meticillin resistant (MRSA) - MRSA, unspecified
Cats - pet animals - Unknown - Clinical investigations			
Cattle (bovine animals) - calves (under 1 year) - Farm - Clinical investigations			
Cattle (bovine animals) - dairy cows - Farm - Clinical investigations			
Dogs - pet animals - Unknown - Clinical investigations			
Dogs - pet animals - Unknown - Clinical investigations			
Dogs - pet animals - Unknown - Clinical investigations			
Gallus gallus (fowl) - laying hens - Farm - Clinical investigations			
Goats - animals over 1 year - Farm - Clinical investigations			
Pigeons - meat production flocks - Farm - Clinical investigations			
Pigs - unspecified - Farm - Clinical investigations			
Rabbits - farmed - Farm - Clinical investigations			
Sheep - animals under 1 year (lambs) - Farm - Clinical investigations			
Sheep - milk ewes - Farm - Clinical investigations			

Table Staphylococcus in Animals

2.13 Q-FEVER

2.13.1 General evaluation of the national situation

2.13.2 Coxiella (Q-fever) in animals

A. C. burnetii in animal

Monitoring system

Sampling strategy

Samples were taken according „Plan of veterinary prevention and protection of state territory in 2013“ in cows and in goats.

Blood samples were investigated serologically in case of abortion and in case of suspicion for disease or on base of clinical signs.

Frequency of the sampling

Samples are taken in case of abort and animals are tested two times in interval of 21 days.

Type of specimen taken

Blood

Diagnostic/analytical methods used

serological: CFT

Results of the investigation

See table Coxiella burnetii in animals

National evaluation of the recent situation, the trends and sources of infection

Q-fever in Slovak Republic occurs and monitoring is carried out according „Plan of veterinary prevention and protection of state territory “in cows and goats.

Samples are taken:

- within the framework of „Plan of veterinary prevention and protection of state territory in 2013“ in cows and goats in case of abortion.
- in case of suspicion for disease or on base of clinical signs.

Table *Coxiella burnetii* (Q fever) in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Analytical Method	Sampling unit	Units tested	Total units positive for <i>Coxiella</i> (Q-fever)	<i>C. burnetii</i>	No of clinically affected herds
Cattle (bovine animals) - Farm - Clinical investigations	SVFI, SVI	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	40	0		
Goats - Farm - Clinical investigations	SVFI, SVI	Suspect sampling	Not applicable	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	21	0		
Cattle (bovine animals) - Farm - Monitoring - passive	SVFI, SVI	Suspect sampling	Official sampling	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	3355	73	73	
Goats - Farm - Monitoring - passive	SVFI, SVI	Suspect sampling	Official sampling	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	136	2	2	
Sheep - Farm - Monitoring - passive	SVFI, SVI	Suspect sampling	Official sampling	animal sample > blood	Domestic	Complement fixation test (CFT)	Animal	15	0		

2.14 WEST NILE VIRUS INFECTIONS

2.14.1 General evaluation of the national situation

2.14.2 West Nile Virus in animals

A. West Nile Virus in Animals

Monitoring system

Sampling strategy

According „Plan of veterinary prevention and protection of state territory in 2013“ monitoring of the epidemiological situation through monitoring of West Nile virus fever antibodies in horses. Detection of postinfection antibodies was performed within targeted intravital diagnostics in horses and the targeted intravital diagnosis of suspected CNS disease.

Frequency of the sampling

In horse holdings the breeding stallions prior to and after the completion of a mating season, mares prior to mating, sport and production horses used for the breeding and animals with suspicion of the disease of CNS were examined.

Type of specimen taken

Blood

Diagnostic/analytical methods used

ELISA IgM

ELISA IgG

Real-time RT-PCR

Results of the investigation

See table.

National evaluation of the recent situation, the trends and sources of infection

West Nile Fever virus was never isolated. Presence of virus was detected only serologically.

Table West Nile Virus in Animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Vaccination status	Analytical Method	Sampling unit	Region	Units tested	Total units positive for West Nile Virus
Solipeds, domestic - horses - Farm - Monitoring	State Veterinary and Food Institutes, State Veterinary Institute	Objective sampling	Official sampling	animal sample > blood	Domestic			Animal		412	0
	West Nile Virus										
Solipeds, domestic - horses - Farm - Monitoring											

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1 ESCHERICHIA COLI, NON-PATHOGENIC

3.1.1 General evaluation of the national situation

A. Escherichia coli general evaluation

National evaluation of the recent situation, the trends and sources of infection

The positive isolates have formed the testing collection and were obtained from clinical samples. Situation regarding resistance in commensal *Escherichia coli* is long-term stability. The highest percentages of isolates were resistant to tetracycline (relative cheap antimicrobials). A higher level of resistance to cephalosporins was observed but the presence of expanded spectrum β -lactamases was not confirmed in Slovak herds. The fluoroquinolone resistance was around 15% and was mostly encoded by chromosomal mutation. Very low level was detected to aminoglycosides.

3.1.2 Antimicrobial resistance in Escherichia coli, non-pathogenic

Table Antimicrobial susceptibility testing of E. coli in Cattle (bovine animals)

Escherichia coli, non-pathogenic Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	E.coli, non-pathogenic, unspecified	
	yes	
	67	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	33	3
Aminoglycosides - Kanamycin	16	7
Aminoglycosides - Streptomycin	24	20
Amphenicols - Chloramphenicol	16	0
Cephalosporins - 3rd generation cephalosporins	8	1
Fluoroquinolones - Enrofloxacin	50	13
Penicillins - Ampicillin	33	18
Quinolones - Nalidixic acid	21	9
Sulfonamides	22	15
Tetracyclines - Tetracycline	54	26

Table Antimicrobial susceptibility testing of E. coli in Pigs

Escherichia coli, non-pathogenic	E.coli, non-pathogenic, unspecified	
	yes	
	20	
	N	n
Antimicrobials:		
Fluoroquinolones - Enrofloxacin	16	1
Tetracyclines - Tetracycline	20	16

Table Antimicrobial susceptibility testing of *E. coli* in *Gallus gallus* (fowl)

Escherichia coli, non-pathogenic Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	E.coli, non-pathogenic, unspecified	
	yes	
	9	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	9	0
Aminoglycosides - Kanamycin	2	0
Aminoglycosides - Streptomycin	9	2
Amphenicols - Chloramphenicol	2	0
Fluoroquinolones - Enrofloxacin	8	6
Penicillins - Ampicillin	9	5
Quinolones - Nalidixic acid	7	6
Sulfonamides	8	3
Tetracyclines - Tetracycline	5	2

Table Antimicrobial susceptibility testing of E. coli in Turkey

Escherichia coli, non-pathogenic Isolates out of a monitoring program (yes/no) Number of isolates available in the laboratory	E.coli, non-pathogenic, unspecified	
	yes	
	2	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	2	0
Aminoglycosides - Kanamycin	2	0
Aminoglycosides - Streptomycin	2	1
Amphenicols - Chloramphenicol	0	0
Fluoroquinolones - Enrofloxacin	2	1
Penicillins - Ampicillin	2	2
Quinolones - Nalidixic acid	2	1
Sulfonamides	2	1
Tetracyclines - Tetracycline	2	2

Table Cut-off values used for antimicrobial susceptibility testing of *Escherichia coli*, non-pathogenic in Animals

Test Method Used		Standard methods used for testing		
Disc diffusion		NCCLS/CLSI		

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin	EFSA	2	
	Streptomycin	NON-EFSA		
Amphenicols	Chloramphenicol	EFSA	16	
	Florfenicol		16	
Cephalosporins	3rd generation cephalosporins		8	
	Cefotaxime	EFSA	0.25	
	Ceftazidime	EFSA	0.5	
Fluoroquinolones	Ciprofloxacin	EFSA	0.064	
Penicillins	Ampicillin	EFSA	8	
Quinolones	Nalidixic acid	EFSA	16	
Sulfonamides	Sulfonamides	EFSA	256	
	Sulfamethoxazole	EFSA	64	
Tetracyclines	Tetracycline	EFSA	8	

Table Cut-off values used for antimicrobial susceptibility testing of *Escherichia coli*, non-pathogenic in Animals

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Trimethoprim	Trimethoprim	EFSA	2	

Table Cut-off values used for antimicrobial susceptibility testing of *Escherichia coli*, non-pathogenic in Feed

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		16	
Amphenicols	Chloramphenicol		16	
Cephalosporins	Cefotaxime		0.25	
	Ceftazidime		0.5	
Fluoroquinolones	Ciprofloxacin		0.064	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfonamides		256	
	Sulfamethoxazole		64	
Tetracyclines	Tetracycline		8	
Trimethoprim	Trimethoprim		2	

Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Feed

Table Cut-off values used for antimicrobial susceptibility testing of *Escherichia coli*, non-pathogenic in Food

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		16	
Amphenicols	Chloramphenicol		16	
Cephalosporins	Cefotaxime		0.25	
	Ceftazidime		0.5	
Fluoroquinolones	Ciprofloxacin		0.064	
Penicillins	Ampicillin		8	
Quinolones	Nalidixic acid		16	
Sulfonamides	Sulfonamides		256	
	Sulfamethoxazole		64	
Tetracyclines	Tetracycline		8	
Trimethoprim	Trimethoprim		2	

Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Food

3.2 ENTEROCOCCUS, NON-PATHOGENIC

3.2.1 General evaluation of the national situation

3.2.2 Antimicrobial resistance in Enterococcus, non-pathogenic isolates

Table Cut-off values for antibiotic resistance of *E. faecalis* in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		512	
Amphenicols	Chloramphenicol		32	
Fluoroquinolones	Ciprofloxacin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	

Table Cut-off values for antibiotic resistance of *E. faecalis* in Animals

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline		4	

Table Cut-off values for antibiotic resistance of *E. faecalis* in Feed

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		512	
Amphenicols	Chloramphenicol		32	
Fluoroquinolones	Ciprofloxacin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Tetracyclines	Tetracycline		4	

Table Cut-off values for antibiotic resistance of *E. faecalis* in Food

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		512	
Amphenicols	Chloramphenicol		32	
Fluoroquinolones	Ciprofloxacin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Tetracyclines	Tetracycline		4	

Table Cut-off values for antibiotic resistance of *E. faecium* in Animals

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		128	
Amphenicols	Chloramphenicol		32	
Fluoroquinolones	Ciprofloxacin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Streptogramins	Quinupristin/Dalfopristin		1	
Tetracyclines	Tetracycline		4	

Table Cut-off values for antibiotic resistance of *E. faecium* in Feed

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		128	
Amphenicols	Chloramphenicol		32	
Fluoroquinolones	Ciprofloxacin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Streptogramins	Quinupristin/Dalfopristin		1	
Tetracyclines	Tetracycline		4	

Table Cut-off values for antibiotic resistance of *E. faecium* in Food

Test Method Used		Standard methods used for testing		
			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		128	
Amphenicols	Chloramphenicol		32	
Fluoroquinolones	Ciprofloxacin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Streptogramins	Quinupristin/Dalfopristin		1	
Tetracyclines	Tetracycline		4	

4. INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS

4.1 CRONOBACTER

4.1.1 General evaluation of the national situation

4.1.2 Cronobacter in foodstuffs

A. Cronobacter in foodstuffs

Monitoring system

Sampling strategy

Public Health Authority of the Slovak Republic and District Public Health Authorities carry out official food control according Act on foodstuffs 152/1995 which set the target control of food. Samples taken in compliance with this target plan are investigated in accredited laboratories for analyses for *Cronobacter sakazakii*.

Samples are taken from pharmacies, distribution chain and during producing.

Frequency of the sampling

- in accordance with target plan

Type of specimen taken

foodstuffs for children, infant formula

Diagnostic/analytical methods used

ISO/DTS 22964 Detection of *Cronobacter sakazakii*

Results of the investigation

See Table

Table Cronobacter in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Cronobacter	Cronobacter sakazakii	Cronobacter spp, unspecified
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	25 Gram	1	0		
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	26	0		
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	1	0		
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	9	0		
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	19	0		
Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	45	0		
Infant formula - dried - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	5	0		
Infant formula - dried - Retail - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	80	0		
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	2	0		
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	152	0		

Table Cronobacter in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Cronobacter	Cronobacter sakazakii	Cronobacter spp. unspecified
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	24	2	2	
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	25 Gram	35	0		
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Batch	10 Gram	8	0		
Infant formula - dried - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	25 Gram	88	1	1	

4.2 HISTAMINE

4.2.1 General evaluation of the national situation

4.2.2 Histamine in foodstuffs

A. Histamine in foodstuffs

Monitoring system

Sampling strategy

All samples of foodstuffs were taken according The Commission Decision 2073/2005 and the direction of State Veterinary and Food Administration and according to work out a plan taking of samples

Diagnostic/analytical methods used

HPLC

Preventive measures in place

in case of pass limit for histamine in foodstuff - retire from market network as a unfit for human consumption

Results of the investigation

See table Histamin in foodstuffs.

Table Histamine in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units in non-conformity	<= 100 mg/kg	>100 - <= 200 mg/kg
Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Retail - Surveillance	SVFI	Objective sampling	Official sampling			Batch	10 g	2	0	2	0
Fish - Fishery products which have undergone enzyme maturation treatment in brine - Processing plant - Surveillance	SVFI	Objective sampling	Official sampling			Batch	10 g	2	0	2	0
Fish - Fishery products which have undergone enzyme maturation treatment in brine - Retail - Surveillance	SVFI	Objective sampling	Official sampling			Batch	10 g	8	0	8	0
										>200 - <= 400 mg/kg	> 400 mg/kg
Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Retail - Surveillance									0	0	0
Fish - Fishery products which have undergone enzyme maturation treatment in brine - Processing plant - Surveillance									0	0	0
Fish - Fishery products which have undergone enzyme maturation treatment in brine - Retail - Surveillance									0	0	0

4.3 STAPHYLOCOCCAL ENTEROTOXINS

4.3.1 General evaluation of the national situation

4.3.2 Staphylococcal enterotoxins in foodstuffs

A. Staphylococcal enterotoxins in foodstuffs

Monitoring system

Sampling strategy

Authorities in Slovakia. Samples comprised of official samples taken by inspectors of veterinary and food administrations and public health authorities according to the valid rules for the year.

All samples were examined by valid international methods for determination of number of coagulase positive staphylococci (STN EN ISO 6888-1 and 6888-2) and the presence of enterotoxins (Official methods for laboratory diagnostics of food and feed, Part Microbiology: M15, M41, M50 and the European screening method - May 2006 as amended and supplemented - November 2007). The samples comprised of one sampling unit or 5 sampling units according to requirements of an applicant and according to the quantity of sample taken.

Samples were taken according sampling plan by inspectors of DVFA and DPHA and in case of suspicions. Most data concerning the genus *Staphylococcus* and staphylococcal enterotoxins have a link with milk and milk products and processed food. Among the most frequent commodities containing exceeding numbers of coagulase positive staphylococci belonged sheep cheeses, ready-to-eat salads and dishes.

Frequency of the sampling

according to sampling plan

Type of specimen taken

according Commission Decision 2075/2005

Definition of positive finding

demonstration of presence of enterotoxin

Diagnostic/analytical methods used

Detection of staphylococcal enterotoxins types SEA to SEE in alltypes of food matrices - European screening method of the EU-RL for "COAGULASE POSITIVE STAPHYLOCOCCI, INCLUDING STAPHYLOCOCCUS AUREUS ", Version 5, September 2010
STN EN ISO 6888-1, 6888-2

Preventive measures in place

In case of positive finding all foodstuffs are judged as unfit for human consumption.
retire of foodstuffs from market network

Measures in case of the positive findings or single cases

In case of positive finding all foodstuffs are judged as unfit for human consumption.

Notification system in place

Results of the investigation

See table Staphylococcal enterotoxins in foodstuffs

Table Staphylococcal enterotoxins in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcal enterotoxins
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	7	0
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	2	0
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	1	0
Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Batch	25 Gram	1	0
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Surveillance	State Veterinary and Food Institutes	Objective sampling	Official sampling	food sample	Domestic	Batch	25 Gram	2	0
Confectionery products and pastes - Processing plant - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	1	0
Dairy products (excluding cheeses) - ice-cream - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	1	0
Dairy products (excluding cheeses) - ice-cream - Retail - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	4	0

Table Staphylococcal enterotoxins in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcal enterotoxins
Dairy products (excluding cheeses) - yoghurt - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	1	0
Infant formula - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	HACCP and own checks	food sample	Domestic	Single	25 Millilitre	162	0
Meat from bovine animals - meat products - cooked, ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	1	1
Meat from broilers (Gallus gallus) - fresh - chilled - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	1	0
Meat from broilers (Gallus gallus) - fresh - chilled - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Imported from outside EU	Single	10 Gram	1	1
Meat from pig - fresh - Hospital or medical care facility - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Intra EU trade	Batch	10 Gram	1	0
Meat from pig - meat products - cooked ham - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	2	0
Meat from poultry, unspecified - fresh - Catering - Monitoring	Public Health Authorities	Selective sampling	Official sampling	food sample	Imported from outside EU	Batch	10 Gram	1	0
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	1	0
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Catering - Surveillance (human disease)	Public Health Authorities	Suspect sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	1	0
Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - Hospital or medical care facility - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	1	0

Table Staphylococcal enterotoxins in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcal enterotoxins
Meat, mixed meat - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Intra EU trade	Batch	25 Gram	1	0
Meat, mixed meat - meat products - cooked, ready-to-eat - Retail - Surveillance	State Veterinary and Food Institutes	Suspect sampling	Official sampling	food sample	Domestic	Batch	25 Gram	1	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	1	0
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Batch	10 Gram	1	1
Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Domestic	Single	10 Gram	4	2
Vegetables - pre-cut - ready-to-eat - Catering - Monitoring	Public Health Authorities	Objective sampling	Official sampling	food sample	Intra EU trade	Single	10 Gram	4	1
Vegetables - pre-cut - ready-to-eat - Catering - Surveillance	Public Health Authorities	Objective sampling	Official sampling	food sample	Unknown	Single	10 Gram	1	0

5. FOODBORNE

Foodborne outbreaks are incidences of two or more human cases of the same disease or infection where the cases are linked or are probably linked to the same food source. Situation, in which the observed human cases exceed the expected number of cases and where a same food source is suspected, is also indicative of a foodborne outbreak.

A. Foodborne outbreaks

System in place for identification, epidemiological investigations and reporting of foodborne outbreaks

Food-borne outbreaks are reported by physicians and by microbiological laboratories to the department of Epidemiology of Public Health Authorities. Regional epidemiologists provide investigation, organise anti-epidemic actions including food investigation that is suspected as factor of transmission. Every important findings were included to the "Early warning system" on Friday or immediately

Description of the types of outbreaks covered by the reporting:

There are reported all types of outbreaks: small outbreaks included family outbreak and small local outbreaks (2-5 cases), general outbreaks and bigger household outbreaks (6 and more cases).

All verified with strong evidence and possible with weak evidence of food-borne outbreaks are reported.

National evaluation of the reported outbreaks in the country:

Trends in numbers of outbreaks and numbers of human cases involved

In year 2013 there were recorded 458 foodborn outbreaks with 2546 cases. From 458 outbreaks, there were 4 verified outbreaks with strong evidence – 0,9% (total cases 235).

From all cases reported in outbreaks: salmonellosis represented 26,9% cases, campylobacteriosis –9,5% cases, unknown causative agent – 19% cases, norovirus – 14,5% cases, viral hepatitis A – 5,6% cases, other viruses 8,6% and staphylococcal enterotoxin – 7,9% cases.

From all outbreaks: salmonellosis represent– 46,7%, campylobacteriosis – 23,6%, unknown causative agent –7,4 %, stafylococcal enterotoxin – 0,7% and viral hepatitis A – 1,7%.

Outbreaks of salmonellosis: Trend is decreased, the number of cases decreased in comparison with year 2012 about 743 cases.-52,1%, (684 in 2013 vs.1427 in 2012). There were reported 183 small outbreaks, when were affected 350 people. (2-4 cases). We reported 31 bigger outbreaks (5-30 cases) with 334 affected people. ..

Outbreaks of campylobacteriosis: In 2013 there were recorded 106 outbreaks, less than in 2012 (about 51 outbreaks), when were affected 243 persons. There were reported 104 small mostly family outbreaks, when were affected 233 persons and 2 general outbreaks (10 cases). Trend of outbreaks is decreased, incidence of sporadic cases increased slightly about 1,6%

Outbreak with unknown agent: 34 outbreaks were reported, when 464 persons were affected. Trend of outbreaks decreased about 42,4%. In opposite number of cases increased more than twice...

Staphylococcus enterotoxin: One big verified outbreak was reported (165 cases) and 2 small outbreaks with 5 affected persons..

Food-borne viruses: There were reported 8 outbreak of viral hepatitis A in year 2013 – 143 cases. All outbreaks were born in areas with low hygienic condition and diseases were spread by close contact. Foods were not suspected as factor of transmission.

Slovakia reported 1 outbreaks TBE, Transmission factor in outbreak was sheep cheese from mix of sheep and goats milk.. The outbreak was verified, veterinary investigation proofed that goats and seeps were positive (TBE specific ELISA IgG and IgM posit), goats in higher proportion than sheeps..

Relevance of the different causative agents, food categories and the agent/food category

combinations

The main causative agent in outbreak of salmonellosis is *Salmonella enteritidis*. Outbreaks caused by *Salmonella typhimurium* are rare (7,5%). The most risky are finished foodstuff from raw eggs, poultry meat.

Food-borne outbreaks caused by *Campylobacter* have decreased trend. The most risky are foods from the chicken, turkey and non-pasteurised sheep and goat milk and products from it, mainly fresh cheese.

Relevance of the different type of places of food production and preparation in outbreaks

Salmonella enteritidis – mainly households (family celebrations), outbreaks in commercial restaurants, canteens and school canteens have decreased trend.

Unknown agents – hospital/medical care facilities, nursery houses, canteens and school canteens

Campylobacteriosis - mainly households

Evaluation of the severity and clinical picture of the human cases

No cases of death were recorded during outbreaks. In all 458 outbreaks there were reported 2546 cases, from which 697 cases were hospitalised (27,4%). Proportion of hospitalized patients is same as in year 2012.

Descriptions of single outbreaks of special interest

TBE transmitted by unpasteurized goat and sheep milk and undercooked products from its in north-east Slovakia, July 2013.

In July 2013 a cluster of 5 TBE cases was identified in north-east Slovakia. Initial investigations revealed a possible link with consumption of goat and sheep milk products.

Description of outbreak – epidemiological data:

Number of cases: 5

Number of exposed: 15

Attack rate: 33,3%

Place of outbreak: district Presov, Village Lada - Unknown endemic area

Onset of 1. case July 1th 2013, onset of last case July 23th 2013

Date of reporting: 9. august 2013

Age of patients: 15,39,42,49 78 years, means 44,6

Clinical symptoms: headache, temperature 38 °C and higher, vomitus, pain of joints

Number of hospitalized cases: 3, mean 12 days, (min 8, max. 22 days)

Epidemiological investigation:

Suspected factor of transmission: sheep and goat milk products (cheese)

Risk factor: unpasteurized milk and undercooked process of cheese production

Origin of products: private sheep farm

Laboratory results:

•Humans:

All 5 cases were laboratory confirmed - IgM, IgG TBE positive (ELISA).

•Animals .

Goats:88 blood samples, 61 positive.

Sheeps: 127 blood samples, 17 positive results (ELISA IgG,ELISA IgM).

Milk from sheep and goats and cheese samples tested negative for the TBE virus (PCR).

Investigation was realized very late because human cases were reported more than one month after

onset of 1.case.

Control measures or other actions taken to improve the situation

Control measures aimed at elimination of imperfections.

Table Foodborne Outbreaks: summarised data

	Weak evidence or no vehicle outbreaks				Strong evidence Number of Outbreaks	Total number of outbreaks
	Number of outbreaks	Human cases	Hospitalized	Deaths		
Salmonella - S. Typhimurium	16	59	12	0	0	16
Salmonella - S. Enteritidis	176	530	112	0	1	177
Salmonella - Other serovars	20	61	13	0	1	21
Campylobacter	106	243	21	0	0	106
Listeria - Listeria monocytogenes	0	unknown	unknown	unknown	0	0
Listeria - Other Listeria	0	unknown	unknown	unknown	0	0
Yersinia	1	2	0	0	0	1
Escherichia coli, pathogenic - Verotoxigenic E. coli (VTEC)	0	unknown	unknown	unknown	0	0
Bacillus - B. cereus	0	unknown	unknown	unknown	0	0
Bacillus - Other Bacillus	0	unknown	unknown	unknown	0	0
Staphylococcal enterotoxins	2	5	0	0	1	3
Clostridium - Cl. botulinum	0	unknown	unknown	unknown	0	0
Clostridium - Cl. perfringens	0	unknown	unknown	unknown	0	0

	Weak evidence or no vehicle outbreaks				Strong evidence Number of Outbreaks	Total number of outbreaks
	Number of outbreaks	Human cases	Hospitalized	Deaths		
Clostridium - Other Clostridia	0	unknown	unknown	unknown	0	0
Other Bacterial agents - Brucella	0	unknown	unknown	unknown	0	0
Other Bacterial agents - Shigella	5	22	9	0	0	5
Other Bacterial agents - Other Bacterial agents	2	18	1	0	0	2
Parasites - Trichinella	0	unknown	unknown	unknown	0	0
Parasites - Giardia	0	unknown	unknown	unknown	0	0
Parasites - Cryptosporidium	0	unknown	unknown	unknown	0	0
Parasites - Anisakis	0	unknown	unknown	unknown	0	0
Parasites - Other Parasites	0	unknown	unknown	unknown	0	0
Viruses - Norovirus	0	unknown	unknown	unknown	0	0
Viruses - Hepatitis viruses	8	143	111	0	0	8
Viruses - Other Viruses	84	761	276	0	1	85
Other agents - Histamine	0	unknown	unknown	unknown	0	0
Other agents - Marine biotoxins	0	unknown	unknown	unknown	0	0
Other agents - Other Agents	0	unknown	unknown	unknown	0	0

Unknown agent	Weak evidence or no vehicle outbreaks				Strong evidence Number of Outbreaks	Total number of outbreaks
	Number of outbreaks	Human cases	Hospitalized	Deaths		
	34	464	74	0	0	34

Table Foodborne Outbreaks: detailed data for Salmonella

Please use CTRL for multiple selection fields

S. Montevideo

Value

FBO Code	A02.0
Number of outbreaks	1
Number of human cases	30
Number of hospitalisations	9
Number of deaths	0
Food vehicle	Cheese
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household
Setting	Household
Place of origin of problem	Household
Origin of food vehicle	Domestic
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

Value

FBO Code	A02.0
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household
Setting	Household
Place of origin of problem	Household
Origin of food vehicle	Domestic
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Staphylococcal enterotoxins

Please use CTRL for multiple selection fields

null

Value

FBO Code	A05.0
Number of outbreaks	1
Number of human cases	196
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Broiler meat (Gallus gallus) and products thereof
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Canteen or workplace catering
Place of origin of problem	Canteen or workplace catering
Origin of food vehicle	Domestic
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Viruses

Please use CTRL for multiple selection fields

Flavivirus

Value

FBO Code	A84.1
Number of outbreaks	1
Number of human cases	5
Number of hospitalisations	5
Number of deaths	0
Food vehicle	Cheese
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household
Setting	Household
Place of origin of problem	Farm
Origin of food vehicle	Domestic
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	