European Food Safety Authority

ZOONOSES MONITORING

# HUNGARY

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

# TRENDS AND SOURCES OF ZOONOSES AND ZOONOTIC AGENTS IN HUMANS, FOODSTUFFS, ANIMALS AND FEEDINGSTUFFS

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

# IN 2011

# INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: Hungary

Reporting Year: 2011

| Laboratory name | Description | Contribution |
|---|---|---|
| Central Agricultural Office | | Responsible authority for zoonoses data collection and reporting |

# 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 Hungary during the year 2011 .

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.

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* 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

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# 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

Data on susceptible animal populations were taken from official publications of the Hungarian Central Statistical Office unless it is noted that from the Central Agricultural Office who collected data from the registrations of the Directorate of Food Chain Safety and Animal Health of the Agricultural Offices of the 19 counties of Hungary.

### National evaluation of the numbers of susceptible population and trends in these figures

According to the data of the Hungarian Central Statistical Office, the decreasing tendency in most of the animal populations continued.

### Additional information

## Table Susceptible animal populations

* Only if different than current reporting year

| | | Number of herds or flocks | | Number of slaughtered animals | | Livestock numbers (live animals) | | Number of holdings | |
|---|---|---|---|---|---|---|---|---|---|
| Animal species | Category of animals | Data | Year* | Data | Year* | Data | Year* | Data | Year* |
| Cattle (bovine animals) | - in total | | | | | 756721 | | | |
| Ducks | - in total | | | | | 4444000 | | | |
| Gallus gallus (fowl) | - in total | | | | | 33006000 | | | |
| Geese | - in total | | | | | 1244000 | | | |
| Goats | - in total | | | | | 15589 | | | |
| Pigs | - in total | | | | | 3032000 | | | |
| Sheep | - in total | | | | | 866474 | | | |
| Solipeds, domestic | horses - in total | | | | | 74000 | | | |
| Turkeys | - in total | | | | | 3053000 | | | |

# 2. INFORMATION ON SPECIFIC ZOONOSES 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

In 1992 the Veterinary Science Committee of the Hungarian Academy of Sciences has established its Salmonella Subcommittee with the main aim to support the work of the Hungarian Ministry of Agriculture and Rural Development in the control of Salmonella with regards to poultry flocks.
This subcommittee has formed a working group with EU experts to prepare the Integrated Quality Chain System for Salmonella Control in the Hungarian Poultry Sector (Edel-Wray-Nagy et al, 1995).
This has been issued by the Ministry for use in the poultry sector and distributed to the County Animal Health and Food Control Stations in 1995. In further years the Salmonella Subcommittee has arranged several courses and lectures to distribute the booklet for wider use. The Basic Document of this Guideline contained the adaptation of Council directive 92/117/EEC. The Guidelines contained general and specific instructions for hatcheries, breeding flocks, broilers, layers, egg packaging plants, slaughterhouses and feedmills. A special chapter was devoted to disinfection and cleaning.
Based on the above Guidelines several large Hungarian poultry farming systems (Babolna, Boly, Nadudvar) have built up and started their Salmonella Reduction Programs between 1996 and 2002.
Besides, the Salmonella subcommittee has agreed with the Ministry of Agriculture and Rural Development to review the situation and to propose a Hungarian Salmonella Reduction Plan for Hungary, which was published by Nagy et al. in 1997.
Directive 92/117/EEC and the basics of the above mentioned Guidelines served the basis for the first ministerial decree [49/2002. (V.24) FVM] on the control of salmonellosis in poultry flocks, which referred to Salmonella Enteritidis and S. Typhimurium in Gallus gallus. The amendment to this Directive [97/2003. (VIII.19) FVM] made the application of the Order compulsory for breeding flocks and hatcheries, and continued to define the above 2 Salmonella serovars to be regarded as Salmonella for the purposes of that decree. The amendment also made the vaccination of table egg producing laying flocks compulsory.
After the accession the EC regulations became directly applicable in Hungary as well. From that time EC regulations are followed. The implementation of these regulations is regulated by Decree 180/2009. (XII.29.)of Ministry of Agriculture.

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

In 2009, a significant decrease could be seen as in the prevalence of salmonella in all types of flocks under scope of national control plans as in meat, meat products, table eggs and egg products of Gallus gallus.

#### Recent actions taken to control the zoonoses

In 2009 control of Salmonella was compulsory in breeding, layer and broiler flocks of Gallus gallus,. Breeding flocks are vaccinated Layer flocks are vaccinated on a compulsory basis.and voluntary in turkey flocks.

## 2.1.2 Salmonellosis in humans

### A. Salmonellosis in humans

#### Reporting system in place for the human cases

There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system provides online connection amid the three levels (municipal, county and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case when the salmonella infection is laboratory confirmed.
Probable case: a clinically compatible case that is not confirmed by laboratory investigation, but it has an epidemiological link to a confirmed salmonellosis outbreak.

#### Diagnostic/analytical methods used

Salmonella isolates are obtained by culturing the faeces samples of the patients on selective-differentiating media, followed by biochemical testing and serotyping. Since 2003 the Hungarian and the Colindale sets of phages have been parallel used for phage typing of the human S. Enteritidis isolates received by the Phage-typing and Molecular Epidemiology Department of the 'Johan Bela' National Centre for Epidemiology. For S.Typhimurium isolates the schemes of Felix and Callow as well as Anderson et al. are also in use.

#### Notification system in place

Human cases have been notifiable since 1959. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS. Hungary has also a laboratory based surveillance system, and the NPHMOS has representative dataset from most of the microbiological laboratories about the laboratory investigated cases (since 2003 antibiotic resistances have also been reported from 5 regional laboratory of NPHMOS and from a number of laboratories from universities or hospitals).
The illness is reported first as enteritis infectiosa syndrome on the basis of the symptoms. Having the results of the laboratory tests this syndrome-based diagnose is modified to etiology-based diagnose. In some cases reporting follows only the available laboratory test results.

#### History of the disease and/or infection in the country

Human cases have been notifiable since 1959. The isolated strains have been phage-typed since the 1960s. The number of the recorded cases has continuously increased from 1959 to 1996 (with a maximum of 28 046 reported case/year, incidence: 274,6/100 000 inhabitant/year). The number of the recorded outbreaks has also increased in a similar way (outbreak = two epidemiologically linked cases of salmonellosis, maximum number of reported outbreaks: 3450 outbreaks in 1995). Since 1996 both the number of the recorded cases and the outbreaks has continuously decreased. The mortality has

increased only in the period of 1972-1994 (10-20 death/year, case fatality rate: 0.1-0.4%). In the other years the mortality was 5-10 death cases per year (case fatality rate: 0.03-0.09%). The age-specific incidence was the highest for the infants in all periods, and it declined with the progressing of the age. The investigation of the outbreaks mostly demonstrated a food-borne origin. The ratio of the person-to-person transmission is insignificant. In the history of human salmonellosis in Hungary there were less than 10 outbreaks caused by contaminated water.

Up to 1980 the serotype S. Typhimurium predominated, and pork was identified as the main source of infection. At that time the infection has spread by homemade foods and also by the products of food-industry. Since 1980 the serotype S. Enteritidis has become predominant and poultry has been identified as the main source of the infection. Since then the prevalence of this serotype has remained about 70-80%. Between 1975 and 1980 the S. Enteritidis phage type 7 (according to the Hungarian scheme) has predominated. In the period of 1980-1990 strains characterized with phage type 1, from 1990 to 1996 strains characterized with phage type 1, 6 and 6b (according to the Hungarian scheme) were most frequently identified. After 1997 the phage type 6 (acc. to the Hungarian scheme) has become the most frequently occurring phage type.

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

The epidemiological situation of the salmonellosis in Hungary has continuously improved till 2004. The number of cases has decreased from 11 507 to 7557 since 2000 (incidence ranged between 114,3 – 74,7/100 000 inhabitants/year), the case fatality ratio changed between 0,01 – 0,08%. The decrease in the number of salmonellosis cases was mainly due to the decrease in the number of cases caused by S. Enteritidis. Eighty percent of the cases were sporadic. There were 6 – 700 community/institutional and family acquired outbreaks recorded. The number of the outbreaks declined more significantly than that of the sporadic cases. The investigation of the outbreaks has showed that in most cases the source of the infection was poultry. Mainly poultry eggs, and foods that contained eggs used without adequate heat-treatment and that were prepared at privet home or at canteen/catering trade caused outbreaks. There were only very few outbreaks caused by foods of industrial origin in the past ten years and there were no outbreaks caused by contaminated water.

## Relevance as zoonotic disease

In the outbreaks a person-to-person transmission has been detected only in very few cases (in specific communities). In most case the outbreaks were suspectedly or conformedly caused by strains originated from poultry, via contaminated food.

## Additional information

At the Phage-typing and Molecular Epidemiology Department of the ‘Johan Bela’ National Center for Epidemiology, the phage typing reactions for S. Enteritidis and S. Typhimurium are prepared parallel both with a Hungarian and the international (Ward et al., Colindale) and the Felix-Callow as well as Anderson et al. sets of phages, respectively.

## 2.1.3 Salmonella in foodstuffs

### A. Salmonella spp. in pig meat and products thereof

#### Monitoring system

##### Sampling strategy

At slaughterhouse and cutting plant

The sampling strategy in the slaughterhouses is  based on the previous years' data on production volume. The monitoring plan prepared by the CAO Food and Feed Safety Directorate determines the number of samples/county/month. The monitoring samples are thrown by the regional veterinary authority and are examined in the official control laboratories belonging to the Central Agricultural Office (CAO). It is a permanent monitoring scheme, data are reported by the official laboratories to CAO and the Ministry of Agricilture and Regional Development in the frame of an annual laboratory report. All the Salmonella strains isolated are serotyped by the NRL Salmonella.

At meat processing plant

The sampling strategy in processing plants is randomised based on the previous years' data on production volume. The samles are thrown by the veterinary authority and are examined in the official food control laboratory.It is a permanent monitoring scheme, data are reported by the official laboratories to the Ministry of Agricilture and Regional Development in the frame of an annual laboratory report.

##### Frequency of the sampling

At slaughterhouse and cutting plant

Sampling distributed evenly throughout the year

At meat processing plant

Sampling distributed evenly throughout the year

##### Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At meat processing plant

Surface of carcass

##### Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

At meat processing plant

Bacteriological method: NMKL No 71:1999

## B. Salmonella spp. in bovine meat and products thereof

### Monitoring system

#### Sampling strategy

At slaughterhouse and cutting plant

Food business operators perform continuous sampling system determined in their HACCP plans, and nearby there is an official control system of the competent authorities with a randomised sampling as well. The data of self control processes are checked in the frame of official control of course, but are not collected to a database, therefore these are not involved in this report. The test results of samples examined by competent authorities in their own laboratories are reported, but the data collection system do not allow to report the data separately for te different stages of food chain (slaughterhouses, processing plants, retail). Based on the structure of the EU zoonosis report, the data collection system will be resturctured this year. This year all the data on fresh meat are reported in the table of slaughterhouses.

At meat processing plant

The sampling strategy is randomised and continuous, performed by the competent authorities. Food producers operate their own continuous sampling system determined in their HACCP plans as well, with the same remarks as in the case of slaughterhouses.

#### Frequency of the sampling

At slaughterhouse and cutting plant

Sampling distributed evenly throughout the year

At meat processing plant

Sampling distributed evenly throughout the year

At retail

Sampling distributed evenly throughout the year

#### Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At meat processing plant

Surface of carcass

At retail

fresh meat and all kinds of meat products

#### Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

500 garms of sample is sent to the laboratory, the test portion is 25 grams

At meat processing plant

Batch sampling with 5 subsamples. Test portion is 10 or 25 grams determined by 2073/2005/EC Regulation.

#### Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

At meat processing plant

Bacteriological method: ISO 6579:2002

At retail

Bacteriological method: ISO 6579:2002

## C. Salmonella spp. in broiler meat and products thereof

### Monitoring system

#### Sampling strategy

##### At slaughterhouse and cutting plant

The sampling strategy in the slaughterhouses is based on the previous years' data on production volume. The monitoring plan prepared by the CAO Food and Feed Safety Directorate determines the number of samples/county/month. The monitoring samples are thrown by the regional veterinary authority and are examined in the official control laboratories belonging to the Central Agricultural Office (CAO). It is a permanent monitoring scheme, data are reported by the official laboratories to CAO and the Ministry of Agriculture and Rural Development in the frame of an annual laboratory report. All the Salmonella strains isolated are serotyped by the NRL Salmonella.

##### At meat processing plant

The sampling strategy in processing plants is randomised based on the previous years' data on production volume. The samles are thrown by the veterinary authority and are examined in the official food control laboratory.It is a permanent monitoring scheme, data are reported by the official laboratories to the Ministry of Agriculture and Rural Development in the frame of an annual laboratory report.

##### At retail

Retail is also sampled by the authority on a regular basis.  The total number of samples is determenid in the annual monitoring plan. About 60 % of the official control samples in a product group are taken at retail.

#### Frequency of the sampling

##### At slaughterhouse and cutting plant

Sampling distributed evenly throughout the year

##### At meat processing plant

Sampling distributed evenly throughout the year

##### At retail

Sampling distributed evenly throughout the year

#### Type of specimen taken

##### At slaughterhouse and cutting plant

Fresh meat

##### At meat processing plant

minced meat, meat prep., meat products

##### At retail

minced meat, meat prep., meat products

#### Methods of sampling (description of sampling techniques)

##### At slaughterhouse and cutting plant

At least 500 grams of meat is sent to the laboratory. The test portion is 25 grams.

##### At meat processing plant

Batch sampling with 5 subsamples. Test portion is 5 x 10 or 25 grams according to Regulation 2073/2005/EC.

### Definition of positive finding

#### At slaughterhouse and cutting plant

a sample or a batch is positive if salmonella was isolated

#### At meat processing plant

a sample or a batch is positive if salmonella was isolated

#### At retail

a sample or a batch is positive if salmonella was isolated

### Diagnostic/analytical methods used

#### At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

#### At meat processing plant

Bacteriological method: ISO 6579:2002

#### At retail

Bacteriological method: ISO 6579:2002

## Preventive measures in place

According to 2073/2005/EC Reg.

## Measures in case of the positive findings or single cases

According to Reg.2073/2005/EC.

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

Based on the monitoring results, salmonella prevalence is high in broiler meat in Hungary. The dominance of Salmonella Infantis strains is well-known in the past years. 90 % of the isolated strains are belonging to this serovar now.
From 1995, the rate of Salmonella Infantis/Enteritidis is showing a continuous increase for Infantis (1% to 90 %), and a decreasing trend for S. Enteritidis (from 60 % to 5%).

The marked increase of Salmonella Infantis serovar in broiler meat was not caused a significant increase in human Salmonella Infantis incidence. The dominating serovar in human infections is continuously S. Enteritidis wich has been responsible for 70-80 % of the human infections for many years.

## 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) - carcase - at slaughterhouse - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > neck skin | | Single | 25 gramms | 397 | 144 | 0 | 0 |
| Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 334 | 142 | 0 | 0 |
| Meat from broilers (Gallus gallus) - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 156 | 63 | 0 | 0 |
| Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 112 | 24 | 0 | 1 |
| Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 42 | 17 | 0 | 0 |
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 172 | 0 | | |
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 96 | 0 | | |
| Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance [1)] | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 43 | 3 | 0 | 0 |
| Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at retail - Surveillance [2)] | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 35 | 2 | 0 | 0 |
| Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 17 | 4 | 0 | 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 broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 4 | 1 | 0 | 0 |
| Meat from turkey - carcase - at slaughterhouse - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > neck skin | | Single | 25 gramms | 286 | 43 | 0 | 0 |
| Meat from turkey - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 296 | 38 | 0 | 0 |
| Meat from turkey - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 34 | 3 | 0 | 0 |
| Meat from turkey - meat products - cooked, ready-to -eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 196 | 1 | 0 | 0 |
| Meat from turkey - meat products - cooked, ready-to -eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 110 | 0 | | |
| Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 54 | 6 | 0 | 0 |
| Meat from turkey - meat products - raw but intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 7 | 0 | | |
| Meat from duck - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 147 | 14 | 2 | 7 |
| Meat from duck - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 29 | 0 | | |
| Meat from geese - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 116 | 0 | | |
| Meat from geese - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 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 turkey - fresh - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 12 | 2 | 0 | 0 |
| Meat from turkey - meat preparation - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 28 | 0 | | |
| Meat from turkey - meat preparation - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 12 | 2 | 0 | 0 |
| Meat from turkey - minced meat - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 94 | 23 | 0 | 1 |
| Meat from turkey - minced meat - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 72 | 9 | 0 | 0 |
| Meat from wild game - birds - fresh - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 33 | 2 | 0 | 0 |

| | Salmonella spp., unspecified | S. Infantis | S. Thompson |
|---|---|---|---|
| Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance | 52 | 90 | 2 |
| Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance | 142 | | |
| Meat from broilers (Gallus gallus) - fresh - at retail - Surveillance | 63 | | |

## Table Salmonella in poultry meat and products thereof

| | Salmonella spp., unspecified | S. Infantis | S. Thompson |
|---|---|---|---|
| Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance | 23 | | |
| Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail - Surveillance | 17 | | |
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance | | | |
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at retail - Surveillance | | | |
| Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance [1)] | 2 | 1 | |
| Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at retail - Surveillance [2)] | 2 | | |
| Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance | 4 | | |
| Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at retail - Surveillance | 1 | | |
| Meat from turkey - carcase - at slaughterhouse - Surveillance | 43 | | |
| Meat from turkey - fresh - at processing plant - Surveillance | 38 | | |

## Table Salmonella in poultry meat and products thereof

| | Salmonella spp., unspecified | S. Infantis | S. Thompson |
|---|---|---|---|
| Meat from turkey - fresh - at retail - Surveillance | 3 | | |
| Meat from turkey - meat products - cooked, ready-to -eat - at processing plant - Surveillance | 1 | | |
| Meat from turkey - meat products - cooked, ready-to -eat - at retail - Surveillance | | | |
| Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance | 6 | | |
| Meat from turkey - meat products - raw but intended to be eaten cooked - at retail - Surveillance | | | |
| Meat from duck - fresh - at processing plant - Surveillance | 5 | | |
| Meat from duck - fresh - at retail - Surveillance | | | |
| Meat from geese - fresh - at processing plant - Surveillance | | | |
| Meat from geese - fresh - at retail - Surveillance | | | |
| Meat from turkey - fresh - at catering - Surveillance | 2 | | |
| Meat from turkey - meat preparation - intended to be eaten cooked - at processing plant - Surveillance | | | |
| Meat from turkey - meat preparation - intended to be eaten cooked - at retail - Surveillance | 2 | | |

## Table Salmonella in poultry meat and products thereof

| | Salmonella spp., unspecified | S. Infantis | S. Thompson |
|---|---|---|---|
| Meat from turkey - minced meat - intended to be eaten cooked - at processing plant - Surveillance | 22 | | |
| Meat from turkey - minced meat - intended to be eaten cooked - at retail - Surveillance | 9 | | |
| Meat from wild game - birds - fresh - in total - Surveillance | 1 | 1 | |

Comments:

[1)] pre heat-treated

[2)] pre heat-treated

## 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 - at farm - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 25 ml | 53 | 0 | | |
| Milk, goats' - raw milk - intended for direct human consumption - at farm - Surveillance | NFCSO FFSD | Selective sampling | Official sampling | food sample | | Single | 25 ml | 1 | 0 | | |
| Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 2 | 0 | | |
| Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 3 | 0 | | |
| Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 2 | 0 | | |
| Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 1 | 0 | | |
| Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 29 | 0 | | |
| Dairy products (excluding cheeses) - milk powder and whey powder - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 27 | 0 | | |
| Cheeses made from cows' milk - fresh - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 65 | 0 | | |
| Cheeses made from cows' milk - fresh - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 21 | 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 - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 67 | 0 | | |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 42 | 0 | | |
| Cheeses made from goats' milk - unspecified - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 4 | 0 | | |
| Cheeses made from sheep's milk - unspecified - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 37 | 0 | | |
| Dairy products (excluding cheeses) - butter - made from pasteurised milk - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 5 | 0 | | |
| Dairy products (excluding cheeses) - dairy desserts - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 23 | 0 | | |
| Dairy products (excluding cheeses) - dairy desserts - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 19 | 0 | | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 17 | 0 | | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 126 | 0 | | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 100 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at farm - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 25 ml | 95 | 0 | | |

| | Salmonella spp., unspecified |
|---|---|
| Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance | |
| Milk, goats' - raw milk - intended for direct human consumption - at farm - Surveillance | |
| Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance | |
| Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail - Surveillance | |
| Cheeses made from sheep's milk - fresh - made from raw or low heat-treated milk - at retail - Surveillance | |
| Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance | |
| Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance | |

## Table Salmonella in milk and dairy products

| | Salmonella spp., unspecified |
|---|---|
| Dairy products (excluding cheeses) - milk powder and whey powder - at retail - Surveillance | |
| Cheeses made from cows' milk - fresh - made from pasteurised milk - at processing plant - Surveillance | |
| Cheeses made from cows' milk - fresh - made from pasteurised milk - at retail - Surveillance | |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | |
| Cheeses made from goats' milk - unspecified - in total - Surveillance | |
| Cheeses made from sheep's milk - unspecified - in total - Surveillance | |
| Dairy products (excluding cheeses) - butter - made from pasteurised milk - in total - Surveillance | |
| Dairy products (excluding cheeses) - dairy desserts - at processing plant - Surveillance | |
| Dairy products (excluding cheeses) - dairy desserts - at retail - Surveillance | |

## Table Salmonella in milk and dairy products

| | Salmonella spp., unspecified |
|---|---|
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at catering - Surveillance | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at processing plant - Surveillance | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at retail - Surveillance | |
| Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at farm - 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 - at retail - Surveillance [1)] | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Batch | 25 gramms from 10 eggs | 233 | 0 | | |
| Fishery products, unspecified - cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 6 | 0 | | |
| Fish - smoked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 33 | 0 | | |
| Seeds, sprouted - ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 52 | 0 | | |
| Vegetables - pre-cut - ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 92 | 0 | | |
| Infant formula - dried - intended for infants below 6 months - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 29 | 0 | | |
| Cereals and meals - at retail - Surveillance [2)] | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 11 | 0 | | |
| Chocolate - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 145 | 0 | | |
| Cocoa and cocoa preparations, coffee and tea - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 108 | 0 | | |
| Coconut - coconut products - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 58 | 2 | | |
| Coconut - coconut products - in total - Unspecified | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Batch | 25 gramms | 10 | 3 | | |
| Confectionery products and pastes - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 219 | 0 | | |
| Egg products - dried - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 29 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Egg products - liquid - at catering - Clinical investigations | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 ml | 8 | 6 | 6 | |
| Egg products - liquid - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 ml | 10 | 0 | | |
| Egg products - liquid - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 ml | 48 | 0 | | |
| Fish - raw - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 41 | 1 | | |
| Foodstuffs intended for special nutritional uses - ready-to-eat - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 31 | 0 | | |
| Infant formula - dried - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 88 | 0 | | |
| Other processed food products and prepared dishes - noodles - in total - Surveillance [3)] | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 112 | 4 | 4 | |
| Other processed food products and prepared dishes - sandwiches - with meat - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 42 | 0 | 0 | |
| Ready-to-eat salads - at catering - Clinical investigations | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 11 | 2 | 2 | |
| Ready-to-eat salads - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 278 | 0 | | |
| Seeds, dried - in total - Surveillance | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 31 | 0 | | |
| Spices and herbs - dried - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 127 | 1 | | |
| Spices and herbs - unspecified - Unspecified | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 12 | 3 | | |

## Table Salmonella in other food

| | Salmonella spp., unspecified |
|---|---|
| Eggs - table eggs - at retail - Surveillance [1)] | |
| Fishery products, unspecified - cooked - at retail - Surveillance | |
| Fish - smoked - at retail - Surveillance | |
| Seeds, sprouted - ready-to-eat - at retail - Surveillance | |
| Vegetables - pre-cut - ready-to-eat - at retail - Surveillance | |
| Infant formula - dried - intended for infants below 6 months - at retail - Surveillance | |
| Cereals and meals - at retail - Surveillance [2)] | |
| Chocolate - in total - Surveillance | |
| Cocoa and cocoa preparations, coffee and tea - in total - Surveillance | |
| Coconut - coconut products - in total - Surveillance | 2 |
| Coconut - coconut products - in total - Unspecified | 3 |
| Confectionery products and pastes - in total - Surveillance | |
| Egg products - dried - in total - Surveillance | |
| Egg products - liquid - at catering - Clinical investigations | |

## Table Salmonella in other food

| | Salmonella spp., unspecified |
|---|---|
| Egg products - liquid - at catering - Surveillance | |
| Egg products - liquid - at processing plant - Surveillance | |
| Fish - raw - in total - Surveillance | 1 |
| Foodstuffs intended for special nutritional uses - ready-to-eat - in total - Surveillance | |
| Infant formula - dried - at retail - Surveillance | |
| Other processed food products and prepared dishes - noodles - in total - Surveillance [3)] | 0 |
| Other processed food products and prepared dishes - sandwiches - with meat - in total - Surveillance | |
| Ready-to-eat salads - at catering - Clinical investigations | |
| Ready-to-eat salads - in total - Surveillance | |
| Seeds, dried - in total - Surveillance | |
| Spices and herbs - dried - in total - Surveillance | 1 |
| Spices and herbs - unspecified - Unspecified | 3 |

Comments:

[1)] + egg surface

[2)] for babies

Table Salmonella in other food

Comments:

[3)] dried products containing eggs

## 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 - at slaughterhouse - Surveillance [1)] | NFCSO FFSD | Objective sampling | Official sampling | food sample > carcass swabs | | Single | | 272 | 1 | | |
| Meat from pig - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 169 | 5 | | |
| Meat from pig - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 47 | 0 | | |
| Meat from pig - minced meat - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 83 | 1 | | |
| Meat from pig - minced meat - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 81 | 3 | | |
| Meat from pig - meat preparation - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 22 | 0 | | |
| Meat from pig - meat preparation - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 15 | 1 | | |
| Meat from pig - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 100 | 3 | | |
| Meat from pig - meat products - raw but intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 19 | 0 | | |
| Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 190 | 0 | | |
| Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 100 | 0 | | |
| Meat from bovine animals - carcase - at slaughterhouse - Surveillance [2)] | NFCSO FFSD | Objective sampling | Official sampling | food sample > carcass swabs | | Single | | 168 | 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 bovine animals - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 150 | 3 | | |
| Meat from bovine animals - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 63 | 0 | | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 58 | 0 | | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 10 gramms | 77 | 1 | | |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 14 | 0 | | |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 19 | 0 | | |
| Other products of animal origin - gelatin and collagen - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 48 | 0 | | |
| Meat from bovine animals - meat products - raw and intended to be eaten raw - in total - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 3 | 0 | | |
| Meat from pig - meat products - fermented sausages - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 538 | 8 | | |
| Meat from pig - meat products - fermented sausages - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 197 | 1 | | |
| Meat from pig - meat products - raw ham - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 174 | 1 | | |

## 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 - raw ham - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 51 | 0 | | |
| Meat from wild game - land mammals - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 73 | 1 | | |
| Meat from wild game - land mammals - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 11 | 2 | | |

| | Salmonella spp., unspecified |
|---|---|
| Meat from pig - carcase - at slaughterhouse - Surveillance [1)] | 1 |
| Meat from pig - fresh - at processing plant - Surveillance | 5 |
| Meat from pig - fresh - at retail - Surveillance | |
| Meat from pig - minced meat - intended to be eaten cooked - at processing plant - Surveillance | 1 |
| Meat from pig - minced meat - intended to be eaten cooked - at retail - Surveillance | 3 |
| Meat from pig - meat preparation - intended to be eaten cooked - at processing plant - Surveillance | |
| Meat from pig - meat preparation - intended to be eaten cooked - at retail - Surveillance | 1 |

## Table Salmonella in red meat and products thereof

| | Salmonella spp., unspecified |
|---|---|
| Meat from pig - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance | 3 |
| Meat from pig - meat products - raw but intended to be eaten cooked - at retail - Surveillance | |
| Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance | |
| Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance | |
| Meat from bovine animals - carcase - at slaughterhouse - Surveillance [2)] | |
| Meat from bovine animals - fresh - at processing plant - Surveillance | 3 |
| Meat from bovine animals - fresh - at retail - Surveillance | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at processing plant - Surveillance | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - Surveillance | 1 |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance | |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance | |

## Table Salmonella in red meat and products thereof

| | Salmonella spp., unspecified |
|---|---|
| Other products of animal origin - gelatin and collagen - at retail - Surveillance | |
| Meat from bovine animals - meat products - raw and intended to be eaten raw - in total - Surveillance | |
| Meat from pig - meat products - fermented sausages - at processing plant - Surveillance | 8 |
| Meat from pig - meat products - fermented sausages - at retail - Surveillance | 1 |
| Meat from pig - meat products - raw ham - at processing plant - Surveillance | 1 |
| Meat from pig - meat products - raw ham - at retail - Surveillance | |
| Meat from wild game - land mammals - fresh - at processing plant - Surveillance | 1 |
| Meat from wild game - land mammals - fresh - at retail - Surveillance | 2 |

Comments:

[1)] 400 cm2

[2)] 400 cm2

## 2.1.4 Salmonella in animals

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 | 394 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 394 | 9 | 5 |
| Gallus gallus (fowl) - parent breeding flocks for egg production line - day-old chicks - Control and eradication programmes | 25 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 25 | 2 | 2 |
| Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period - Control and eradication programmes | 76 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 76 | 7 | 7 |
| Gallus gallus (fowl) - parent breeding flocks for egg production line - adult - Control and eradication programmes | 159 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 83 | 6 | 3 |
| Gallus gallus (fowl) - grandparent breeding flocks for egg production line - adult - Control and eradication programmes | 67 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 27 | 0 | 0 |
| Gallus gallus (fowl) - elite breeding flocks for egg production line - adult - Control and eradication programmes | 5 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 5 | 0 | 0 |
| Gallus gallus (fowl) - parent breeding flocks for broiler production line - day-old chicks - Control and eradication programmes | 10 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 10 | 0 | 0 |
| Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period - Control and eradication programmes | 120 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 139 | 0 | 0 |

## 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) - parent breeding flocks for broiler production line - adult - Control and eradication programmes | 413 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 405 | 8 | 5 |

| | 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 | 0 | 0 | 0 | 0 | 0 | 4 |
| Gallus gallus (fowl) - parent breeding flocks for egg production line - day-old chicks - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 0 |
| Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 0 |
| Gallus gallus (fowl) - parent breeding flocks for egg production line - adult - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 3 |
| Gallus gallus (fowl) - grandparent breeding flocks for egg production line - adult - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 0 |
| Gallus gallus (fowl) - elite breeding flocks for egg production line - adult - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 0 |

## Table Salmonella in breeding flocks of Gallus gallus

| | S. Hadar | S. Infantis | S. Typhimurium | S. Virchow | S. 1,4,[5],12:i:- | Salmonella spp., unspecified |
|---|---|---|---|---|---|---|
| Gallus gallus (fowl) - parent breeding flocks for broiler production line - day-old chicks - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 0 |
| Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 0 |
| Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult - Control and eradication programmes | 0 | 0 | 0 | 0 | 0 | 3 |

## 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) - unspecified - in total - Clinical investigations | NFCSO | Unspecified | Not applicable | animal sample | | Animal | 3 | 3 | | 2 | |
| Pigs - unspecified - in total - Clinical investigations | NFCSO | Unspecified | Not applicable | animal sample | | Animal | 33 | 33 | 1 | 24 | |
| Pigs - unspecified - in total - Monitoring - active | NFCSO | Unspecified | Not applicable | animal sample | | Animal | 45 | 45 | 2 | 8 | |

| | Salmonella spp., unspecified |
|---|---|
| Cattle (bovine animals) - unspecified - in total - Clinical investigations | 1 |
| Pigs - unspecified - in total - Clinical investigations | 8 |
| Pigs - unspecified - in total - Monitoring - active | 35 |

## 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 - day-old chicks - Control and eradication programmes | 36 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 36 | 12 | 3 |
| Gallus gallus (fowl) - laying hens - during rearing period - Control and eradication programmes | 56 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 56 | 15 | 0 |
| Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes | 867 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 867 | 136 | 23 |
| Gallus gallus (fowl) - broilers - day-old chicks - Control and eradication programmes | 1518 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 1518 | 57 | 9 |
| Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | 6146 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 6146 | 1409 | 15 |
| Turkeys - breeding flocks, unspecified - day-old chicks - at farm - Control and eradication programmes | 4 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs and dust | | yes | | 4 | 4 | 3 |
| Turkeys - breeding flocks, unspecified - during rearing period - at farm - Control and eradication programmes | 14 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs and dust | | yes | | 14 | 12 | 0 |
| Turkeys - breeding flocks, unspecified - adult - at farm - Control and eradication programmes | 129 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 129 | 14 | 1 |
| Turkeys - fattening flocks - before slaughter - at farm - Control and eradication programmes | 2702 | County report | Objective sampling | Official and industry sampling | environmental sample > boot swabs | | yes | Flock | 2702 | 1008 | 3 |

## Table Salmonella in other poultry

| | S. Typhimurium | S. 1,4,[5],12:i:- | Salmonella spp., unspecified |
|---|---|---|---|
| Gallus gallus (fowl) - laying hens - day-old chicks - Control and eradication programmes | 1 | 0 | 8 |
| Gallus gallus (fowl) - laying hens - during rearing period - Control and eradication programmes | 1 | 0 | 14 |
| Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes | 3 | 0 | 110 |
| Gallus gallus (fowl) - broilers - day-old chicks - Control and eradication programmes | 6 | 0 | 42 |
| Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | 7 | 0 | 1387 |
| Turkeys - breeding flocks, unspecified - day-old chicks - at farm - Control and eradication programmes | | | 1 |
| Turkeys - breeding flocks, unspecified - during rearing period - at farm - Control and eradication programmes | | | 12 |
| Turkeys - breeding flocks, unspecified - adult - at farm - Control and eradication programmes | 0 | 0 | 13 |
| Turkeys - fattening flocks - before slaughter - at farm - Control and eradication programmes | 5 | 0 | 1000 |

## 2.1.5 Salmonella in feedingstuffs

### 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 - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 44 | 1 | | 1 |
| Compound feedingstuffs for pigs - final product - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 166 | 2 | 1 | |
| Compound feedingstuffs for poultry (non specified) - final product - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 167 | 0 | | |
| Compound feedingstuffs for poultry - breeders - final product - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 12 | 1 | | |
| Compound feedingstuffs for poultry - laying hens - final product - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 47 | 0 | | |
| Compound feedingstuffs for poultry - broilers - final product - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 72 | 0 | | |

| | Salmonella spp., unspecified | S. Senftenberg | S. Worthington |
|---|---|---|---|
| Compound feedingstuffs for cattle - final product - at feed mill - Surveillance | | | |
| Compound feedingstuffs for pigs - final product - at feed mill - Surveillance | | | 1 |

## Table Salmonella in compound feedingstuffs

| | Salmonella spp., unspecified | S. Senftenberg | S. Worthington |
|---|---|---|---|
| Compound feedingstuffs for poultry (non specified) - final product - at feed mill - Surveillance | | | |
| Compound feedingstuffs for poultry - breeders - final product - at feed mill - Surveillance | | 1 | |
| Compound feedingstuffs for poultry - laying hens - final product - at feed mill - Surveillance | | | |
| Compound feedingstuffs for poultry - broilers - final product - at feed mill - 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 - meat meal - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 6 | 0 | | |
| Feed material of marine animal origin - fish meal - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 3 | 0 | | |

| | Salmonella spp., unspecified |
|---|---|
| Feed material of land animal origin - meat meal - at feed mill - Surveillance | |
| Feed material of marine animal origin - fish meal - at 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 - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 5 | 0 | | |
| Feed material of cereal grain origin - wheat derived - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 12 | 0 | | |
| Feed material of cereal grain origin - maize derived - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 19 | 0 | | |
| Feed material of oil seed or fruit origin - rape seed derived - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 3 | 0 | | |
| Feed material of oil seed or fruit origin - soya (bean) derived - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 5 | 0 | | |
| Feed material of oil seed or fruit origin - sunflower seed derived - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 3 | 0 | | |
| Feed material of oil seed or fruit origin - linseed derived - at feed mill - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | feed sample | | Single | 1 kg | 10 | 0 | | |

| | Salmonella spp., unspecified |
|---|---|
| Feed material of cereal grain origin - barley derived - at feed mill - Surveillance | |
| Feed material of cereal grain origin - wheat derived - at feed mill - Surveillance | |

## Table Salmonella in other feed matter

| | Salmonella spp., unspecified |
|---|---|
| Feed material of cereal grain origin - maize derived - at feed mill - Surveillance | |
| Feed material of oil seed or fruit origin - rape seed derived - at feed mill - Surveillance | |
| Feed material of oil seed or fruit origin - soya (bean) derived - at feed mill - Surveillance | |
| Feed material of oil seed or fruit origin - sunflower seed derived - at feed mill - Surveillance | |
| Feed material of oil seed or fruit origin - linseed derived - at feed mill - Surveillance | |

## 2.1.6 Salmonella serovars and phagetype distribution

The methods of collecting, isolating and testing of the Salmonella isolates are described in the chapters above respectively for each animal species, foodstuffs and humans. The serotype and phagetype distributions can be used to investigate the sources of the Salmonella infections in humans. Findings of same serovars and phagetypes in human cases and in foodstuffs or animals may indicate that the food category or animal species in question serves as a source of human infections. However as information is not available from all potential sources of infections, conclusions have to be drawn with caution.

Table Salmonella serovars in animals

| Serovar | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | 3 | | | 45 | 33 | | | | | | |
| Number of isolates serotyped | 0 | 0 | 3 | 0 | 0 | 45 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| Other serovars | | | | | | | | | | | | | |
| S. 4,12:-:- | | | | | | | | | | | | | |
| S. 6,7:-:- | | | | | | | | | | | | | |
| S. 6,8:-:- | | | | | | | | | | | | | |
| S. 6,8:e,h:- | | | | | | | | | | | | | |
| S. 9,12:lv:- | | | | | | 2 | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | 3 | | | 45 | 33 | | | | | | |
| Number of isolates serotyped | 0 | 0 | 3 | 0 | 0 | 45 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Abony | | | | | | | | | | | | | |
| S. Agona | | | | | | | | | | | | | |
| S. Anatum | | | | | | | | | | | | | |
| S. Banana | | | | | | | | | | | | | |
| S. Blockley | | | | | | | | | | | | | |
| S. Bovismorbificans | | | 1 | | | | 1 | | | | | | |
| S. Bredeney | | | | | | 4 | | | | | | | |
| S. Choleraesuis | | | | | | 1 | 4 | | | | | | |
| S. Coeln | | | | | | | | | | | | | |
| S. Derby | | | | | | 19 | 3 | | | | | | |
| S. Enteritidis | | | | | | 2 | 1 | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | 3 | | | 45 | 33 | | | | | | |
| Number of isolates serotyped | 0 | 0 | 3 | 0 | 0 | 45 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Goldcoast | | | | | | 1 | | | | | | | |
| S. Hadar | | | | | | | | | | | | | |
| S. Indiana | | | | | | | | | | | | | |
| S. Infantis | | | | | | 3 | | | | | | | |
| S. Kentucky | | | | | | 1 | | | | | | | |
| S. Kottbus | | | | | | | | | | | | | |
| S. Livingstone | | | | | | | | | | | | | |
| S. London | | | | | | 1 | | | | | | | |
| S. Manhattan | | | | | | | | | | | | | |
| S. Mbandaka | | | | | | | | | | | | | |
| S. Montevideo | | | | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | 3 | | | 45 | 33 | | | | | | |
| Number of isolates serotyped | 0 | 0 | 3 | 0 | 0 | 45 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Newport | | | | | | | | | | | | | |
| S. Ohio | | | | | | | | | | | | | |
| S. Orion | | | | | | | | | | | | | |
| S. Saintpaul | | | | | | 2 | | | | | | | |
| S. Senftenberg | | | | | | | | | | | | | |
| S. Stanley | | | | | | | | | | | | | |
| S. Tennessee | | | | | | | | | | | | | |
| S. Thompson | | | | | | 1 | | | | | | | |
| S. Typhimurium | | | 2 | | | 6 | 18 | | | | | | |
| S. Typhimurium, monophasic | | | | | | 2 | 6 | | | | | | |
| S. Virchow | | | | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | 3 | | | 45 | 33 | | | | | | |
| Number of isolates serotyped | 0 | 0 | 3 | 0 | 0 | 45 | 33 | 0 | 0 | 0 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Welikade | | | | | | | | | | | | | |
| S. enterica subsp. enterica, rough | | | | | | | | | | | | | |

| Serovar | Other poultry | | | Gallus gallus (fowl) - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring |
| Number of isolates in the laboratory | | | | 56 | | | | 1644 | | | | 117 | |
| Number of isolates serotyped | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 1644 | 0 | 0 | 0 | 117 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| Other serovars | | | | | | | | | | | | | |
| S. 4,12:-:- | | | | | | | | | | | | | |
| S. 6,7:-:- | | | | | | | | 6 | | | | | |
| S. 6,8:-:- | | | | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Other poultry | | | Gallus gallus (fowl) - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring |
| Number of isolates in the laboratory | | | | 56 | | | | 1644 | | | | 117 | |
| Number of isolates serotyped | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 1644 | 0 | 0 | 0 | 117 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. 6,8:e,h:- | | | | | | | | | | | | | |
| S. 9,12:lv:- | | | | | | | | | | | | | |
| S. Abony | | | | | | | | 1 | | | | 1 | |
| S. Agona | | | | 1 | | | | 7 | | | | 5 | |
| S. Anatum | | | | | | | | | | | | 2 | |
| S. Banana | | | | | | | | 2 | | | | | |
| S. Blockley | | | | 1 | | | | | | | | | |
| S. Bovismorbificans | | | | 3 | | | | 17 | | | | 4 | |
| S. Bredeney | | | | | | | | | | | | | |
| S. Choleraesuis | | | | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Other poultry | | | Gallus gallus (fowl) - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring |
| Number of isolates in the laboratory | | | | 56 | | | | 1644 | | | | 117 | |
| Number of isolates serotyped | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 1644 | 0 | 0 | 0 | 117 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Coeln | | | | | | | | 1 | | | | | |
| S. Derby | | | | | | | | | | | | | |
| S. Enteritidis | | | | 18 | | | | 26 | | | | 57 | |
| S. Goldcoast | | | | | | | | | | | | | |
| S. Hadar | | | | | | | | | | | | | |
| S. Indiana | | | | | | | | | | | | 2 | |
| S. Infantis | | | | 21 | | | | 1408 | | | | 11 | |
| S. Kentucky | | | | 2 | | | | 4 | | | | | |
| S. Kottbus | | | | 1 | | | | 1 | | | | 7 | |
| S. Livingstone | | | | | | | | 3 | | | | 1 | |

## Table Salmonella serovars in animals

| Serovar | Other poultry | | | Gallus gallus (fowl) - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring |
| Number of isolates in the laboratory | | | | 56 | | | | 1644 | | | | 117 | |
| Number of isolates serotyped | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 1644 | 0 | 0 | 0 | 117 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. London | | | | | | | | | | | | | |
| S. Manhattan | | | | | | | | 12 | | | | | |
| S. Mbandaka | | | | | | | | 2 | | | | | |
| S. Montevideo | | | | | | | | 2 | | | | 1 | |
| S. Newport | | | | 1 | | | | 21 | | | | | |
| S. Ohio | | | | | | | | 1 | | | | | |
| S. Orion | | | | | | | | 1 | | | | | |
| S. Saintpaul | | | | | | | | 1 | | | | 6 | |
| S. Senftenberg | | | | | | | | 12 | | | | 1 | |
| S. Stanley | | | | 1 | | | | 6 | | | | | |

## Table Salmonella serovars in animals

| Serovar | Other poultry | | | Gallus gallus (fowl) - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes | | | | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring |
| Number of isolates in the laboratory | | | | 56 | | | | 1644 | | | | 117 | |
| Number of isolates serotyped | 0 | 0 | 0 | 56 | 0 | 0 | 0 | 1644 | 0 | 0 | 0 | 117 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Tennessee | | | | 4 | | | | 2 | | | | 5 | |
| S. Thompson | | | | 3 | | | | 73 | | | | 5 | |
| S. Typhimurium | | | | | | | | 25 | | | | 9 | |
| S. Typhimurium, monophasic | | | | | | | | 1 | | | | | |
| S. Virchow | | | | | | | | | | | | | |
| S. Welikade | | | | | | | | | | | | | |
| S. enterica subsp. enterica, rough | | | | | | | | 9 | | | | | |

## Table Salmonella serovars in animals

| Serovar | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | | Turkeys - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Turkeys - fattening flocks - at farm - Control and eradication programmes | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | 130 | | | | 1334 | | | |
| Number of isolates serotyped | 0 | 0 | 130 | 0 | 0 | 0 | 1334 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | |
| Other serovars | | | 2 | | | | | | | |
| S. 4,12:-:- | | | | | | | 1 | | | |
| S. 6,7:-:- | | | | | | | | | | |
| S. 6,8:-:- | | | 1 | | | | | | | |
| S. 6,8:e,h:- | | | 1 | | | | | | | |
| S. 9,12:lv:- | | | | | | | | | | |
| S. Abony | | | | | | | | | | |
| S. Agona | | | | | | | 8 | | | |
| S. Anatum | | | 2 | | | | | | | |
| S. Banana | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | | Turkeys - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Turkeys - fattening flocks - at farm - Control and eradication programmes | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | 130 | | | | 1334 | | | |
| Number of isolates serotyped | 0 | 0 | 130 | 0 | 0 | 0 | 1334 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | |
| S. Blockley | | | | | | | 7 | | | |
| S. Bovismorbificans | | | 37 | | | | 40 | | | |
| S. Bredeney | | | 15 | | | | 250 | | | |
| S. Choleraesuis | | | | | | | | | | |
| S. Coeln | | | | | | | | | | |
| S. Derby | | | | | | | | | | |
| S. Enteritidis | | | 1 | | | | 9 | | | |
| S. Goldcoast | | | | | | | | | | |
| S. Hadar | | | | | | | 1 | | | |
| S. Indiana | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | | Turkeys - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Turkeys - fattening flocks - at farm - Control and eradication programmes | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | 130 | | | | 1334 | | | |
| Number of isolates serotyped | 0 | 0 | 130 | 0 | 0 | 0 | 1334 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | |
| S. Infantis | | | 5 | | | | 184 | | | |
| S. Kentucky | | | 11 | | | | 199 | | | |
| S. Kottbus | | | | | | | 8 | | | |
| S. Livingstone | | | | | | | | | | |
| S. London | | | | | | | | | | |
| S. Manhattan | | | | | | | | | | |
| S. Mbandaka | | | | | | | | | | |
| S. Montevideo | | | | | | | | | | |
| S. Newport | | | 11 | | | | 51 | | | |
| S. Ohio | | | | | | | | | | |

## Table Salmonella serovars in animals

| Serovar | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | | Turkeys - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Turkeys - fattening flocks - at farm - Control and eradication programmes | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | 130 | | | | 1334 | | | |
| Number of isolates serotyped | 0 | 0 | 130 | 0 | 0 | 0 | 1334 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | |
| S. Orion | | | | | | | | | | |
| S. Saintpaul | | | 6 | | | | 269 | | | |
| S. Senftenberg | | | 1 | | | | 4 | | | |
| S. Stanley | | | 30 | | | | 242 | | | |
| S. Tennessee | | | 3 | | | | 46 | | | |
| S. Thompson | | | 1 | | | | | | | |
| S. Typhimurium | | | 3 | | | | 2 | | | |
| S. Typhimurium, monophasic | | | | | | | 2 | | | |
| S. Virchow | | | | | | | 5 | | | |
| S. Welikade | | | | | | | 6 | | | |

## Table Salmonella serovars in animals

| Serovar | Gallus gallus (fowl) - laying hens - at farm - Control and eradication programmes | | Turkeys - breeding flocks, unspecified - at farm - Control and eradication programmes | | | | Turkeys - fattening flocks - at farm - Control and eradication programmes | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | 130 | | | | 1334 | | | |
| Number of isolates serotyped | 0 | 0 | 130 | 0 | 0 | 0 | 1334 | 0 | 0 | 0 |
| Number of isolates per serovar | | | | | | | | | | |
| S. enterica subsp. enterica, rough | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals | | Meat from pig | | Meat from broilers (Gallus gallus) | | Meat from other poultry species | | Other products of animal origin | | Meat from bovine animals - fresh | | Meat from bovine animals - meat products - raw but intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | | | | | | | | | | 3 | | 1 |
| Number of isolates serotyped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. 6,7:-:- | | | | | | | | | | | | | |
| S. 9,12:lv:- | | | | | | | | | | | | | |
| S. Agona | | | | | | | | | | | 1 | | |
| S. Banana | | | | | | | | | | | | | |
| S. Blockley | | | | | | | | | | | | | |
| S. Bovismorbificans | | | | | | | | | | | | | |
| S. Brandenburg | | | | | | | | | | | | | |
| S. Bredeney | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals | | Meat from pig | | Meat from broilers (Gallus gallus) | | Meat from other poultry species | | Other products of animal origin | | Meat from bovine animals - fresh | | Meat from bovine animals - meat products - raw but intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | | | | | | | | | | 3 | | 1 |
| Number of isolates serotyped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Derby | | | | | | | | | | | | | |
| S. Enteritidis | | | | | | | | | | | | | |
| S. Goldcoast | | | | | | | | | | | | | |
| S. Indiana | | | | | | | | | | | | | |
| S. Infantis | | | | | | | | | | | | | 1 |
| S. Kentucky | | | | | | | | | | | | | |
| S. Kottbus | | | | | | | | | | | | | |
| S. Livingstone | | | | | | | | | | | | | |
| S. London | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals | | Meat from pig | | Meat from broilers (Gallus gallus) | | Meat from other poultry species | | Other products of animal origin | | Meat from bovine animals - fresh | | Meat from bovine animals - meat products - raw but intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | | | | | | | | | | 3 | | 1 |
| Number of isolates serotyped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Newport | | | | | | | | | | | | | |
| S. Ohio | | | | | | | | | | | | | |
| S. Panama | | | | | | | | | | | | | |
| S. Paratyphi B var. Java | | | | | | | | | | | | | |
| S. Saintpaul | | | | | | | | | | | | | |
| S. Stanley | | | | | | | | | | | | | |
| S. Tennessee | | | | | | | | | | | | | |
| S. Thompson | | | | | | | | | | | | | |
| S. Typhimurium | | | | | | | | | | | 2 | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals | | Meat from pig | | Meat from broilers (Gallus gallus) | | Meat from other poultry species | | Other products of animal origin | | Meat from bovine animals - fresh | | Meat from bovine animals - meat products - raw but intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | | | | | | | | | | 3 | | 1 |
| Number of isolates serotyped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Typhimurium, monophasic | | | | | | | | | | | | | |
| S. enterica subsp. enterica, rough | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals - meat products - raw but intended to be eaten cooked | Meat from bovine animals - minced meat - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - carcase - at slaughterhouse | | Meat from broilers (Gallus gallus) - fresh | | Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat | | Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 2 | | | 195 | | 235 | | 33 | | 7 | | 6 |
| Number of isolates serotyped | 0 | 2 | 0 | 0 | 195 | 0 | 235 | 0 | 33 | 0 | 7 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. 6,7:-:- | | | | | 1 | | | | | | | | |
| S. 9,12:lv:- | | | | | | | | | | | | | |
| S. Agona | | | | | | | | | | | | | |
| S. Banana | | | | | 4 | | | | | | | | |
| S. Blockley | | | | | | | | | | | | | |
| S. Bovismorbificans | | 1 | | | | | | | | | | | |
| S. Brandenburg | | | | | | | | | | | | | |
| S. Bredeney | | | | | 2 | | | | | | | | |
| S. Derby | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals - meat products - raw but intended to be eaten cooked | Meat from bovine animals - minced meat - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - carcase - at slaughterhouse | | Meat from broilers (Gallus gallus) - fresh | | Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat | | Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 2 | | | 195 | | 235 | | 33 | | 7 | | 6 |
| Number of isolates serotyped | 0 | 2 | 0 | 0 | 195 | 0 | 235 | 0 | 33 | 0 | 7 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Enteritidis | | | | | | | | | | | | | |
| S. Goldcoast | | | | | | | | | | | | | |
| S. Indiana | | | | | 2 | | | | | | | | |
| S. Infantis | | | | | 182 | | 230 | | 31 | | 7 | | 6 |
| S. Kentucky | | | | | | | | | | | | | |
| S. Kottbus | | | | | | | | | | | | | |
| S. Livingstone | | | | | | | | | | | | | |
| S. London | | | | | | | | | | | | | |
| S. Newport | | | | | | | 1 | | 1 | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals - meat products - raw but intended to be eaten cooked | Meat from bovine animals - minced meat - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - carcase - at slaughterhouse | | Meat from broilers (Gallus gallus) - fresh | | Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat | | Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 2 | | | 195 | | 235 | | 33 | | 7 | | 6 |
| Number of isolates serotyped | 0 | 2 | 0 | 0 | 195 | 0 | 235 | 0 | 33 | 0 | 7 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Ohio | | | | | | | | | | | | | |
| S. Panama | | | | | | | | | | | | | |
| S. Paratyphi B var. Java | | | | | | | | | | | | | |
| S. Saintpaul | | | | | | | 1 | | | | | | |
| S. Stanley | | | | | | | | | | | | | |
| S. Tennessee | | | | | | | | | | | | | |
| S. Thompson | | | | | 2 | | | | | | | | |
| S. Typhimurium | | 1 | | | | | | | 1 | | | | |
| S. Typhimurium, monophasic | | | | | 1 | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from bovine animals - meat products - raw but intended to be eaten cooked | Meat from bovine animals - minced meat - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - carcase - at slaughterhouse | | Meat from broilers (Gallus gallus) - fresh | | Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked | | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat | | Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 2 | | | 195 | | 235 | | 33 | | 7 | | 6 |
| Number of isolates serotyped | 0 | 2 | 0 | 0 | 195 | 0 | 235 | 0 | 33 | 0 | 7 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. enterica subsp. enterica, rough | | | | | 1 | | 3 | | | | | | |

| Serovar | Meat from duck - fresh | | Meat from pig - fresh | | Meat from pig - meat preparation - intended to be eaten cooked | | Meat from pig - meat products - cooked, ready-to-eat | | Meat from pig - meat products - raw and intended to be eaten raw | | Meat from pig - meat products - raw but intended to be eaten cooked | | Meat from pig - minced meat - intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | 16 | | 14 | | 5 | | 1 | | 17 | | 6 | |
| Number of isolates serotyped | 0 | 16 | 0 | 14 | 0 | 5 | 0 | 1 | 0 | 17 | 0 | 6 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. 6,7:-:- | | | | | | | | | | | | | |
| S. 9,12:lv:- | | | | | | | | | | 1 | | | |

## Table Salmonella serovars in food

| Serovar | Meat from duck - fresh | | Meat from pig - fresh | | Meat from pig - meat preparation - intended to be eaten cooked | | Meat from pig - meat products - cooked, ready-to-eat | | Meat from pig - meat products - raw and intended to be eaten raw | | Meat from pig - meat products - raw but intended to be eaten cooked | | Meat from pig - minced meat - intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | 16 | | 14 | | 5 | | 1 | | 17 | | 6 | |
| Number of isolates serotyped | 0 | 16 | 0 | 14 | 0 | 5 | 0 | 1 | 0 | 17 | 0 | 6 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Agona | | | | | | | | | | | | | |
| S. Banana | | | | | | | | | | | | | |
| S. Blockley | | | | | | | | | | | | | |
| S. Bovismorbificans | | | | | | | | | | | | | |
| S. Brandenburg | | | | 1 | | | | | | | | | |
| S. Bredeney | | | | | | | | | | 2 | | | |
| S. Derby | | | | 1 | | 2 | | | | | | | |
| S. Enteritidis | | 2 | | | | | | | | 1 | | | |
| S. Goldcoast | | | | | | | | | | 2 | | | |
| S. Indiana | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from duck - fresh | | Meat from pig - fresh | | Meat from pig - meat preparation - intended to be eaten cooked | | Meat from pig - meat products - cooked, ready-to-eat | | Meat from pig - meat products - raw and intended to be eaten raw | | Meat from pig - meat products - raw but intended to be eaten cooked | | Meat from pig - minced meat - intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | 16 | | 14 | | 5 | | 1 | | 17 | | 6 | |
| Number of isolates serotyped | 0 | 16 | 0 | 14 | 0 | 5 | 0 | 1 | 0 | 17 | 0 | 6 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Infantis | | 2 | | 2 | | | | 1 | | 2 | | 2 | |
| S. Kentucky | | | | | | | | | | | | | |
| S. Kottbus | | 2 | | | | | | | | | | | |
| S. Livingstone | | 1 | | | | | | | | | | | |
| S. London | | | | | | 1 | | | | | | 1 | |
| S. Newport | | | | | | | | | | | | | |
| S. Ohio | | | | | | | | | | | | 1 | |
| S. Panama | | | | 3 | | | | | | | | | |
| S. Paratyphi B var. Java | | 1 | | | | | | | | | | | |
| S. Saintpaul | | | | | | | | | | 2 | | | |

## Table Salmonella serovars in food

| Serovar | Meat from duck - fresh | | Meat from pig - fresh | | Meat from pig - meat preparation - intended to be eaten cooked | | Meat from pig - meat products - cooked, ready-to-eat | | Meat from pig - meat products - raw and intended to be eaten raw | | Meat from pig - meat products - raw but intended to be eaten cooked | | Meat from pig - minced meat - intended to be eaten cooked |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | 16 | | 14 | | 5 | | 1 | | 17 | | 6 | |
| Number of isolates serotyped | 0 | 16 | 0 | 14 | 0 | 5 | 0 | 1 | 0 | 17 | 0 | 6 | 0 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Stanley | | | | | | | | | | | | | |
| S. Tennessee | | | | | | | | | | | | | |
| S. Thompson | | | | | | | | | | | | | |
| S. Typhimurium | | 7 | | 5 | | 2 | | | | 4 | | 1 | |
| S. Typhimurium, monophasic | | 1 | | 2 | | | | | | 3 | | 1 | |
| S. enterica subsp. enterica, rough | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from pig - minced meat - intended to be eaten cooked | Meat from turkey - carcase - at slaughterhouse | | Meat from turkey - fresh | | Meat from turkey - meat preparation - intended to be eaten cooked | | Meat from turkey - meat products - cooked, ready-to-eat | | Meat from turkey - meat products - raw and intended to be eaten raw | | Meat from turkey - meat products - raw but intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | 9 | | 62 | | 47 | | 5 | | 2 | | 1 | | 6 |
| Number of isolates serotyped | 9 | 0 | 62 | 0 | 47 | 0 | 5 | 0 | 2 | 0 | 1 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. 6,7:-:- | | | | | 2 | | | | | | | | |
| S. 9,12:lv:- | | | | | | | | | | | | | |
| S. Agona | | | 1 | | | | | | | | | | |
| S. Banana | | | | | | | | | | | | | |
| S. Blockley | | | | | 1 | | | | | | | | |
| S. Bovismorbificans | | | 2 | | 3 | | | | | | | | |
| S. Brandenburg | | | | | | | | | | | | | |
| S. Bredeney | 2 | | 14 | | 2 | | 2 | | | | | | 1 |
| S. Derby | 2 | | | | | | | | | | | | |
| S. Enteritidis | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from pig - minced meat - intended to be eaten cooked | Meat from turkey - carcase - at slaughterhouse | | Meat from turkey - fresh | | Meat from turkey - meat preparation - intended to be eaten cooked | | Meat from turkey - meat products - cooked, ready-to-eat | | Meat from turkey - meat products - raw and intended to be eaten raw | | Meat from turkey - meat products - raw but intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | 9 | | 62 | | 47 | | 5 | | 2 | | 1 | | 6 |
| Number of isolates serotyped | 9 | 0 | 62 | 0 | 47 | 0 | 5 | 0 | 2 | 0 | 1 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Goldcoast | 1 | | | | | | | | | | | | |
| S. Indiana | | | | | | | | | | | | | |
| S. Infantis | | | 11 | | 8 | | 2 | | 2 | | | | 3 |
| S. Kentucky | | | 18 | | 8 | | | | | | | | 2 |
| S. Kottbus | | | | | | | | | | | | | |
| S. Livingstone | | | | | | | | | | | | | |
| S. London | | | | | | | | | | | | | |
| S. Newport | | | 10 | | 9 | | | | | | | | |
| S. Ohio | | | | | | | | | | | | | |
| S. Panama | | | | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from pig - minced meat - intended to be eaten cooked | Meat from turkey - carcase - at slaughterhouse | | Meat from turkey - fresh | | Meat from turkey - meat preparation - intended to be eaten cooked | | Meat from turkey - meat products - cooked, ready-to-eat | | Meat from turkey - meat products - raw and intended to be eaten raw | | Meat from turkey - meat products - raw but intended to be eaten cooked | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | 9 | | 62 | | 47 | | 5 | | 2 | | 1 | | 6 |
| Number of isolates serotyped | 9 | 0 | 62 | 0 | 47 | 0 | 5 | 0 | 2 | 0 | 1 | 0 | 6 |
| Number of isolates per serovar | | | | | | | | | | | | | |
| S. Paratyphi B var. Java | | | | | | | | | | | | | |
| S. Saintpaul | | | 2 | | 9 | | 1 | | | | | | |
| S. Stanley | | | | | 2 | | | | | | | | |
| S. Tennessee | | | 2 | | 3 | | | | | | | | |
| S. Thompson | | | | | | | | | | | | | |
| S. Typhimurium | 2 | | | | | | | | | | 1 | | |
| S. Typhimurium, monophasic | 2 | | | | | | | | | | | | |
| S. enterica subsp. enterica, rough | | | 2 | | | | | | | | | | |

## Table Salmonella serovars in food

| Serovar | Meat from turkey - minced meat - intended to be eaten cooked | |
|---|---|---|
| Sources of isolates | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 35 |
| Number of isolates serotyped | 0 | 35 |
| Number of isolates per serovar | | |
| S. 6,7:-:- | | |
| S. 9,12:lv:- | | |
| S. Agona | | |
| S. Banana | | |
| S. Blockley | | 1 |
| S. Bovismorbificans | | |
| S. Brandenburg | | |
| S. Bredeney | | 7 |
| S. Derby | | |
| S. Enteritidis | | |
| S. Goldcoast | | |

## Table Salmonella serovars in food

| Serovar | Meat from turkey - minced meat - intended to be eaten cooked | |
|---|---|---|
| Sources of isolates | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 35 |
| Number of isolates serotyped | 0 | 35 |
| Number of isolates per serovar | | |
| S. Indiana | | |
| S. Infantis | | 5 |
| S. Kentucky | | 11 |
| S. Kottbus | | |
| S. Livingstone | | |
| S. London | | |
| S. Newport | | 4 |
| S. Ohio | | |
| S. Panama | | |
| S. Paratyphi B var. Java | | |
| S. Saintpaul | | 5 |

## Table Salmonella serovars in food

| Serovar | Meat from turkey - minced meat - intended to be eaten cooked | |
|---|---|---|
| Sources of isolates | Monitoring | Surveillance |
| Number of isolates in the laboratory | | 35 |
| Number of isolates serotyped | 0 | 35 |
| Number of isolates per serovar | | |
| S. Stanley | | 1 |
| S. Tennessee | | |
| S. Thompson | | |
| S. Typhimurium | | 1 |
| S. Typhimurium, monophasic | | |
| S. enterica subsp. enterica, rough | | |

## Table Salmonella Enteritidis phagetypes in animals

| Phagetype | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | | | | 2 | 1 | | 101 | | | | 10 |
| Number of isolates phagetyped | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 101 | 0 | 0 | 0 | 10 |
| Number of isolates per phagetype | | | | | | | | | | | | | |
| Not typeable | | | | | | | | | 14 | | | | |
| PT 1 | | | | | | | | | 2 | | | | |
| PT 12 | | | | | | | | | 1 | | | | |
| PT 13 | | | | | | | | | | | | | 1 |
| PT 13a | | | | | | | | | 3 | | | | 3 |
| PT 14b | | | | | | | | | | | | | 3 |
| PT 1b | | | | | | | | | 8 | | | | |
| PT 2 | | | | | | | | | 3 | | | | |
| PT 21 | | | | | | 1 | | | 10 | | | | 1 |
| PT 23 | | | | | | | | | 3 | | | | 1 |
| PT 37 | | | | | | | | | 2 | | | | |

## Table Salmonella Enteritidis phagetypes in animals

| Phagetype | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | | | | 2 | 1 | | 101 | | | | 10 |
| Number of isolates phagetyped | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 101 | 0 | 0 | 0 | 10 |
| Number of isolates per phagetype | | | | | | | | | | | | | |
| PT 4 | | | | | | | | | 6 | | | | |
| PT 5 | | | | | | | 1 | | 13 | | | | |
| PT 6 | | | | | | | | | 2 | | | | |
| PT 6a | | | | | | | | | 8 | | | | |
| PT 6c | | | | | | | | | 4 | | | | |
| PT 8 | | | | | | 1 | | | 17 | | | | |
| RDNC | | | | | | | | | 5 | | | | 1 |

## Table Salmonella Enteritidis phagetypes in animals

| Phagetype / Sources of isolates | Other poultry | | |
|---|---|---|---|
| | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | |
| Number of isolates phagetyped | 0 | 0 | 0 |
| Number of isolates per phagetype | | | |
| Not typeable | | | |
| PT 1 | | | |
| PT 12 | | | |
| PT 13 | | | |
| PT 13a | | | |
| PT 14b | | | |
| PT 1b | | | |
| PT 2 | | | |
| PT 21 | | | |
| PT 23 | | | |
| PT 37 | | | |

## Table Salmonella Enteritidis phagetypes in animals

| Phagetype | Other poultry | | |
|---|---|---|---|
| Sources of isolates | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | |
| Number of isolates phagetyped | 0 | 0 | 0 |
| Number of isolates per phagetype | | | |
| PT 4 | | | |
| PT 5 | | | |
| PT 6 | | | |
| PT 6a | | | |
| PT 6c | | | |
| PT 8 | | | |
| RDNC | | | |

## Table Salmonella Enteritidis phagetypes in food

| Phagetype | Meat from bovine animals | | Meat from pig | | Meat from broilers (Gallus gallus) | | Meat from other poultry species | | Other products of animal origin | | Meat from duck - fresh | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance |
| Number of isolates in the laboratory | | | | | | | | | | | | 2 |
| Number of isolates phagetyped | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Number of isolates per phagetype | | | | | | | | | | | | |
| PT 2 | | | | | | | | | | | | 1 |
| PT 9b | | | | | | | | | | | | 1 |

## Table Salmonella Enteritidis phagetypes in humans

| Phagetype | Humans | |
|---|---|---|
| Sources of isolates | Monitoring | Clinical |
| Number of isolates in the laboratory | 1131 | 686 |
| Number of isolates phagetyped | 1131 | 686 |
| Number of isolates per phagetype | | |
| 1 | 11 | 8 |
| 2 | 526 | 244 |
| 3a | 3 | |
| 4 | 69 | 64 |
| 4b | 10 | 3 |
| 6 | 27 | 6 |
| 6a | 5 | 6 |
| 6c | 7 | 10 |
| 8 | 176 | 137 |
| Other | 9 | 3 |
| PT 13 | | 3 |

## Table Salmonella Enteritidis phagetypes in humans

| Phagetype | Humans | |
|---|---|---|
| Sources of isolates | Monitoring | Clinical |
| Number of isolates in the laboratory | 1131 | 686 |
| Number of isolates phagetyped | 1131 | 686 |
| Number of isolates per phagetype | | |
| PT 13a | 4 | 2 |
| PT 14b | 7 | 2 |
| PT 14c | 2 | |
| PT 1b | 9 | 13 |
| PT 21 | 133 | 58 |
| PT 21c | 3 | 3 |
| PT 23 | 2 | |
| PT 51 | 77 | 62 |
| PT 58 | 7 | 3 |
| PT 5c | | 2 |
| RDNC | 10 | 21 |

## Table Salmonella Enteritidis phagetypes in humans

| Phagetype | Humans | |
|---|---|---|
| Sources of isolates | Monitoring | Clinical |
| Number of isolates in the laboratory | 1131 | 686 |
| Number of isolates phagetyped | 1131 | 686 |
| Number of isolates per phagetype | | |
| U | 34 | 36 |

## Table Salmonella Typhimurium phagetypes in animals

| Phagetype | Cattle (bovine animals) | | | | Pigs | | | | Gallus gallus (fowl) | | | | Other poultry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program | Monitoring | Clinical | Surveillance | Control program |
| Number of isolates in the laboratory | | | 2 | | | 6 | 18 | | 34 | | | | 5 |
| Number of isolates phagetyped | 0 | 0 | 2 | 0 | 0 | 6 | 17 | 0 | 32 | 0 | 0 | 0 | 5 |
| Number of isolates per phagetype | | | | | | | | | | | | | |
| DT 1 | | | | | | | | | 1 | | | | |
| DT 104 | | | 1 | | | 1 | 1 | | | | | | 1 |
| DT 104b | | | | | | 1 | 8 | | | | | | |
| DT 22 | | | | | | | | | 5 | | | | |
| DT 46a | | | | | | | | | 2 | | | | 1 |
| DT 8 | | | | | | | | | 1 | | | | |
| Not typeable | | | | | | 2 | | | | | | | 1 |
| RDNC | | | 1 | | | 1 | | | 20 | | | | 2 |
| U 302 | | | | | | 1 | 8 | | 3 | | | | |

## Table Salmonella Typhimurium phagetypes in animals

| Phagetype / Sources of isolates | Other poultry | | |
|---|---|---|---|
| | Monitoring | Clinical | Surveillance |
| Number of isolates in the laboratory | | | |
| Number of isolates phagetyped | 0 | 0 | 0 |
| Number of isolates per phagetype | | | |
| DT 1 | | | |
| DT 104 | | | |
| DT 104b | | | |
| DT 22 | | | |
| DT 46a | | | |
| DT 8 | | | |
| Not typeable | | | |
| RDNC | | | |
| U 302 | | | |

## Table Salmonella Typhimurium phagetypes in food

| Phagetype | Meat from bovine animals | | Meat from pig | | Meat from broilers (Gallus gallus) | | Meat from other poultry species | | Other products of animal origin | | Meat from duck - fresh | | Meat from turkey |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sources of isolates | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring | Surveillance | Monitoring |
| Number of isolates in the laboratory | | 3 | | 14 | | 1 | | | | | | 7 | |
| Number of isolates phagetyped | 0 | 3 | 0 | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| Number of isolates per phagetype | | | | | | | | | | | | | |
| DT 10 | | | | 1 | | | | | | | | | |
| DT 104b | | 2 | | 3 | | | | | | | | | |
| DT 193 | | | | 1 | | | | | | | | | |
| DT 46a | | | | | | | | | | | | 1 | |
| DT 8 | | | | | | | | | | | | 1 | |
| Not typeable | | | | 1 | | | | | | | | | |
| RDNC | | | | 2 | | 1 | | | | | | 2 | |
| U 302 | | | | 5 | | | | | | | | | |
| U 311 | | 1 | | | | | | | | | | 1 | |

## Table Salmonella Typhimurium phagetypes in food

| Phagetype | Meat from turkey |
|---|---|
| Sources of isolates | Surveillance |
| Number of isolates in the laboratory | 2 |
| Number of isolates phagetyped | 2 |
| Number of isolates per phagetype | |
| DT 10 | |
| DT 104b | |
| DT 193 | 1 |
| DT 46a | |
| DT 8 | |
| Not typeable | 1 |
| RDNC | |
| U 302 | |
| U 311 | |

## Table Salmonella Typhimurium phagetypes in humans

| Phagetype | Humans | |
|---|---|---|
| Sources of isolates | Monitoring | Clinical |
| Number of isolates in the laboratory | 366 | 157 |
| Number of isolates phagetyped | 364 | 157 |
| Number of isolates per phagetype | | |
| 1 | 9 | 2 |
| DT 104a | | 2 |
| DT 104b | 67 | 41 |
| DT 104l | 46 | 21 |
| DT 12 | 3 | |
| DT 120 | | 3 |
| DT 124 | 3 | |
| DT 193 | 76 | 25 |
| DT 193a | | 2 |
| DT 194 | 5 | |
| DT 195 | 50 | 21 |

## Table Salmonella Typhimurium phagetypes in humans

| Phagetype | Humans | |
|---|---|---|
| Sources of isolates | Monitoring | Clinical |
| Number of isolates in the laboratory | 366 | 157 |
| Number of isolates phagetyped | 364 | 157 |
| Number of isolates per phagetype | | |
| DT 208 | 4 | 3 |
| DT 27 | 4 | |
| DT 35 | 3 | 2 |
| DT 36 | 3 | |
| DT 41 | 2 | |
| DT 46a | 3 | |
| DT 8 | 11 | |
| DT 92 | | 2 |
| DT 99 | 4 | |
| Other | 12 | 10 |
| RDNC | 29 | 6 |

## Table Salmonella Typhimurium phagetypes in humans

| Phagetype | Humans | |
|---|---|---|
| Sources of isolates | Monitoring | Clinical |
| Number of isolates in the laboratory | 366 | 157 |
| Number of isolates phagetyped | 364 | 157 |
| Number of isolates per phagetype | | |
| U | 14 | 6 |
| U 302 | 12 | 11 |
| U 310 | 4 | |

## 2.1.7 Antimicrobial resistance in Salmonella isolates

### A. Antimicrobial resistance in Salmonella in foodstuff derived from poultry

#### Sampling strategy used in monitoring

##### Frequency of the sampling

Frequency: as described previously in prevalence tables. As only Salmonella Enteritidis and Typhimurium strains are involved in the resistence monitoring program in foodstuff, and the number of isolates belonging to these serovars is very limited because of the 90% dominance of Salmonella Infantis in broiler chicken, only a limited number of isolates are available for the tests.

##### Type of specimen taken

Fresh meat at slaughterhouses, minced meat, meat preparations, meat products at processing level and at the market. There is no direct sampling program for antimicrobial resistance, it is connected to prevalence monitoring.

##### Methods of sampling (description of sampling techniques)

As described earlier.

##### Procedures for the selection of isolates for antimicrobial testing

S. Enteritidis and Salmonella Infantis strains are selected. All the S. Enteritidis strains of broiler origin were tested. As S. Infantis shows a characteristic dominance in Hungary, the number of the strains available is just 2000. Therefore only 10 % of the isolates were selected for testing.

##### Methods used for collecting data

All the strains isolated from food are serotyped in the NRL Salmonella. Antimicrobial resistence testing is performed in the NRL.

#### Laboratory methodology used for identification of the microbial isolates

ISO 6579 - isolation, biochemical and serological confirmation.

#### Laboratory used for detection for resistance

##### Antimicrobials included in monitoring

Disc diffusion method according to NCCLS is used. The inhibitive zone diameters are measured by a computerised system.

#### Preventive measures in place

There are no specific preventive measures in place.

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

Because of the very low number of Salmonella Enteritidis isolates the information available is limited. There is no significant change in level of resistance in the past four years.

## B. Antimicrobial resistance in Salmonella in poultry

### Sampling strategy used in monitoring

#### Methods used for collecting data

Testing and data collection was the task of the NRL Salmonella.

### Laboratory methodology used for identification of the microbial isolates

ISO 6579 - isolation, biochemical and serological confirmation. ISO 6579 - isolation, biochemical and serological confirmation.

### Laboratory used for detection for resistance

#### Antimicrobials included in monitoring

Disc diffusion method according to NCCLS is used. The inhibitive zone diameters are measured by a computerised system.

### Results of the investigation

# Table Antimicrobial susceptibility testing of Salmonella in humans

| Salmonella | S. Enteritidis | | S. Typhimurium | | Salmonella spp. | |
|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | yes | | yes | |
| Number of isolates available in the laboratory | 1817 | | 553 | | 500 | |
| Antimicrobials: | N | n | N | n | N | n |
| Aminoglycosides - Gentamicin | 129 | 0 | 553 | 7 | 500 | 4 |
| Aminoglycosides - Kanamycin | 129 | 0 | 553 | 6 | 500 | 9 |
| Aminoglycosides - Streptomycin | 129 | 4 | 553 | 240 | 500 | 169 |
| Amphenicols - Chloramphenicol | 129 | 4 | 553 | 132 | 500 | 2 |
| Cephalosporins - 3rd generation cephalosporins | 129 | 0 | 553 | 0 | 500 | 2 |
| Fluoroquinolones - Ciprofloxacin | 129 | 0 | 553 | 0 | 500 | 2 |
| Penicillins - Ampicillin | 129 | 25 | 553 | 380 | 500 | 99 |
| Quinolones - Nalidixic acid | 129 | 13 | 553 | 14 | 500 | 313 |
| Sulfonamides | 129 | 6 | 553 | 276 | 500 | 253 |
| Tetracyclines - Tetracycline | 129 | 3 | 553 | 249 | 500 | 242 |
| Trimethoprim | 129 | 0 | 553 | 69 | 500 | 32 |
| Fully sensitive | 129 | 95 | 553 | 125 | 500 | 151 |
| Resistant to 1 antimicrobial | 129 | 25 | 553 | 135 | 500 | 50 |
| Resistant to 2 antimicrobials | 129 | 5 | 553 | 23 | 500 | 48 |
| Resistant to 3 antimicrobials | 129 | 0 | 553 | 22 | 500 | 81 |
| Resistant to 4 antimicrobials | 129 | 2 | 553 | 94 | 500 | 122 |
| Resistant to >4 antimicrobials | 129 | 2 | 553 | 154 | 500 | 48 |
| Number of multiresistant S. Typhimurium - with penta resistance | | | 553 | 104 | | |
| Number of multiresistant S. Typhimurium - resistant to other antimicrobials | | | 553 | 166 | | |

Table Antimicrobial susceptibility testing of Salmonella in humans

## Table Antimicrobial susceptibility testing of Salmonella in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

| Salmonella | S. Enteritidis | | S. Infantis | | S. Typhimurium | | S. Typhimurium, monophasic - 4 | | Salmonella spp. | |
|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | yes | | yes | | yes | | yes | |
| Number of isolates available in the laboratory | 0 | | 368 | | 2 | | 1 | | 6 | |
| Antimicrobials: | N | n | N | n | N | n | N | n | N | n |
| Aminoglycosides - Gentamicin | 0 | | 170 | 3 | 2 | 0 | 1 | 0 | 6 | 0 |
| Aminoglycosides - Streptomycin | 0 | | 170 | 74 | 2 | 1 | 1 | 1 | 6 | 0 |
| Amphenicols - Chloramphenicol | 0 | | 170 | 2 | 2 | 1 | 1 | 0 | 6 | 0 |
| Cephalosporins - Cefotaxime | 0 | | 170 | 0 | 2 | 0 | 1 | 0 | 6 | 0 |
| Fluoroquinolones - Ciprofloxacin | 0 | | 170 | 167 | 2 | 0 | 1 | 0 | 6 | 4 |
| Fluoroquinolones - Enrofloxacin | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Penicillins - Ampicillin | 0 | | 170 | 16 | 2 | 1 | 1 | 1 | 6 | 3 |
| Quinolones - Nalidixic acid | 0 | | 170 | 168 | 2 | 0 | 1 | 0 | 6 | 4 |
| Sulfonamides | 0 | | 37 | 28 | 2 | 1 | 1 | 1 | 4 | 0 |
| Tetracyclines - Tetracycline | 0 | | 170 | 138 | 2 | 1 | 1 | 1 | 6 | 3 |
| Trimethoprim | 0 | | 170 | 0 | 2 | 0 | 1 | 0 | 6 | 0 |
| Fully sensitive | 0 | | 170 | 2 | 2 | 1 | 1 | 0 | 6 | 2 |
| Resistant to 1 antimicrobial | | | 170 | 1 | 2 | 0 | 1 | 0 | 6 | 0 |
| Resistant to 2 antimicrobials | | | 170 | 18 | 2 | 0 | 1 | 0 | 6 | 1 |
| Resistant to 3 antimicrobials | | | 170 | 58 | 2 | 0 | 1 | 0 | 6 | 0 |
| Resistant to 4 antimicrobials | | | 170 | 75 | 2 | 0 | 1 | 1 | 6 | 3 |
| Resistant to >4 antimicrobials | | | 170 | 16 | 2 | 1 | 1 | 0 | 6 | 0 |

Table Antimicrobial susceptibility testing of Salmonella in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

## Table Antimicrobial susceptibility testing of Salmonella in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

| Salmonella | S. Bredeney | | S. Enteritidis | | S. Infantis | | S. Kentucky | | S. Newport | | S. Saintpaul | | S. Typhimurium | | S. Typhimurium, monophasic - 4 | | Salmonella spp. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | yes | | yes | | yes | | yes | | yes | | yes | | yes | | yes | |
| Number of isolates available in the laboratory | 15 | | 0 | | 29 | | 28 | | 26 | | 16 | | 2 | | 0 | | 12 | |
| Antimicrobials: | N | n | N | n | N | n | N | n | N | n | N | n | N | n | N | n | N | n |
| Aminoglycosides - Gentamicin | 15 | 0 | | | 29 | 0 | 28 | 28 | 26 | 0 | 16 | 0 | 2 | 0 | | | 12 | 0 |
| Aminoglycosides - Streptomycin | 15 | 3 | | | 29 | 12 | 28 | 22 | 26 | 1 | 16 | 0 | 2 | 2 | | | 12 | 2 |
| Amphenicols - Chloramphenicol | 15 | 0 | | | 29 | 0 | 28 | 1 | 26 | 0 | 16 | 0 | 2 | 0 | | | 12 | 0 |
| Cephalosporins - Cefotaxime | 15 | 0 | | | 29 | 0 | 28 | 0 | 26 | 0 | 16 | 0 | 2 | 0 | | | 12 | 0 |
| Fluoroquinolones - Ciprofloxacin | 15 | 15 | | | 29 | 29 | 28 | 28 | 26 | 25 | 16 | 16 | 2 | 1 | | | 12 | 6 |
| Fluoroquinolones - Enrofloxacin | 0 | | | | 0 | | 0 | | 0 | | 0 | | 0 | | | | 0 | |
| Penicillins - Ampicillin | 15 | 15 | | | 29 | 0 | 28 | 28 | 26 | 25 | 16 | 2 | 2 | 2 | | | 12 | 0 |
| Quinolones - Nalidixic acid | 15 | 15 | | | 29 | 29 | 28 | 28 | 26 | 19 | 16 | 16 | 2 | 1 | | | 12 | 6 |
| Sulfonamides | 3 | 0 | | | 9 | 8 | 13 | 13 | 9 | 1 | 13 | 0 | 1 | 1 | | | 9 | 2 |
| Tetracyclines - Tetracycline | 15 | 15 | | | 29 | 28 | 28 | 28 | 26 | 24 | 16 | 0 | 2 | 2 | | | 12 | 1 |
| Trimethoprim | 15 | 0 | | | 29 | 0 | 28 | 0 | 26 | 0 | 16 | 0 | 2 | 0 | | | 12 | 0 |
| Fully sensitive | 15 | 0 | | | 29 | 0 | 28 | 0 | 26 | 0 | 16 | 0 | 2 | 0 | | | 12 | 4 |
| Resistant to 1 antimicrobial | 15 | 0 | | | 29 | 0 | 28 | 0 | 26 | 1 | 16 | 0 | 2 | 0 | | | 12 | 1 |
| Resistant to 2 antimicrobials | 15 | 0 | | | 29 | 0 | 28 | 0 | 26 | 1 | 16 | 14 | 2 | 0 | | | 12 | 6 |
| Resistant to 3 antimicrobials | 15 | 0 | | | 29 | 17 | 28 | 0 | 26 | 6 | 16 | 2 | 2 | 0 | | | 12 | 0 |
| Resistant to 4 antimicrobials | 15 | 12 | | | 29 | 5 | 28 | 0 | 26 | 16 | 16 | 0 | 2 | 1 | | | 12 | 1 |
| Resistant to >4 antimicrobials | 15 | 3 | | | 29 | 7 | 28 | 28 | 26 | 2 | 16 | 0 | 2 | 1 | | | 12 | 0 |

Table Antimicrobial susceptibility testing of Salmonella in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

## Table Antimicrobial susceptibility testing of Salmonella in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

| Salmonella | S. Enteritidis | | S. Typhimurium | | S. Typhimurium, monophasic - 4 | | Salmonella spp. | |
|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | yes | | yes | | yes | |
| Number of isolates available in the laboratory | 1 | | 12 | | 5 | | 19 | |
| Antimicrobials: | N | n | N | n | N | n | N | n |
| Aminoglycosides - Gentamicin | 1 | 0 | 12 | 0 | 5 | 0 | 17 | 0 |
| Aminoglycosides - Streptomycin | 1 | 0 | 12 | 7 | 5 | 5 | 16 | 4 |
| Amphenicols - Chloramphenicol | 1 | 0 | 12 | 4 | 5 | 0 | 17 | 1 |
| Cephalosporins - Cefotaxime | 1 | 0 | 12 | 0 | 5 | 0 | 17 | 0 |
| Fluoroquinolones - Ciprofloxacin | 1 | 0 | 12 | 1 | 5 | 0 | 17 | 6 |
| Fluoroquinolones - Enrofloxacin | 0 | | 0 | | 0 | | 0 | |
| Penicillins - Ampicillin | 1 | 0 | 12 | 9 | 5 | 5 | 17 | 3 |
| Quinolones - Nalidixic acid | 1 | 0 | 12 | 0 | 5 | 0 | 17 | 7 |
| Sulfonamides | 1 | 0 | 9 | 5 | 5 | 5 | 12 | 2 |
| Tetracyclines - Tetracycline | 1 | 0 | 12 | 7 | 5 | 4 | 17 | 8 |
| Trimethoprim | 1 | 0 | 12 | 0 | 5 | 0 | 17 | 0 |
| Fully sensitive | 1 | 1 | 12 | 2 | 5 | 0 | 17 | 7 |
| Resistant to 1 antimicrobial | 1 | 0 | 12 | 2 | 5 | 0 | 17 | 2 |
| Resistant to 2 antimicrobials | 1 | 0 | 12 | 1 | 5 | 0 | 17 | 1 |
| Resistant to 3 antimicrobials | 1 | 0 | 12 | 1 | 5 | 1 | 17 | 3 |
| Resistant to 4 antimicrobials | 1 | 0 | 12 | 4 | 5 | 4 | 17 | 3 |
| Resistant to >4 antimicrobials | 1 | 0 | 12 | 2 | 5 | 0 | 17 | 1 |

Table Antimicrobial susceptibility testing of Salmonella in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

## Table Antimicrobial susceptibility testing of Salmonella in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

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

Table Antimicrobial susceptibility testing of Salmonella in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample

# Table Antimicrobial susceptibility testing of S. Typhimurium in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

| S. Typhimurium | Meat from pig - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 12 | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 12 | 0 | | | | | 0 | 2 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Aminoglycosides - Streptomycin | 32 | 12 | 7 | | | | | | | | | 0 | 2 | 0 | 2 | 1 | 2 | 5 | 0 | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 12 | 4 | | | | | | | | | 3 | 2 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | | | | | |
| Cephalosporins - Cefotaxime | 0.5 | 12 | 0 | | | | 1 | 7 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 12 | 1 | | 3 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Penicillins - Ampicillin | 4 | 12 | 9 | | | | | | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 12 | 0 | | | | | | | | | 3 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | | | | | | |
| Sulfonamides | 256 | 9 | 5 | | | | | | | | | | | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 5 | | | | |
| Tetracyclines - Tetracycline | 8 | 12 | 7 | | | | | | | 0 | 0 | 3 | 2 | 0 | 1 | 3 | 0 | 3 | | | | | | | |
| Trimethoprim | 2 | 12 | 0 | | | | | 3 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |

# Table Antimicrobial susceptibility testing of S. Typhimurium, monophasic - 4 in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

| 4 | Meat from pig - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 5 | 0 | | | | | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Aminoglycosides - Streptomycin | 32 | 5 | 5 | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 5 | 0 | | | | | | | | | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Cephalosporins - Cefotaxime | 0.5 | 5 | 0 | | | | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 5 | 0 | | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Penicillins - Ampicillin | 4 | 5 | 5 | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 5 | 0 | | | | | | | | | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | | | | | | |
| Sulfonamides | 256 | 5 | 5 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | | | | |
| Tetracyclines - Tetracycline | 8 | 5 | 4 | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | | | | | | | |
| Trimethoprim | 2 | 5 | 0 | | | | | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |

# Table Antimicrobial susceptibility testing of S. Infantis in Meat from broilers (Gallus gallus) - in total - Monitoring - active - Objective sampling - Official sampling - food sample - 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 - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 368 | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 170 | 3 | | | | | 1 | 15 | 49 | 71 | 31 | 3 | 0 | 0 | 0 | | | | | | | | | |
| Aminoglycosides - Streptomycin | 32 | 170 | 74 | | | | | | | | | 0 | 4 | 1 | 47 | 44 | 42 | 29 | 3 | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 170 | 2 | | | | | | | | | 26 | 54 | 75 | 13 | 2 | 0 | 0 | 0 | 0 | | | | | |
| Cephalosporins - Cefotaxime | 0.5 | 170 | 0 | | | | 27 | 68 | 72 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 170 | 167 | | 0 | 0 | 3 | 1 | 8 | 47 | 89 | 22 | 0 | 0 | 0 | | | | | | | | | | |
| Penicillins - Ampicillin | 4 | 170 | 16 | | | | | | | 20 | 52 | 48 | 34 | 11 | 3 | 2 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 170 | 168 | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 17 | 151 | | | | | | |
| Sulfonamides | 256 | 37 | 28 | | | | | | | | | | | 0 | 2 | 4 | 2 | 0 | 1 | 0 | 28 | | | | |
| Tetracyclines - Tetracycline | 8 | 170 | 138 | | | | | | | 0 | 1 | 0 | 24 | 7 | 2 | 5 | 14 | 117 | | | | | | | |
| Trimethoprim | 2 | 170 | 0 | | | | | 4 | 29 | 71 | 49 | 17 | 0 | 0 | 0 | 0 | | | | | | | | | |

# Table Antimicrobial susceptibility testing of S. Saintpaul in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Dilution method]

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

| S. Saintpaul | Meat from turkey - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 16 | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 16 | 0 | | | | | 0 | 3 | 4 | 8 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Aminoglycosides - Streptomycin | 32 | 16 | 0 | | | | | | | | | 3 | 1 | 2 | 10 | 0 | 0 | 0 | 0 | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 16 | 0 | | | | | | | | | 3 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Cephalosporins - Cefotaxime | 0.5 | 16 | 0 | | | | 4 | 7 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 16 | 16 | | 0 | 0 | 0 | 0 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Penicillins - Ampicillin | 4 | 16 | 2 | | | | | | | 0 | 3 | 6 | 5 | 1 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 16 | 16 | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 2 | 7 | 6 | | | | | | |
| Sulfonamides | 256 | 13 | 0 | | | | | | | | | | | 1 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | | | | |
| Tetracyclines - Tetracycline | 8 | 16 | 0 | | | | | | | 0 | 3 | 7 | 6 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Trimethoprim | 2 | 16 | 0 | | | | | 3 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |

# Table Antimicrobial susceptibility testing of S. Enteritidis in Other food - in total - Monitoring - active - Objective sampling - Official sampling - food sample - quantitative data [Dilution method]

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

| S. Enteritidis | Other food - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 38 | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 18 | 0 | | | | | 0 | 3 | 5 | 6 | 4 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Aminoglycosides - Streptomycin | 32 | 18 | 1 | | | | | | | | | 0 | 5 | 9 | 2 | 1 | 0 | 1 | 0 | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 18 | 0 | | | | | | | | | 6 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Cephalosporins - Cefotaxime | 0.5 | 18 | 0 | | | | 7 | 7 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 18 | 1 | | 3 | 12 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Penicillins - Ampicillin | 4 | 18 | 0 | | | | | | | 1 | 3 | 10 | 4 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 18 | 1 | | | | | | | | | 1 | 13 | 1 | 2 | 0 | 0 | 1 | 0 | | | | | | |
| Sulfonamides | 256 | 16 | 3 | | | | | | | | | | | 0 | 2 | 4 | 4 | 3 | 0 | 0 | 3 | | | | |
| Tetracyclines - Tetracycline | 8 | 18 | 0 | | | | | | | 0 | 0 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Trimethoprim | 2 | 18 | 0 | | | | | 3 | 2 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |

# Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Enteritidis | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 0 | | | | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 0 | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 0 | | | | | | | | | | | | | 1 | 1 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 0 | | | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | |

| S. Enteritidis | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Enteritidis | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Livingstone in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Livingstone | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | |

| S. Livingstone | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Livingstone in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Livingstone | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Anatum in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Anatum | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | |

| S. Anatum | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Anatum in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Anatum | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Kentucky in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Kentucky | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 34 | 32 | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | 25 | 7 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 34 | 33 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 15 | 15 | 3 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 34 | 0 | | | | | | | | | | | | 2 | 15 | 17 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 34 | 34 | | | | | | | 8 | 19 | 6 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 34 | 34 | | | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 32 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 34 | 33 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 33 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 34 | 34 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 34 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 34 | 32 | | | | | | | | | | | 0 | 2 | 0 | 0 | 1 | 1 | 30 | | | | | | |
| Trimethoprim | 2 | 34 | 1 | | | | | | | | | | 33 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 34 | 0 | | | | | | | | | 1 | 12 | 20 | 1 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 34 | 32 | | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 1 | 0 | 0 | | 32 | |

| S. Kentucky | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 34 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Kentucky in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Kentucky | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 34 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Bovismorbificans in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Bovismorbificans | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 3 | 0 | | | | | | | | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 3 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 2 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 3 | 0 | | | | | | | | | | | | 0 | 2 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 3 | 3 | | | | | | | 2 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 3 | 3 | | | 0 | 2 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 3 | 0 | | | | | | | | | | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 3 | 0 | | | | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 3 | 0 | | | | | | | | | | | 1 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 3 | 0 | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 3 | 0 | | | | | | | | | 2 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 3 | 2 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 2 | |

| S. Bovismorbificans | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Bovismorbificans in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Bovismorbificans | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Bredeney in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Bredeney | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 36 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 36 | 4 | | | | | | | | | 4 | 13 | 9 | 6 | 4 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 36 | 11 | | | | | | | | | | | | 0 | 0 | 15 | 10 | 6 | 3 | 2 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 36 | 1 | | | | | | | | | | | | 1 | 9 | 9 | 16 | 1 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 36 | 36 | | | | | | | 7 | 11 | 14 | 3 | 1 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 36 | 36 | | | 0 | 0 | | 0 | 0 | 4 | 16 | 13 | 3 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 36 | 36 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 36 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 36 | 36 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 36 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 36 | 36 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 36 | | | | | | |
| Trimethoprim | 2 | 36 | 3 | | | | | | | | | | 28 | 5 | 0 | 1 | 0 | 0 | 2 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 36 | 0 | | | | | | | | | 12 | 22 | 2 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 36 | 2 | | | | | | | | | | | | | | 0 | 6 | 19 | 9 | 0 | 0 | 0 | | 2 | |

| S. Bredeney | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 36 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Bredeney in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Bredeney | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 36 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Agona in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Agona | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Agona | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Agona in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Agona | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Stanley in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Stanley | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 1 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Stanley | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Stanley in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Stanley | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Thompson in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Thompson | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | |

| S. Thompson | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Thompson in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Thompson | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Senftenberg in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Senftenberg | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 6 | 0 | | | | | | | | | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 6 | 1 | | | | | | | | | | | | 0 | 0 | 4 | 1 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 6 | 2 | | | | | | | | | | | | 0 | 0 | 0 | 4 | 2 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 6 | 6 | | | | | | | 0 | 0 | 3 | 3 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 6 | 6 | | | 0 | 0 | | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 6 | 0 | | | | | | | | | | 0 | 0 | 2 | 2 | 2 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 6 | 0 | | | | | | | | | | | | | 0 | 5 | 1 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 6 | 0 | | | | | | | | | | | 0 | 0 | 2 | 4 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 6 | 0 | | | | | | | | | | 5 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 6 | 0 | | | | | | | | | 0 | 2 | 2 | 2 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 6 | 2 | | | | | | | | | | | | | | 0 | 0 | 2 | 2 | 0 | 0 | 0 | | 2 | |

| S. Senftenberg | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 6 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Senftenberg in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Senftenberg | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 6 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Saintpaul in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Saintpaul | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. Saintpaul | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Saintpaul in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Saintpaul | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Tennessee in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Tennessee | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 7 | 0 | | | | | | | | | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 7 | 3 | | | | | | | | | | | | 0 | 1 | 0 | 3 | 1 | 2 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 7 | 0 | | | | | | | | | | | | 0 | 1 | 6 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 7 | 7 | | | | | | | 3 | 4 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 7 | 7 | | | 0 | 5 | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 7 | 0 | | | | | | | | | | 0 | 4 | 3 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 7 | 0 | | | | | | | | | | | | | 6 | 1 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 7 | 0 | | | | | | | | | | | 0 | 7 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 7 | 0 | | | | | | | | | | 7 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 7 | 0 | | | | | | | | | 2 | 5 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 7 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 3 | 3 | 1 | 0 | | 0 | |

| S. Tennessee | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 7 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Tennessee in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Tennessee | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 7 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Infantis | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 135 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 135 | 1 | | | | | | | | | 51 | 58 | 21 | 4 | 1 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 135 | 118 | | | | | | | | | | | | 0 | 1 | 11 | 5 | 60 | 44 | 14 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 135 | 8 | | | | | | | | | | | | 0 | 21 | 48 | 58 | 8 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 135 | 135 | | | | | | | 10 | 33 | 65 | 24 | 3 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 135 | 135 | | | 0 | 1 | | 0 | 0 | 1 | 28 | 53 | 48 | 4 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 135 | 5 | | | | | | | | | | 0 | 35 | 42 | 50 | 3 | 0 | 5 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 135 | 133 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 133 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 135 | 114 | | | | | | | | | | | 1 | 10 | 10 | 0 | 0 | 0 | 114 | | | | | | |
| Trimethoprim | 2 | 135 | 1 | | | | | | | | | | 129 | 5 | 0 | 1 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 135 | 0 | | | | | | | | | 15 | 74 | 44 | 2 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 135 | 117 | | | | | | | | | | | | | | 0 | 1 | 6 | 7 | 4 | 0 | 0 | | 117 | |

| S. Infantis | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 135 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Infantis | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 135 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. group O:7 in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. group O:7 | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 1 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. group O:7 | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. group O:7 in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. group O:7 | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Typhimurium in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Typhimurium | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 3 | 0 | | | | | | | | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 3 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 2 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 3 | 0 | | | | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 3 | 3 | | | | | | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 3 | 3 | | | 0 | 2 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 3 | 0 | | | | | | | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 3 | 0 | | | | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 3 | 1 | | | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 3 | 0 | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 3 | 0 | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 3 | 0 | | | | | | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | 0 | | 0 | |

| S. Typhimurium | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Typhimurium in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Typhimurium | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Enteritidis in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Enteritidis | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. Enteritidis | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Enteritidis in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Enteritidis | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Livingstone in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Livingstone | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Livingstone | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Livingstone in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Livingstone | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Anatum in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Anatum | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Anatum | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

Table Antimicrobial susceptibility testing of S. Anatum in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Anatum | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Kentucky in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Kentucky | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. Kentucky | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Kentucky in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Kentucky | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Blockley in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Blockley | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 1 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | |

| S. Blockley | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Blockley in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Blockley | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Bredeney in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Bredeney | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 4 | 0 | | | | | | | | | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 4 | 3 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 2 | 1 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 4 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 3 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 4 | 4 | | | | | | | 0 | 4 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 4 | 4 | | | 0 | 0 | | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 4 | 1 | | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 4 | 1 | | | | | | | | | | | | | 3 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 4 | 2 | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 2 | | | | | | |
| Trimethoprim | 2 | 4 | 1 | | | | | | | | | | 2 | 0 | 1 | 1 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 4 | 0 | | | | | | | | | 3 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 4 | 4 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 4 | |

| S. Bredeney | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Bredeney in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Bredeney | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Newport in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Newport | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 1 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | |

| S. Newport | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Newport in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Newport | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. group O:4 in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. group O:4 | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 1 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. group O:4 | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. group O:4 in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. group O:4 | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Kottbus in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Kottbus | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 1 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Kottbus | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Kottbus in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Kottbus | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Thompson in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Thompson | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 4 | 0 | | | | | | | | | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 4 | 1 | | | | | | | | | | | | 0 | 0 | 3 | 0 | 0 | 0 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 4 | 0 | | | | | | | | | | | | 0 | 0 | 4 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 4 | 4 | | | | | | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 4 | 4 | | | 0 | 3 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 4 | 1 | | | | | | | | | | 0 | 3 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 4 | 0 | | | | | | | | | | | | | 4 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 4 | 0 | | | | | | | | | | | 0 | 3 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 4 | 0 | | | | | | | | | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 4 | 0 | | | | | | | | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 4 | 0 | | | | | | | | | | | | | | 0 | 0 | 2 | 2 | 0 | 0 | 0 | | 0 | |

| S. Thompson | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Thompson in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Thompson | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 4 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of Other serovars in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| Other serovars | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| Other serovars | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of Other serovars in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| Other serovars | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Derby in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Derby | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 16 | 1 | | | | | | | | | 0 | 0 | 12 | 3 | 1 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 16 | 12 | | | | | | | | | | | | 0 | 0 | 0 | 4 | 5 | 2 | 5 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 16 | 7 | | | | | | | | | | | | 0 | 0 | 5 | 4 | 3 | 4 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 16 | 16 | | | | | | | 2 | 4 | 3 | 7 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 16 | 16 | | | 0 | 4 | | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 16 | 5 | | | | | | | | | | 0 | 4 | 6 | 0 | 1 | 0 | 5 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 16 | 0 | | | | | | | | | | | | | 10 | 6 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 16 | 10 | | | | | | | | | | | 0 | 1 | 5 | 0 | 0 | 3 | 7 | | | | | | |
| Trimethoprim | 2 | 16 | 0 | | | | | | | | | | 12 | 3 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 16 | 0 | | | | | | | | | 1 | 12 | 3 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 16 | 12 | | | | | | | | | | | | | | 0 | 0 | 0 | 3 | 0 | 1 | 0 | | 12 | |

| S. Derby | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 16 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Derby in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Derby | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 16 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Tennessee in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Tennessee | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 12 | 0 | | | | | | | | | 0 | 5 | 6 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 12 | 9 | | | | | | | | | | | | 0 | 0 | 0 | 3 | 4 | 5 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 12 | 0 | | | | | | | | | | | | 0 | 0 | 6 | 6 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 12 | 12 | | | | | | | 1 | 10 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 12 | 12 | | | 0 | 6 | | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 12 | 1 | | | | | | | | | | 0 | 6 | 4 | 1 | 0 | 1 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 12 | 2 | | | | | | | | | | | | | 7 | 3 | 0 | 0 | 2 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 12 | 1 | | | | | | | | | | | 0 | 7 | 4 | 0 | 0 | 1 | 0 | | | | | | |
| Trimethoprim | 2 | 12 | 0 | | | | | | | | | | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 12 | 0 | | | | | | | | | 1 | 11 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 12 | 0 | | | | | | | | | | | | | | 0 | 0 | 2 | 8 | 2 | 0 | 0 | | 0 | |

| S. Tennessee | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 12 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Tennessee in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Tennessee | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 12 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Infantis in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Infantis | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 3 | 0 | | | | | | | | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 3 | 3 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 1 | 2 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 3 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 2 | 1 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 3 | 3 | | | | | | | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 3 | 3 | | | 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 3 | 0 | | | | | | | | | | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 3 | 3 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 3 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 3 | 3 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | | | | | |
| Trimethoprim | 2 | 3 | 0 | | | | | | | | | | 2 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 3 | 0 | | | | | | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 3 | 3 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 3 | |

| S. Infantis | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Infantis in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Infantis | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Montevideo in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Montevideo | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 5 | 0 | | | | | | | | | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 5 | 1 | | | | | | | | | | | | 0 | 0 | 3 | 1 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 5 | 0 | | | | | | | | | | | | 0 | 3 | 1 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 5 | 5 | | | | | | | 4 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 5 | 5 | | | 0 | 1 | | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 5 | 0 | | | | | | | | | | 0 | 5 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 5 | 0 | | | | | | | | | | | | | 2 | 0 | 3 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 5 | 0 | | | | | | | | | | | 2 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 5 | 0 | | | | | | | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 5 | 0 | | | | | | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 5 | 1 | | | | | | | | | | | | | | 0 | 0 | 2 | 2 | 0 | 0 | 0 | | 1 | |

| S. Montevideo | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Montevideo in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Montevideo | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 5 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Typhimurium | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 5 | 0 | | | | | | | | | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 5 | 1 | | | | | | | | | | | | 0 | 0 | 2 | 2 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 5 | 0 | | | | | | | | | | | | 0 | 5 | 0 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 5 | 5 | | | | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 5 | 5 | | | 0 | 3 | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 5 | 0 | | | | | | | | | | 0 | 4 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 5 | 0 | | | | | | | | | | | | | 5 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 5 | 3 | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 3 | | | | | | |
| Trimethoprim | 2 | 5 | 0 | | | | | | | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 5 | 0 | | | | | | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 5 | 0 | | | | | | | | | | | | | | 0 | 1 | 3 | 1 | 0 | 0 | 0 | | 0 | |

| S. Typhimurium | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Typhimurium | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Enteritidis | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 30 | 1 | | | | | | | | | 4 | 19 | 6 | 0 | 1 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 30 | 0 | | | | | | | | | | | | 2 | 18 | 8 | 2 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 30 | 1 | | | | | | | | | | | | 2 | 3 | 23 | 1 | 0 | 1 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 30 | 30 | | | | | | | 8 | 15 | 3 | 2 | 0 | 0 | 2 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 30 | 30 | | | 0 | 5 | | 21 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 30 | 1 | | | | | | | | | | 1 | 8 | 18 | 2 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 30 | 4 | | | | | | | | | | | | | 26 | 0 | 0 | 1 | 3 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 30 | 0 | | | | | | | | | | | 1 | 27 | 2 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 30 | 1 | | | | | | | | | | 27 | 2 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 30 | 2 | | | | | | | | | 17 | 11 | 0 | 0 | 0 | 0 | 2 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 30 | 1 | | | | | | | | | | | | | | 0 | 0 | 1 | 14 | 12 | 2 | 0 | | 1 | |

| S. Enteritidis | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 30 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Enteritidis | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 30 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Manhattan in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Manhattan | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. Manhattan | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Manhattan in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Manhattan | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Indiana in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Indiana | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 1 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 0 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 0 | | | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 0 | 1 | 0 | 1 | 0 | 0 | 0 | | 0 | |

| S. Indiana | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Indiana in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Indiana | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Blockley in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Blockley | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 2 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 0 | | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 2 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 2 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 2 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 2 | 0 | 0 | | 0 | |

| S. Blockley | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Blockley in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Blockley | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Bovismorbificans in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Bovismorbificans | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 3 | 0 | | | | | | | | | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 3 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 3 | 0 | | | | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 3 | 3 | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 3 | 3 | | | 0 | 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 3 | 0 | | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 3 | 0 | | | | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 3 | 0 | | | | | | | | | | | 1 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 3 | 0 | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 3 | 0 | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 3 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 3 | 0 | 0 | 0 | | 0 | |

| S. Bovismorbificans | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Bovismorbificans in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Bovismorbificans | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Newport in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Newport | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 7 | 0 | | | | | | | | | 1 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 7 | 1 | | | | | | | | | | | | 0 | 0 | 4 | 2 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 7 | 0 | | | | | | | | | | | | 0 | 1 | 6 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 7 | 7 | | | | | | | 4 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 7 | 7 | | | 0 | 0 | | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 7 | 7 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 7 | 3 | | | | | | | | | | | | | 0 | 0 | 4 | 3 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 7 | 7 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 7 | | | | | | |
| Trimethoprim | 2 | 7 | 0 | | | | | | | | | | 7 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 7 | 0 | | | | | | | | | 7 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 7 | 0 | | | | | | | | | | | | | | 0 | 0 | 2 | 5 | 0 | 0 | 0 | | 0 | |

| S. Newport | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 7 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

Table Antimicrobial susceptibility testing of S. Newport in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Newport | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 7 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. group O:4 in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. group O:4 | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 1 | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. group O:4 | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. group O:4 in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. group O:4 | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Kottbus in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Kottbus | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 1 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 0 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 0 | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | | 0 | |

| S. Kottbus | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Kottbus in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Kottbus | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Thompson in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Thompson | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. Thompson | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Thompson in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Thompson | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. group O:8 in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. group O:8 | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | |

| S. group O:8 | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

Table Antimicrobial susceptibility testing of S. group O:8 in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. group O:8 | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Senftenberg in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Senftenberg | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | |

| S. Senftenberg | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Senftenberg in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Senftenberg | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Tennessee in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Tennessee | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | |

| S. Tennessee | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Tennessee in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Tennessee | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Goldcoast in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Goldcoast | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 1 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. Goldcoast | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Goldcoast in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Goldcoast | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Infantis | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 19 | 2 | | | | | | | | | 1 | 13 | 3 | 0 | 2 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 19 | 5 | | | | | | | | | | | | 0 | 0 | 8 | 6 | 1 | 3 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 19 | 0 | | | | | | | | | | | | 0 | 5 | 12 | 2 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 19 | 19 | | | | | | | 1 | 13 | 4 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 19 | 19 | | | 0 | 4 | | 5 | 0 | 0 | 7 | 2 | 1 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 19 | 0 | | | | | | | | | | 0 | 8 | 9 | 2 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 19 | 10 | | | | | | | | | | | | | 9 | 0 | 0 | 0 | 10 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 19 | 10 | | | | | | | | | | | 3 | 6 | 0 | 0 | 0 | 0 | 10 | | | | | | |
| Trimethoprim | 2 | 19 | 1 | | | | | | | | | | 18 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 19 | 0 | | | | | | | | | 2 | 15 | 2 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 19 | 11 | | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 4 | 3 | 0 | | 11 | |

| S. Infantis | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 19 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Infantis in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Infantis | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 19 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Typhimurium in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Typhimurium | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 4 | 0 | | | | | | | | | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 4 | 4 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 1 | 3 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 4 | 2 | | | | | | | | | | | | 0 | 0 | 0 | 2 | 0 | 2 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 4 | 4 | | | | | | | 0 | 3 | 0 | 0 | 0 | 0 | 1 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 4 | 4 | | | 0 | 0 | | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 4 | 4 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 4 | 1 | | | | | | | | | | | | | 2 | 1 | 0 | 1 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 4 | 4 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | | | | | | |
| Trimethoprim | 2 | 4 | 1 | | | | | | | | | | 2 | 1 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 4 | 1 | | | | | | | | | 1 | 2 | 0 | 0 | 0 | 0 | 1 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 4 | 4 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 4 | |

| S. Typhimurium | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Typhimurium in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Typhimurium | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Enteritidis in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Enteritidis | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 4 | 0 | | | | | | | | | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 4 | 0 | | | | | | | | | | | | 2 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 4 | 0 | | | | | | | | | | | | 1 | 1 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 4 | 4 | | | | | | | 2 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 4 | 4 | | | 0 | 3 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 4 | 0 | | | | | | | | | | 1 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 4 | 0 | | | | | | | | | | | | | 4 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 4 | 0 | | | | | | | | | | | 3 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 4 | 0 | | | | | | | | | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 4 | 0 | | | | | | | | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 4 | 0 | | | | | | | | | | | | | | 0 | 1 | 2 | 1 | 0 | 0 | 0 | | 0 | |

| S. Enteritidis | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Enteritidis in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Enteritidis | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 4 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. London in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. London | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 1 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 1 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 1 | |

| S. London | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. London in Pigs - Monitoring - active - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. London | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Indiana in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Indiana | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 1 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 0 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 0 | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 0 | 1 | 0 | 1 | 0 | 0 | 0 | | 0 | |

| S. Indiana | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Indiana in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Indiana | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Kentucky in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Kentucky | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 3 | 1 | | | | | | | | | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 3 | 3 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 2 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 3 | 0 | | | | | | | | | | | | 0 | 0 | 3 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 3 | 3 | | | | | | | 1 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 3 | 3 | | | 0 | 0 | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 3 | 1 | | | | | | | | | | 0 | 0 | 1 | 1 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 3 | 1 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 3 | 3 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 3 | | | | | | |
| Trimethoprim | 2 | 3 | 0 | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 3 | 0 | | | | | | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 3 | 2 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 2 | |

| S. Kentucky | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Kentucky in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Kentucky | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Bovismorbificans in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Bovismorbificans | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 34 | 0 | | | | | | | | | 7 | 17 | 9 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 34 | 7 | | | | | | | | | | | | 0 | 0 | 11 | 16 | 7 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 34 | 0 | | | | | | | | | | | | 0 | 7 | 19 | 8 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 34 | 34 | | | | | | | 15 | 13 | 4 | 2 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 34 | 34 | | | 0 | 4 | | 20 | 6 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 34 | 4 | | | | | | | | | | 1 | 14 | 7 | 8 | 0 | 0 | 4 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 34 | 1 | | | | | | | | | | | | | 22 | 8 | 3 | 1 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 34 | 0 | | | | | | | | | | | 3 | 23 | 8 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 34 | 0 | | | | | | | | | | 32 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 34 | 0 | | | | | | | | | 24 | 9 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 34 | 4 | | | | | | | | | | | | | | 0 | 1 | 8 | 14 | 7 | 0 | 0 | | 4 | |

| S. Bovismorbificans | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 34 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Bovismorbificans in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Bovismorbificans | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 34 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Newport in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Newport | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 1 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 1 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Newport | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Newport in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Newport | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Agona in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Agona | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 1 | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 0 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 0 | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 0 | 1 | 0 | | 0 | |

| S. Agona | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Agona in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Agona | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Stanley in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Stanley | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 47 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 47 | 10 | | | | | | | | | 2 | 20 | 10 | 5 | 1 | 0 | 1 | 8 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 47 | 17 | | | | | | | | | | | | 0 | 0 | 18 | 12 | 6 | 4 | 7 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 47 | 0 | | | | | | | | | | | | 3 | 14 | 30 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 47 | 47 | | | | | | | 25 | 16 | 6 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 47 | 47 | | | 0 | 0 | | 0 | 1 | 14 | 31 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 47 | 12 | | | | | | | | | | 1 | 26 | 8 | 0 | 0 | 0 | 12 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 47 | 47 | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 46 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 47 | 7 | | | | | | | | | | | 9 | 31 | 0 | 0 | 0 | 0 | 7 | | | | | | |
| Trimethoprim | 2 | 47 | 0 | | | | | | | | | | 46 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 47 | 0 | | | | | | | | | 37 | 8 | 2 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 47 | 4 | | | | | | | | | | | | | | 0 | 4 | 12 | 22 | 4 | 1 | 0 | | 4 | |

| S. Stanley | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 47 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Stanley in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Stanley | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 47 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Thompson in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Thompson | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 3 | 0 | | | | | | | | | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 3 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 2 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 3 | 0 | | | | | | | | | | | | 0 | 0 | 3 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 3 | 3 | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 3 | 3 | | | 0 | 3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 3 | 0 | | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 3 | 0 | | | | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 3 | 0 | | | | | | | | | | | 0 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 3 | 0 | | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 3 | 0 | | | | | | | | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 3 | 0 | | | | | | | | | | | | | | 0 | 0 | 0 | 1 | 2 | 0 | 0 | | 0 | |

| S. Thompson | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Thompson in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Thompson | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 3 | |
| **Antimicrobials:** | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Senftenberg in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Senftenberg | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 0 | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 0 | | | | | | | | | | | | 0 | 1 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 0 | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 1 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 0 | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 2 | 0 | | | | | | | | | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 0 | | | | | | | | | | | | | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | 0 | |

| S. Senftenberg | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

Table Antimicrobial susceptibility testing of S. Senftenberg in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Senftenberg | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Saintpaul in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Saintpaul | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 35 | 0 | | | | | | | | | 3 | 19 | 9 | 4 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 35 | 7 | | | | | | | | | | | | 0 | 0 | 17 | 11 | 5 | 0 | 2 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 35 | 0 | | | | | | | | | | | | 1 | 6 | 25 | 3 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 35 | 35 | | | | | | | 17 | 15 | 3 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 35 | 35 | | | 0 | 1 | | 0 | 0 | 10 | 21 | 3 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 35 | 3 | | | | | | | | | | 0 | 18 | 12 | 2 | 0 | 0 | 3 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 35 | 34 | | | | | | | | | | | | | 1 | 0 | 0 | 0 | 34 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 35 | 3 | | | | | | | | | | | 5 | 20 | 7 | 0 | 0 | 0 | 3 | | | | | | |
| Trimethoprim | 2 | 35 | 2 | | | | | | | | | | 33 | 0 | 0 | 0 | 0 | 0 | 2 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 35 | 0 | | | | | | | | | 22 | 12 | 1 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 35 | 4 | | | | | | | | | | | | | | 0 | 0 | 4 | 10 | 15 | 2 | 0 | | 4 | |

| S. Saintpaul | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 35 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Saintpaul in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Saintpaul | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 35 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Virchow in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Virchow | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 2 | 0 | | | | | | | | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 2 | 2 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 2 | 2 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 2 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 2 | 2 | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 2 | 2 | | | 0 | 0 | | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 2 | 1 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 2 | 2 | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 2 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 2 | 2 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | | | | |
| Trimethoprim | 2 | 2 | 2 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 2 | 0 | | | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 2 | 2 | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 | |

| S. Virchow | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Virchow in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Virchow | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 2 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Infantis in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Infantis | Turkeys - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 33 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 33 | 0 | | | | | | | | | 15 | 13 | 5 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 33 | 27 | | | | | | | | | | | | 0 | 1 | 3 | 2 | 11 | 13 | 3 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 33 | 0 | | | | | | | | | | | | 0 | 7 | 15 | 11 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 33 | 33 | | | | | | | 5 | 13 | 13 | 2 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 33 | 33 | | | 0 | 2 | | 0 | 0 | 0 | 6 | 18 | 7 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 33 | 2 | | | | | | | | | | 0 | 8 | 15 | 8 | 0 | 1 | 1 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 33 | 31 | | | | | | | | | | | | | 2 | 0 | 0 | 0 | 31 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 33 | 29 | | | | | | | | | | | 3 | 0 | 1 | 0 | 0 | 0 | 29 | | | | | | |
| Trimethoprim | 2 | 33 | 0 | | | | | | | | | | 33 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 33 | 0 | | | | | | | | | 7 | 17 | 9 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 33 | 28 | | | | | | | | | | | | | | 0 | 0 | 1 | 2 | 2 | 0 | 0 | | 28 | |

| S. Infantis | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 33 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |
| Aminoglycosides - Streptomycin | 2 | 128 |

## Table Antimicrobial susceptibility testing of S. Infantis in Turkeys - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Infantis | Turkeys - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 33 | |
| **Antimicrobials:** | lowest | highest |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Ohio in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Ohio | Gallus gallus (fowl) - broilers - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 1 | 0 | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 1 | 0 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 1 | 1 | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 1 | 1 | | | 0 | 0 | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 1 | 0 | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 1 | 0 | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 1 | 0 | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 1 | 0 | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 1 | 0 | | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 1 | 0 | | | | | | | | | | | | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | |

| S. Ohio | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

Table Antimicrobial susceptibility testing of S. Ohio in Gallus gallus (fowl) - broilers - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Ohio | Gallus gallus (fowl) - broilers - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 1 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

# Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

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

| S. Typhimurium | Gallus gallus (fowl) - laying hens - Control and eradication programmes | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 5 | 0 | | | | | | | | | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | | | | | | | |
| Aminoglycosides - Streptomycin | 16 | 5 | 1 | | | | | | | | | | | | 0 | 0 | 1 | 3 | 1 | 0 | 0 | | | | | |
| Amphenicols - Chloramphenicol | 16 | 5 | 0 | | | | | | | | | | | | 0 | 1 | 4 | 0 | 0 | 0 | | | | | | |
| Cephalosporins - Cefotaxime | 0 | 5 | 5 | | | | | | | 1 | 4 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 0 | 5 | 5 | | | 0 | 0 | | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Penicillins - Ampicillin | 8 | 5 | 0 | | | | | | | | | | 0 | 2 | 3 | 0 | 0 | 0 | 0 | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 5 | 1 | | | | | | | | | | | | | 2 | 2 | 0 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 8 | 5 | 0 | | | | | | | | | | | 1 | 4 | 0 | 0 | 0 | 0 | 0 | | | | | | |
| Trimethoprim | 2 | 5 | 0 | | | | | | | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Cephalosporins - Ceftazidim | 2 | 5 | 0 | | | | | | | | | 2 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Sulfonamides - Sulfamethoxazol | 256 | 5 | 1 | | | | | | | | | | | | | | 0 | 0 | 1 | 3 | 0 | 0 | 0 | | 1 | |

| S. Typhimurium | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.25 | 32 |

## Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - laying hens - Control and eradication programmes - Unspecified - Official and industry sampling - animal sample - quantitative data [Dilution method]

| S. Typhimurium | Gallus gallus (fowl) - laying hens - Control and eradication programmes | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | no | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Streptomycin | 2 | 128 |
| Amphenicols - Chloramphenicol | 2 | 64 |
| Cephalosporins - Cefotaxime | 0.06 | 4 |
| Fluoroquinolones - Ciprofloxacin | 0.008 | 8 |
| Penicillins - Ampicillin | 0.5 | 32 |
| Quinolones - Nalidixic acid | 4 | 64 |
| Tetracyclines - Tetracycline | 1 | 64 |
| Trimethoprim | 0.5 | 32 |
| Cephalosporins - Ceftazidim | 0.25 | 16 |
| Sulfonamides - Sulfamethoxazol | 8 | 1024 |

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

| 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 | |
| Fluoroquinolones | Ciprofloxacin | | 0.06 | |
| Penicillins | Ampicillin | | 4 | |
| Quinolones | Nalidixic acid | | 16 | |
| Sulfonamides | Sulfonamides | | 256 | |
| Tetracyclines | Tetracycline | | 8 | |
| Trimethoprim | Trimethoprim | | 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 | |
| Fluoroquinolones | Ciprofloxacin | | 0.06 | |
| Penicillins | Ampicillin | | 4 | |
| 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 |
|---|---|
| | |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | | 2 | |
| | Streptomycin | | 32 | |
| Amphenicols | Chloramphenicol | | 16 | |
| Cephalosporins | Cefotaxime | | 0.5 | |
| Fluoroquinolones | Ciprofloxacin | | 0.06 | |
| Penicillins | Ampicillin | | 4 | |
| Quinolones | Nalidixic acid | | 16 | |
| Sulfonamides | Sulfonamides | | 256 | |
| Tetracyclines | Tetracycline | | 8 | |
| Trimethoprim | Trimethoprim | | 2 | |

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

| Test Method Used | Standard methods used for testing |
|---|---|
| | |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | | 129 | 0 |
| | Kanamycin | | 129 | 0 |
| | Streptomycin | | 129 | 4 |
| Amphenicols | Chloramphenicol | | 129 | 4 |
| Cephalosporins | 3rd generation cephalosporins | | 129 | 0 |
| Fluoroquinolones | Ciprofloxacin | | 129 | 0 |
| Penicillins | Ampicillin | | 129 | 25 |
| Quinolones | Nalidixic acid | | 129 | 13 |
| Sulfonamides | Sulfonamides | | 129 | 6 |
| Tetracyclines | Tetracycline | | 129 | 3 |
| Trimethoprim | Trimethoprim | | 129 | 0 |
| Fully sensitive | Fully sensitive | | 129 | 95 |
| Resistant to 1 antimicrobial | Resistant to 1 antimicrobial | | 129 | 25 |

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

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Resistant to 2 antimicrobials | Resistant to 2 antimicrobials | | 129 | 5 |
| Resistant to 3 antimicrobials | Resistant to 3 antimicrobials | | 129 | 0 |
| Resistant to 4 antimicrobials | Resistant to 4 antimicrobials | | 129 | 2 |
| Resistant to >4 antimicrobials | Resistant to >4 antimicrobials | | 129 | 2 |

# 2.2 CAMPYLOBACTERIOSIS

## 2.2.1 General evaluation of the national situation

### A. Thermophilic Campylobacter general evaluation

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

The main source of human campylobacter infections in Hungary is raw meat especially poultry meat. The seasonal prevalence of campylobacters in raw chicken meat shows a strong correlation with the seasonal distribution of human cases. The prevalence in raw milk is low, but it can mean a possible source in some cases. As typing of Campylobacter of food origin is not performed at a large scale, PFGE and other molecular based methods are used mainly for outbreak invetigations and in small scale regional studies, the identification of sources should be improved in the future.

#### Recent actions taken to control the zoonoses

Actions specifically used for the control of campylobacters are not implemented in Hungary. Hygienic measurements used in the primary production (all in -all out systems, cleaning, desinfection, pest control)HACCP and GHP systems at slaughterhouses, improvement of the packaging of raw meat, labelling the minced meat and meat preparations with the requirement of heat treatment before consumption are the main actions in use.

## 2.2.2 Campylobacteriosis in humans

### A. Thermophilic Campylobacter in humans

#### Reporting system in place for the human cases

There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system provides online connection between the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case when the campylobacter infection is laboratory confirmed.
Probable case: a clinically compatible case that is not confirmed by laboratory investigation, but it has an epidemiological link to a confirmed campylobacter outbreak.

#### Diagnostic/analytical methods used

Campylobacter isolates are obtained by culturing the faeces samples of the patients on selective-differentiating media, using reduced oxigen tension and special incubation temperature, followed by biochemical tests.

#### Notification system in place

The laboratories of NPHMOS have been able to identify campylobacters since 1987. Human cases have been notifiable since 1998. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS. Hungary has also a laboratory based surveillance system, and the NPHMOS has representative dataset from most of the microbiological laboratories about the laboratory investigated cases (since 2003 antibiotic resistances have also been reported from 5 regional laboratories of NPHMOS and from a number of laboratories of universities or hospitals).
The illness is reported first as enteritis infectiosa syndrome on the basis of the symptoms. Having the results of the laboratory tests this syndrome-based diagnose is modified to etiology-based diagnose. In some cases the reporting follows only the available laboratory test results.

#### History of the disease and/or infection in the country

The laboratories of NPHMOS have been able to identify campylobacters since 1987. In 1990 the National Centre for Epidemiology prepared a guideline on campylobacter enteritis, and then the collection of data on campylobacteriosis was started on this basis. The number of isolates increased from 5 500/year in 1990 to 12 000/year in 1996. Since 1998 this number has varied between 9 500 – 11 500 /year. Human cases have been notifiable since 1998, so the laboratory and clinical surveillance have been linked in this year.
The number of registered cases remained around 8 300-9 200 between 1998 and 2004 (incidence: 81,6 –

91,0 /100 000 inhabitants/year).
Altogether four death cases were registered between 1998 and 2004 (case fatality rate ranged between 0,0 – 0,02%/year). The highest age-specific incidence was observed among children under five years in all periods, and the incidence has declined with the progressing of the age.
The 95% of cases were sporadic, widespread outbreaks were observed very rarely; outbreaks mostly appeared in families (200 – 300/year). The most of the outbreaks were caused by poultry prepared with inadequate heat treatment or additionally contaminated food. There has not been any evidence in Hungary for outbreaks caused by ready-to-eat foods of industrial origin.
[In 1998 a single outbreak was investigated that occurred among consumers exposed to non-pasteurised milk (cow) consumed on a livestock market and exhibition (51 cases)]
75-80% of isolated strains were C.jejuni, around 10% were C.coli, 4-5% were C.lari, the distribution of campylobacter specieses did not changed significantly during the last five years.

## Relevance as zoonotic disease

It is supposed that person-to-person transmission of campylobacter occur only in very few cases (infants, etc). Most of the outbreaks originated from poultry, via contaminated food. However, this facts have not based on statistical or laboratory evidences in Hungary.

## 2.2.3 Campylobacter in foodstuffs

### A. Thermophilic Campylobacter in Broiler meat and products thereof

#### Monitoring system

##### Sampling strategy

At slaughterhouse and cutting plant

There is an annual monitoring program based on the production capacity of the region. The monitoring plan is prepared by the central authority. The samples are taken by the regional authorities. Only one sample unit is taken from a batch, 25 grams are examined in the laboratory. These official samples are examined in the NRL Campylobacter with a presence-absence test followed by species identification and antimicrobial resistance.

At retail

To be reported via ECDC.

##### Frequency of the sampling

At slaughterhouse and cutting plant

Sampling distributed evenly throughout the year

##### Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

##### Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

At least 500 grams of fresh meat is sampled in a sterile plastic bag. The sample is transported to the laboratory in a cool box by courier.

##### Definition of positive finding

At slaughterhouse and cutting plant

When a strain of thermophilic Campylobacter is isolated from the sample (25g) after enrichment.

##### Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 10272:1995

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

Thermophilic Campylobacter - as in many countries - shows a high prevalence in broiler meat with a marked sesonal disribution of 30 % in winter to more than 60% in the summer months.

## 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 - at processing plant | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 177 | 4 | 4 | |
| Meat from pig - fresh - at retail | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 46 | 1 | 1 | |
| Meat from bovine animals - fresh - at processing plant | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 123 | 3 | 1 | 2 |
| Meat from bovine animals - fresh - at retail | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 14 | 0 | | |
| Milk, cows' - raw milk - intended for direct human consumption - at farm | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 50 ml | 47 | 0 | | |
| Meat from pig - fresh - at catering - Unspecified | NFCSO FFSD | Unspecified | Official sampling | food sample > meat | | Single | 25 gramms | 15 | 2 | 2 | |
| Milk, cows' - raw milk - at farm - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 50 ml | 82 | 0 | | |

| | C. lari | C. upsaliensis | Thermophilic Campylobacter spp., unspecified |
|---|---|---|---|
| Meat from pig - fresh - at processing plant | | | |
| Meat from pig - fresh - at retail | | | |
| Meat from bovine animals - fresh - at processing plant | | | |
| Meat from bovine animals - fresh - at retail | | | |
| Milk, cows' - raw milk - intended for direct human consumption - at farm | | | |

## Table Campylobacter in other food

| | C. lari | C. upsaliensis | Thermophilic Campylobacter spp., unspecified |
|---|---|---|---|
| Meat from pig - fresh - at catering - Unspecified | | | |
| Milk, cows' - raw milk - at farm - 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) - carcase - at slaughterhouse | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 31 | 9 | 5 | 4 |
| Meat from broilers (Gallus gallus) - fresh - at processing plant | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 193 | 90 | 44 | 46 |
| Meat from broilers (Gallus gallus) - fresh - at retail | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 171 | 78 | 54 | 24 |
| Meat from turkey - fresh - at processing plant | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 196 | 31 | 21 | 10 |
| Meat from turkey - fresh - at retail | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 86 | 20 | 11 | 9 |
| Meat from duck - fresh - at retail | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 24 | 6 | 2 | 4 |
| Meat from geese - fresh - at retail | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 9 | 2 | 0 | 2 |
| Meat from broilers (Gallus gallus) - fresh - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 35 | 7 | 5 | 2 |
| Meat from duck - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 64 | 11 | 3 | 7 |
| Meat from geese - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | Single | 25 gramms | 88 | 3 | 1 | 2 |

| | C. lari | C. upsaliensis | Thermophilic Campylobacter spp., unspecified |
|---|---|---|---|
| Meat from broilers (Gallus gallus) - carcase - at slaughterhouse | | | |

## Table Campylobacter in poultry meat

| | C. lari | C. upsaliensis | Thermophilic Campylobacter spp., unspecified |
|---|---|---|---|
| Meat from broilers (Gallus gallus) - fresh - at processing plant | | | |
| Meat from broilers (Gallus gallus) - fresh - at retail | | | |
| Meat from turkey - fresh - at processing plant | | | |
| Meat from turkey - fresh - at retail | | | |
| Meat from duck - fresh - at retail | | | |
| Meat from geese - fresh - at retail | | | |
| Meat from broilers (Gallus gallus) - fresh - at catering - Surveillance | | | |
| Meat from duck - fresh - at processing plant - Surveillance | 1 | | |
| Meat from geese - fresh - at processing plant - Surveillance | | | |

## 2.2.4 Antimicrobial resistance in Campylobacter isolates

### A. Antimicrobial resistance in Campylobacter jejuni and coli in foodstuff derived from poultry

#### Sampling strategy used in monitoring

##### Frequency of the sampling

Isolates derive from monitoring system performed for measurement of prevalence of campylobacters in fresh poultry meat. The sampling is random , performed by the regional competent authorities. The samples are taken in slaughterhouses, and is a part of a permanent monitoring scheme.

##### Type of specimen taken

500 grams of fresh poultry meat.

##### Procedures for the selection of isolates for antimicrobial testing

Almost every isolated strains are tested.

##### Methods used for collecting data

All the tests are performed by the NRL.

#### Laboratory methodology used for identification of the microbial isolates

Disc diffusion method on horseblood agar plates. Control strains are used.

## Table Antimicrobial susceptibility testing of Campylobacter in Meat from broilers (Gallus gallus) - meat products - at slaughterhouse - Monitoring - active - Objective sampling - Official sampling - food sample

| Campylobacter | C. coli | | C. jejuni | |
|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | yes | |
| Number of isolates available in the laboratory | 61 | | 33 | |
| Antimicrobials: | N | n | N | n |
| Aminoglycosides - Gentamicin | 61 | 2 | 33 | 2 |
| Aminoglycosides - Streptomycin | 61 | 16 | 33 | 7 |
| Fluoroquinolones - Ciprofloxacin | 61 | 55 | 33 | 28 |
| Tetracyclines - Tetracycline | 61 | 39 | 33 | 18 |
| Fully sensitive | 61 | 3 | 33 | 2 |
| Macrolides - Erythromycin | 61 | 2 | 33 | 0 |
| Resistant to 1 antimicrobial | 61 | 18 | 33 | 16 |
| Resistant to 2 antimicrobials | 61 | 25 | 33 | 8 |
| Resistant to 3 antimicrobials | 61 | 14 | 33 | 5 |
| Resistant to 4 antimicrobials | 61 | 1 | 33 | 2 |
| Resistant to >4 antimicrobials | 61 | 0 | 33 | 0 |

## Table Antimicrobial susceptibility testing of Campylobacter in Meat from turkey - meat products - at slaughterhouse - Monitoring - active - Objective sampling - Official sampling - food sample

| Campylobacter | C. coli | | C. jejuni | |
|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | yes | |
| Number of isolates available in the laboratory | 12 | | 9 | |
| Antimicrobials: | N | n | N | n |
| Aminoglycosides - Gentamicin | 12 | 0 | 9 | 0 |
| Aminoglycosides - Streptomycin | 12 | 1 | 9 | 3 |
| Fluoroquinolones - Ciprofloxacin | 12 | 9 | 9 | 6 |
| Tetracyclines - Tetracycline | 12 | 9 | 9 | 8 |
| Fully sensitive | 12 | 0 | 9 | 0 |
| Macrolides - Erythromycin | 12 | 0 | 9 | 0 |
| Resistant to 1 antimicrobial | 12 | 6 | 9 | 4 |
| Resistant to 2 antimicrobials | 12 | 5 | 9 | 2 |
| Resistant to 3 antimicrobials | 12 | 1 | 9 | 3 |
| Resistant to 4 antimicrobials | 12 | 0 | 9 | 0 |
| Resistant to >4 antimicrobials | 12 | 0 | 9 | 0 |

# Table Antimicrobial susceptibility testing of C. jejuni in Meat from broilers (Gallus gallus) - meat products - at slaughterhouse - Monitoring - Objective sampling - Official sampling - food sample - neck skin - quantitative data [Dilution method]

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

| C. jejuni | Meat from broilers (Gallus gallus) - meat products - at slaughterhouse - Monitoring | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 1 | 33 | 2 | | | | | | 27 | 3 | 1 | 1 | 1 | 0 | 0 | | | | | | | | | | |
| Aminoglycosides - Streptomycin | 2 | 33 | 7 | | | | | | | | 15 | 11 | 2 | 0 | 0 | 4 | 1 | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 33 | 28 | | | | 0 | 2 | 0 | 2 | 1 | 1 | 9 | 14 | 4 | | | | | | | | | | |
| Tetracyclines - Tetracycline | 2 | 33 | 18 | | | | | | | | 11 | 4 | 1 | 1 | 1 | 2 | 13 | | | | | | | | |
| Macrolides - Erythromycin | 4 | 33 | 0 | | | | | | | | 33 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |

Footnote:

Number of multiresistant isolates

| | N | %R |
|---|---|---|
| fully sensitive | 336 | |
| resistant to 1 antimicrobial | 33 | 48 |
| resistant to 2 antimicrobials | 33 | 24 |
| resistant to 3 antimicrobials | 33 | 15 |
| resistant to 4 antimicrobials | 33 | 6 |
| resistant to >4 antimicrobials | 33 | 0 |

# Table Antimicrobial susceptibility testing of C. coli in Meat from broilers (Gallus gallus) - meat products - at slaughterhouse - Monitoring - active - Objective sampling - Official sampling - food sample - neck skin - quantitative data [Dilution method]

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

| C. coli | Meat from broilers (Gallus gallus) - meat products - at slaughterhouse - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 61 | 2 | | | | | | 43 | 11 | 5 | 0 | 2 | 0 | 0 | | | | | | | | | | |
| Aminoglycosides - Streptomycin | 4 | 61 | 16 | | | | | | | | 18 | 18 | 9 | 4 | 2 | 8 | 2 | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 61 | 55 | | | | 0 | 2 | 3 | 0 | 1 | 2 | 7 | 30 | 16 | | | | | | | | | | |
| Tetracyclines - Tetracycline | 2 | 61 | 39 | | | | | | | | 15 | 7 | 1 | 2 | 3 | 2 | 31 | | | | | | | | |
| Macrolides - Erythromycin | 16 | 61 | 2 | | | | | | | | 58 | 0 | 0 | 0 | 1 | 0 | 2 | | | | | | | | |

Footnote:

Number of multiresistant isolates

| | N | %R |
|---|---|---|
| fully sensitive | 61 | 5 |
| resistant to 1 antimicrobial | 61 | 30 |
| resistant to 2 antimicrobials | 61 | 41 |
| resistant to 3 antimicrobials | 61 | 23 |
| resistant to 4 antimicrobials | 61 | 1,6 |
| resistant to >4 antimicrobials | 61 | 0 |

# Table Antimicrobial susceptibility testing of C. jejuni in Meat from turkey - meat products - at slaughterhouse - Monitoring - active - Objective sampling - Official sampling - food sample - neck skin - quantitative data [Dilution method]

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

| C. jejuni | Meat from turkey - meat products - at slaughterhouse - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 1 | 9 | 0 | | | | | | 5 | 3 | 1 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Aminoglycosides - Streptomycin | 2 | 9 | 3 | | | | | | | | 5 | 1 | 1 | 2 | 0 | 0 | 0 | | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 9 | 6 | | | | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 3 | 1 | | | | | | | | | | |
| Tetracyclines - Tetracycline | 2 | 9 | 8 | | | | | | | | 0 | 1 | 2 | 1 | 5 | 0 | 0 | | | | | | | | |
| Macrolides - Erythromycin | 4 | 9 | 0 | | | | | | | | 9 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |

Footnote:

Number of multiresistant isolates

| | N | %R |
|---|---|---|
| fully sensitive | 9 | 0 |
| resistant to 1 antimicrobial | 9 | 44,4 |
| resistant to 2 antimicrobials | 9 | 22,2 |
| resistant to 3 antimicrobials | 9 | 33,3 |
| resistant to 4 antimicrobials | 9 | 0 |
| resistant to >4 antimicrobials | 9 | 0 |

# Table Antimicrobial susceptibility testing of C. coli in Meat from turkey - meat products - at slaughterhouse - Monitoring - active - Objective sampling - Official sampling - food sample - neck skin - quantitative data [Dilution method]

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

| C. coli | Meat from turkey - meat products - at slaughterhouse - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 21 | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=0.008 | 0.015 | 0.03 | 0.06 | 0.12 | 0.25 | 0.5 | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | >2048 | lowest | highest |
| Aminoglycosides - Gentamicin | 2 | 12 | 0 | | | | | | 9 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | |
| Aminoglycosides - Streptomycin | 4 | 12 | 1 | | | | | | | | 3 | 7 | 1 | 0 | 1 | 0 | 0 | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 12 | 9 | | | | 0 | 2 | 1 | 0 | 0 | 0 | 3 | 3 | 3 | | | | | | | | | |
| Tetracyclines - Tetracycline | 2 | 12 | 9 | | | | | | | | 0 | 3 | 1 | 0 | 0 | 1 | 7 | | | | | | | |
| Macrolides - Erythromycin | 16 | 12 | 0 | | | | | | | | 12 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |

Footnote:

| Number of multiresistant isolates | N | %R |
|---|---|---|
| fully sensitive | 12 | 0 |
| resistant to 1 antimicrobial | 12 | 50 |
| resistant to 2 antimicrobials | 12 | 41,6 |
| resistant to 3 antimicrobials | 12 | 8,3 |
| resistant to 4 antimicrobials | 12 | 0 |
| resistant to >4 antimicrobials | 12 | 0 |

# Table Antimicrobial susceptibility testing of C. coli in Pigs - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

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

| C. coli | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 76 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 76 | 6 | | | | | | | | 2 | 4 | 23 | 28 | 13 | 3 | 0 | 3 | | | | | | | | |
| Aminoglycosides - Streptomycin | 4 | 76 | 60 | | | | | | | | | | | 4 | 5 | 7 | 3 | 57 | | | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 76 | 2 | | | | | | | | | | | | 33 | 35 | 6 | 0 | 2 | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 76 | 40 | | | | | | | 3 | 17 | 8 | 5 | 3 | 1 | 39 | | | | | | | | | | |
| Quinolones - Nalidixic acid | 32 | 76 | 37 | | | | | | | | | | | | 0 | 9 | 18 | 8 | 4 | 37 | | | | | | |
| Tetracyclines - Tetracycline | 2 | 76 | 67 | | | | | | | | | 3 | 2 | 2 | 2 | 0 | 0 | 67 | | | | | | | | |
| Macrolides - Erythromycin | 16 | 76 | 12 | | | | | | | | | | 34 | 13 | 12 | 4 | 0 | 1 | 12 | | | | | | | |

| C. coli | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 76 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.12 | 16 |
| Aminoglycosides - Streptomycin | 1 | 16 |
| Amphenicols - Chloramphenicol | 2 | 32 |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 4 |
| Quinolones - Nalidixic acid | 2 | 64 |
| Tetracyclines - Tetracycline | 0.25 | 16 |

## Table Antimicrobial susceptibility testing of C. coli in Pigs - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

| C. coli | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 76 | |
| Antimicrobials: | lowest | highest |
| Macrolides - Erythromycin | 0.5 | 32 |

# Table Antimicrobial susceptibility testing of C. jejuni - C. jejuni subsp. jejuni in Gallus gallus (fowl) - broilers - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

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

| C. jejuni subsp. jejuni | Gallus gallus (fowl) - broilers - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 36 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 1 | 36 | 2 | | | | | | | | 7 | 10 | 14 | 3 | 2 | 0 | 0 | 0 | | | | | | | | |
| Aminoglycosides - Streptomycin | 2 | 36 | 12 | | | | | | | | | | | 17 | 7 | 6 | 3 | 3 | | | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 36 | 0 | | | | | | | | | | | | 27 | 7 | 2 | 0 | 0 | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 36 | 31 | | | | | | | 1 | 3 | 1 | 0 | 0 | 0 | 31 | | | | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 36 | 30 | | | | | | | | | | | | 1 | 4 | 0 | 1 | 2 | 28 | | | | | | |
| Tetracyclines - Tetracycline | 2 | 36 | 14 | | | | | | | | | 10 | 4 | 8 | 0 | 0 | 1 | 13 | | | | | | | | |
| Macrolides - Erythromycin | 4 | 36 | 2 | | | | | | | | | | 29 | 4 | 1 | 0 | 0 | 0 | 2 | | | | | | | |

| C. jejuni subsp. jejuni | Gallus gallus (fowl) - broilers - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 36 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.12 | 16 |
| Aminoglycosides - Streptomycin | 1 | 16 |
| Amphenicols - Chloramphenicol | 2 | 32 |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 4 |
| Quinolones - Nalidixic acid | 2 | 64 |

## Table Antimicrobial susceptibility testing of C. jejuni - C. jejuni subsp. jejuni in Gallus gallus (fowl) - broilers - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

| C. jejuni subsp. jejuni | Gallus gallus (fowl) - broilers - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 36 | |
| Antimicrobials: | lowest | highest |
| Tetracyclines - Tetracycline | 0.25 | 16 |
| Macrolides - Erythromycin | 0.5 | 32 |

# Table Antimicrobial susceptibility testing of C. jejuni - C. jejuni subsp. jejuni in Pigs - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

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

| C. jejuni subsp. jejuni | Pigs - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 1 | 5 | 1 | | | | | | | | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | | | | | | | | |
| Aminoglycosides - Streptomycin | 2 | 5 | 2 | | | | | | | | | | | 0 | 3 | 1 | 0 | 1 | | | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 5 | 0 | | | | | | | | | | | | 2 | 3 | 0 | 0 | 0 | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 5 | 1 | | | | | | | 1 | 0 | 3 | 0 | 0 | 0 | 1 | | | | | | | | | | |
| Quinolones - Nalidixic acid | 16 | 5 | 1 | | | | | | | | | | | | 0 | 1 | 2 | 1 | 0 | 1 | | | | | | |
| Tetracyclines - Tetracycline | 2 | 5 | 2 | | | | | | | | | 0 | 1 | 2 | 0 | 0 | 0 | 2 | | | | | | | | |
| Macrolides - Erythromycin | 4 | 5 | 0 | | | | | | | | | | 4 | 0 | 1 | 0 | 0 | 0 | 0 | | | | | | | |

| C. jejuni subsp. jejuni | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.12 | 16 |
| Aminoglycosides - Streptomycin | 1 | 16 |
| Amphenicols - Chloramphenicol | 2 | 32 |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 4 |
| Quinolones - Nalidixic acid | 2 | 64 |
| Tetracyclines - Tetracycline | 0.25 | 16 |

## Table Antimicrobial susceptibility testing of C. jejuni - C. jejuni subsp. jejuni in Pigs - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

| C. jejuni subsp. jejuni | Pigs - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 5 | |
| Antimicrobials: | lowest | highest |
| Macrolides - Erythromycin | 0.5 | 32 |

# Table Antimicrobial susceptibility testing of C. coli in Gallus gallus (fowl) - broilers - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

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

| C. coli | Gallus gallus (fowl) - broilers - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 35 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | >4096 | 1024 | 2048 |
| Aminoglycosides - Gentamicin | 2 | 35 | 0 | | | | | | | | 0 | 1 | 14 | 17 | 3 | 0 | 0 | 0 | | | | | | | | |
| Aminoglycosides - Streptomycin | 4 | 35 | 12 | | | | | | | | | | | 0 | 13 | 10 | 6 | 6 | | | | | | | | |
| Amphenicols - Chloramphenicol | 16 | 35 | 1 | | | | | | | | | | | | 13 | 17 | 4 | 0 | 1 | | | | | | | |
| Fluoroquinolones - Ciprofloxacin | 1 | 35 | 30 | | | | | | | 0 | 4 | 1 | 0 | 0 | 0 | 30 | | | | | | | | | | |
| Quinolones - Nalidixic acid | 32 | 35 | 30 | | | | | | | | | | | | 0 | 2 | 3 | 0 | 0 | 30 | | | | | | |
| Tetracyclines - Tetracycline | 2 | 35 | 24 | | | | | | | | | 2 | 3 | 6 | 0 | 0 | 1 | 23 | | | | | | | | |
| Macrolides - Erythromycin | 16 | 35 | 0 | | | | | | | | | | 16 | 10 | 7 | 2 | 0 | 0 | 0 | | | | | | | |

| C. coli | Gallus gallus (fowl) - broilers - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 35 | |
| Antimicrobials: | lowest | highest |
| Aminoglycosides - Gentamicin | 0.12 | 16 |
| Aminoglycosides - Streptomycin | 1 | 16 |
| Amphenicols - Chloramphenicol | 2 | 32 |
| Fluoroquinolones - Ciprofloxacin | 0.06 | 4 |
| Quinolones - Nalidixic acid | 2 | 64 |

## Table Antimicrobial susceptibility testing of C. coli in Gallus gallus (fowl) - broilers - Monitoring - active - Unspecified - Industry sampling - animal sample - quantitative data [Dilution method]

| C. coli | Gallus gallus (fowl) - broilers - Monitoring - active | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 35 | |
| Antimicrobials: | lowest | highest |
| Tetracyclines - Tetracycline | 0.25 | 16 |
| Macrolides - Erythromycin | 0.5 | 32 |

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

| Test Method Used | Standard methods used for testing |
|---|---|
| | |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | | 2 | |
| | Streptomycin | | 4 | |
| Fluoroquinolones | Ciprofloxacin | | 1 | |
| Macrolides | Erythromycin | | 16 | |
| Tetracyclines | Tetracycline | | 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 | | 1 | |
| Macrolides | Erythromycin | | 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 |
|---|---|
| | |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | | 2 | |
| | Streptomycin | | 4 | |
| Fluoroquinolones | Ciprofloxacin | | 1 | |
| Macrolides | Erythromycin | | 16 | |
| Tetracyclines | Tetracycline | | 2 | |

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

| Test Method Used | Standard methods used for testing |
|---|---|
| | |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | | 1 | |
| | Streptomycin | | 2 | |
| Fluoroquinolones | Ciprofloxacin | | 1 | |
| Macrolides | Erythromycin | | 4 | |
| Tetracyclines | Tetracycline | | 2 | |

## 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 | | 1 | |
| | Streptomycin | | 2 | |
| Fluoroquinolones | Ciprofloxacin | | 1 | |
| Macrolides | Erythromycin | | 4 | |
| Tetracyclines | Tetracycline | | 2 | |

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

| Test Method Used | Standard methods used for testing |
|---|---|
| | |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | | 1 | |
| | Streptomycin | | 2 | |
| Fluoroquinolones | Ciprofloxacin | | 1 | |
| Macrolides | Erythromycin | | 4 | |
| Tetracyclines | Tetracycline | | 2 | |

# 2.3 LISTERIOSIS

## 2.3.1 General evaluation of the national situation

### A. Listeriosis general evaluation

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

Testing of ready-to-eat products for the presence/and/or the determination of the number of Listeria monocytogenes is obligatory for food business operators based on Reg.2073/2005/EC. The official monitoring program concentrates to take samples from these products on a risk based approach as well. Only the data of official control are presented in this report, because only these data are collected in the database of the authority. The legislative background has changed a lot, because before 2006 only milk and milk products were regularly tested for Listeria monocytogenes and only by presence absence tests. In the frame of USDA-FSIS monitoring obligatory for US exporting establishments raw cured products were tested as well with presence-abscence tests and MPN based method suitable for enumeration of low numbers of the microorganism

From 2006, those RTE products that not support the growth of Listeria, are examined by the enumeration method ISO 11290:2 (e.g.salami, raw smoked ham). If the product is able to support the growth of the pathogen, presence-abscence test is used as a first step (ISO 11290:1), or the two method run paralel (depending on the expiry date, the amount of sample is enough to perform an enumeration test if the first test is positive). The pathogen is enumerated from all the positive samples.

Based on the past decade's USDA Listeria monitoring data, Listeria monocytogenes can be frequently isolated from traditional raw and smoked meat products as salami and sausages, but the highest contamination level was 2.3 cells (MPN method)/gram. Therefore this product group certainly does not play an important role in human infections.

Listeria monocytogenes can be isolated from mixes salads as well, but because of low pH and preservatives charateristic for this product group generally do not support the growth of the pathogen, and only level of <10 cells per gram was measured from the positive samples.

Milk products are characteristically made of pasteurised milk in Hungary, therefore these types of foodstuff are practically free from Listeria.

Consumers show an increasing interest to by raw milk for consumption in the past few years. Despite of the obligatory labelling to call the consumers' attention for heat treating of raw milk, this product can be considered as a potential source of infection in the future.

#### Recent actions taken to control the zoonoses

Based on Reg. 2073/2005/EC.

## 2.3.2 Listeriosis in humans

### A. Listeriosis in humans

#### Reporting system in place for the human cases

There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic reporting system for registering and analysing data of communicable diseases in a combined national database, so the system provides online connection amid the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: Clinical picture of an invasive illness (meningitis purulenta, sepsis, stillbirth etc.), and L.monocytogenes has been isolated from invasive sample (liquor, blood, amniotic fluid etc.)

#### Diagnostic/analytical methods used

The samples are cultivated on enriched medium. The isolation is followed by the biochemical tests, and antimicrobial susceptibility testing.

#### Notification system in place

Listeriosis has been notifiable since 1998 in Hungary. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS. Hungary also has a laboratory based surveillance system, and the NPHMOS has representative dataset from most of the microbiological laboratories about the investigated cases (since 2003 antibiotic resistances has also been reported from 20 county institutes and 12 laboratories from universities or hospitals).
The illness is reported first as meningitis purulenta syndrome on the basis of the symptoms. Having the results of the laboratory tests this syndrome-based diagnose is modified to etiology-based diagnose (listeriosis).

#### History of the disease and/or infection in the country

Listeriosis has been notifiable since 1998 in Hungary, there have been 91 cases registered since then. The number of yearly registered cases ranged between 4 – 25 (incidence 0,04 – 0,2/100 000 inhabitants/year; median: 14 cases), the case fatality rate ranged between 0 – 50% (median 22,2%). The age-distribution of cases: 12% infants, 1 – 14 year 3,4%, 15 – 19 year 0%, 20 – 49 year 20%, 50 – 59 year 20%, > 60 year 43%. Most of the cases are meningitis, less of them are sepsis.

#### Relevance as zoonotic disease

Listeriosis is underreported in Hungary. No evidence has been found for a food-borne case based on laboratory tests in Hungary.

## 2.3.3 Listeria in foodstuffs

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 L. monocytogenes | Units tested with detection method | Listeria monocytogenes presence in x g |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 25 ml | 61 | 3 | 60 | 3 |
| Milk, cows' - pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 10 or 25 ml | 58 | 0 | 52 | 0 |
| Milk, cows' - pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 25 ml | 16 | 0 | 16 | 0 |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 77 | 1 | 61 | 1 |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 165 | 0 | 87 | 0 |
| Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 gramms | 1 | 0 | | |
| Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 9 | 0 | 9 | 0 |
| Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 7 | 0 | 6 | 0 |
| Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 2 | 0 | 2 | 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 L. monocytogenes | Units tested with detection method | Listeria monocytogenes presence in x g |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 3 | 0 | 3 | 0 |
| Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 70 | 0 | 64 | 0 |
| Dairy products (excluding cheeses) - butter - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 39 | 0 | 39 | 0 |
| Cheeses made from cows' milk - fresh - unspecified - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 123 | 0 | 98 | 0 |
| Cheeses made from goats' milk - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 5 | 0 | 4 | 0 |
| Cheeses made from sheep's milk - fresh - unspecified - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 52 | 0 | 42 | 0 |
| Dairy products (excluding cheeses) - dairy desserts - unspecified - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 110 | 0 | 77 | 0 |
| Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 75 | 0 | 73 | 0 |
| Dairy products (excluding cheeses) - fermented dairy products - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 127 | 0 | 105 | 0 |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 45 | 0 | 28 | 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 L. monocytogenes | Units tested with detection method | Listeria monocytogenes presence in x g |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 103 | 0 | 82 | 0 |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramm | 131 | 0 | 96 | 0 |
| Milk, cows' - raw milk - at farm - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | Single | 25 ml | 89 | 0 | 68 | 0 |

| | Units tested with enumeration method | > detection limit but <= 100 cfu/g | L. monocytogenes > 100 cfu/g |
|---|---|---|---|
| Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance | 1 | | |
| Milk, cows' - pasteurised milk - at processing plant - Surveillance | 6 | | |
| Milk, cows' - pasteurised milk - at retail - Surveillance | 0 | | |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | 16 | | |
| Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | 78 | | |
| Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance | 1 | | |

## Table Listeria monocytogenes in milk and dairy products

| | Units tested with enumeration method | > detection limit but <= 100 cfu/g | L. monocytogenes > 100 cfu/g |
|---|---|---|---|
| Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | | | |
| Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | 1 | | |
| Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance | 0 | | |
| Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance | 0 | | |
| Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance | 6 | | |
| Dairy products (excluding cheeses) - butter - made from pasteurised milk - at retail - Surveillance | 0 | | |
| Cheeses made from cows' milk - fresh - unspecified - Surveillance | 25 | | |
| Cheeses made from goats' milk - fresh - at processing plant - Surveillance | 1 | | |
| Cheeses made from sheep's milk - fresh - unspecified - Surveillance | 10 | | |
| Dairy products (excluding cheeses) - dairy desserts - unspecified - Surveillance | 33 | | |

## Table Listeria monocytogenes in milk and dairy products

| | Units tested with enumeration method | > detection limit but <= 100 cfu/g | L. monocytogenes > 100 cfu/g |
|---|---|---|---|
| Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance | 2 | | |
| Dairy products (excluding cheeses) - fermented dairy products - at retail - Surveillance | 22 | | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at catering - Surveillance | 17 | | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at processing plant - Surveillance | 21 | | |
| Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at retail - Surveillance | 35 | | |
| Milk, cows' - raw milk - at farm - Surveillance | 21 | | |

## 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 L. monocytogenes | Units tested with detection method | Listeria monocytogenes presence in x g |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 60 | 1 | 43 | 1 |
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 144 | 0 | 109 | 0 |
| Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 88 | 0 | 72 | 0 |
| Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 214 | 5 | 154 | 2 |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 25 gramms | 5 | 0 | 5 | 0 |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 35 | 0 | 28 | 0 |
| Fish - smoked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 181 | 38 | 134 | 24 |
| Infant formula - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 169 | 0 | 143 | 0 |
| Other processed food products and prepared dishes - sandwiches - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 266 | 4 | 194 | 3 |
| Vegetables - pre-cut - ready-to-eat - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 142 | 2 | 102 | 1 |
| Confectionery products and pastes - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 117 | 1 | 77 | 1 |
| Ready-to-eat salads - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 140 | 3 | 107 | 3 |

## 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 L. monocytogenes | Units tested with detection method | Listeria monocytogenes presence in x g |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ready-to-eat salads - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 83 | 3 | 62 | 2 |
| Ready-to-eat salads - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 232 | 18 | 145 | 14 |
| Seeds, sprouted - ready-to-eat - unspecified - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 83 | 0 | 65 | 0 |
| Vegetables - pre-cut - ready-to-eat - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample | | Single | 10 or 25 gramms | 29 | 0 | 19 | 0 |

| | Units tested with enumeration method | > detection limit but <= 100 cfu/g | L. monocytogenes > 100 cfu/g |
|---|---|---|---|
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance | 17 | 0 | 0 |
| Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at retail - Surveillance | 35 | 0 | 0 |
| Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance | 16 | 0 | 0 |
| Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance | 60 | 2 | 1 |
| Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance | 0 | 0 | 0 |

## Table Listeria monocytogenes in other foods

| | Units tested with enumeration method | > detection limit but <= 100 cfu/g | L. monocytogenes > 100 cfu/g |
|---|---|---|---|
| Meat from bovine animals - meat products - cooked, ready-to-eat - at retail - Surveillance | 7 | 0 | 0 |
| Fish - smoked - at retail - Surveillance | 47 | 10 | 4 |
| Infant formula - at retail - Surveillance | 26 | 0 | 0 |
| Other processed food products and prepared dishes - sandwiches - at retail - Surveillance | 72 | 1 | 0 |
| Vegetables - pre-cut - ready-to-eat - at retail - Surveillance | 40 | 1 | 0 |
| Confectionery products and pastes - at retail - Surveillance | 40 | 0 | 0 |
| Ready-to-eat salads - at catering - Surveillance | 33 | 0 | 0 |
| Ready-to-eat salads - at processing plant - Surveillance | 21 | 1 | 0 |
| Ready-to-eat salads - at retail - Surveillance | 87 | 4 | 0 |
| Seeds, sprouted - ready-to-eat - unspecified - Surveillance | 18 | 0 | 0 |
| Vegetables - pre-cut - ready-to-eat - at processing plant - Surveillance | 10 | 0 | 0 |

# 2.4 E. COLI INFECTIONS

## 2.4.1 General evaluation of the national situation

### A. Verotoxigenic Escherichia coli infections general evaluation

#### Additional information

E. coli- microbiological examination of food according to ISO 16654 (E. coli O157) identification by antisera

## 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 bovine animals - fresh - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | ISO 16654:2001 | Single | 25 gramms | 98 | | 0 |
| Meat from bovine animals - fresh - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | ISO 16654:2001 | Single | 25 gramms | 61 | | 0 |
| Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | ISO 16654:2001 | Single | 25 ml | 102 | | 0 |
| Vegetables - pre-cut - ready-to-eat - at retail - Surveillance | NFCSO FFSD | Selective sampling | Official sampling | food sample | | ISO/PRF TS 13136 | Single | 25 gramms | 5 | 0 | 0 |
| Seeds, sprouted - ready-to-eat - at retail - Surveillance | NFCSO FFSD | Selective sampling | Official sampling | food sample | | ISO/PRF TS 13136 | Single | 25 gramms | 5 | 0 | 0 |
| Seeds, dried - at processing plant - Surveillance [1)] | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | ISO/PRF TS 13136 | Batch | 10 x25 gramms | 1 | 0 | 0 |
| Fruits - non-pre-cut - at retail - imported - Surveillance | NFCSO FFSD | Selective sampling | Official sampling | food sample | | ISO/PRF TS 13136 | Single | 25 gramms | 13 | | 0 |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at catering - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | ISO 16654:2001 | Single | 25 gramms | 8 | | 0 |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at processing plant - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | ISO 16654:2001 | Single | 25 gramms | 22 | | 0 |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > meat | | ISO 16654:2001 | Single | 25 gramms | 39 | | 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 bovine animals - minced meat - intended to be eaten cooked - at retail - imported - Surveillance | NFCSO FFSD | Suspect sampling | Official sampling | food sample > meat | | ISO 16654:2001 | Batch | 5x25 gramms | 2 | | 0 |
| Meat from bovine animals - minced meat - intended to be eaten cooked - frozen - at retail - imported - Surveillance | NFCSO FFSD | Suspect sampling | Official sampling | food sample > meat | | ISO/PRF TS 13136 | Batch | 5x25 gramms | 2 | | 0 |
| Meat from pig - meat preparation - at processing plant - Unspecified [2)] | NFCSO FFSD | Suspect sampling | Official sampling | food sample > meat | | ISO/PRF TS 13136 | Single | 25 gramms | 2 | 1 | 0 |
| Meat from pig - meat products - raw and intended to be eaten raw - at processing plant - Unspecified [3)] | NFCSO FFSD | Suspect sampling | Official sampling | food sample > meat | | ISO/PRF TS 13136 | Single | 25 gramms | 2 | 1 | 0 |
| Meat from pig - meat products - unspecified - Surveillance | NFCSO FFSD | Selective sampling | Official sampling | food sample > meat | | ISO/PRF TS 13136 | Single | 25 gramms | 3 | 0 | 0 |
| Milk, cows' - raw milk - intended for direct human consumption - at retail - Surveillance | NFCSO FFSD | Objective sampling | Official sampling | food sample > milk | | ISO 16654:2001 | Single | 25 ml | 8 | | 0 |
| Vegetables - non-pre-cut - at retail - imported - Surveillance | NFCSO FFSD | Selective sampling | Official sampling | food sample | | ISO/PRF TS 13136 | Single | 25 gramms | 452 | 0 | 0 |

| | Verotoxigenic E. coli (VTEC) - VTEC non-O157 | Verotoxigenic E. coli (VTEC) - VTEC, unspecified |
|---|---|---|
| Meat from bovine animals - fresh - at processing plant - Surveillance | | |
| Meat from bovine animals - fresh - at retail - Surveillance | | |

## Table VT E. coli in food

| | Verotoxigenic E. coli (VTEC) - VTEC non-O157 | Verotoxigenic E. coli (VTEC) - VTEC, unspecified |
|---|---|---|
| Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance | | |
| Vegetables - pre-cut - ready-to-eat - at retail - Surveillance | 0 | |
| Seeds, sprouted - ready-to-eat - at retail - Surveillance | 0 | |
| Seeds, dried - at processing plant - Surveillance [1)] | 0 | |
| Fruits - non-pre-cut - at retail - imported - Surveillance | 0 | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at catering - Surveillance | | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at processing plant - Surveillance | | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - Surveillance | | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - at retail - imported - Surveillance | | |
| Meat from bovine animals - minced meat - intended to be eaten cooked - frozen - at retail - imported - Surveillance | 0 | |
| Meat from pig - meat preparation - at processing plant - Unspecified [2)] | 0 | 1 |

## Table VT E. coli in food

| | Verotoxigenic E. coli (VTEC) - VTEC non-O157 | Verotoxigenic E. coli (VTEC) - VTEC, unspecified |
|---|---|---|
| Meat from pig - meat products - raw and intended to be eaten raw - at processing plant - Unspecified [3)] | 0 | 1 |
| Meat from pig - meat products - unspecified - Surveillance | 0 | |
| Milk, cows' - raw milk - intended for direct human consumption - at retail - Surveillance | | |
| Vegetables - non-pre-cut - at retail - imported - Surveillance | 0 | |

Comments:

[1)] fenugreek originated from the suspected lot (outbreak 2011)

[2)] stx2 positive, eae negative

[3)] stx2 positive, eae negative

## 2.4.3 Escherichia coli, pathogenic in animals

### A. Verotoxigenic Escherichia coli in cattle (bovine animals)

#### Monitoring system

##### Sampling strategy

Monitoring, Official sampling, objective sampling

##### Frequency of the sampling

Animals at farm

Sampling distributed evenly throughout the year

Animals at slaughter (herd based approach)

Sampling distributed evenly throughout the year

##### Type of specimen taken

Animals at slaughter (herd based approach)

meat, minced meat

##### Methods of sampling (description of sampling techniques)

Animals at slaughter (herd based approach)

500 gram meat sample is taken (from one animal), the weight of test portion is 25 grams (cutted from the surface of meat).
The samples are examined by ISO 16654:2001 Standard. Immuno-magnetic concentration is used for the detection of the most important serotype O157. If a strain belongig to the O 157 serotype is isolated, the toxin production is detected by a latex based agglutination test.

##### Case definition

Animals at slaughter (herd based approach)

The sample is considered to be positive if E. coli O157 was isolated, and the strain produces verotoxin (VT-1, VT-2 or both)

##### Diagnostic/analytical methods used

Animals at slaughter (herd based approach)

Bacteriological method:  ISO 16654:2001

# 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 bovine populations, eradication measures for tuberculosis started in 1962. The eradication of bovine tuberculosis was considered to be completed at the end of 1980. Since then, only sporadic cases occur.

As regards of tuberculosis in man, the favourable tendency which could be observed from the 1950s in the epidemiology of tuberculosis seemed to stop and getting worse in 1990. (Incidence raised by 19% between 1990 and 1995.)In order to lower the incidence and improve the situation, a National Tuberculosis Programme was adopted in 1994 which also incorporated a national surveillance programme based on a central, computerised database.

#### Recent actions taken to control the zoonoses

Regular screening of the human population is provided. All farm workers have to be checked by the competent public health authority for their compliance with the rules set for persons dealing with animals and food intended for human consumption. The documents proving their compliance are subject to on farm checks performed by the veterinary service. Each county veterinary authority has the right to set further health requirements for persons dealing with animals kept on small size farms.

## 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

The nationwide program for eradication of bovine tuberculosis in Hungary has successfully been completed by 31 December 1980 and the tuberculosis free status of the country were declared to the OIE. Since then no evidence of the presence of infection in more than 0,1 % of our herds has been found.

#### Monitoring system

##### Sampling strategy

Post mortem inspections

According to the meat inspection rules in force in Hungary, based on a tradition of at least a century, each animal for slaughter is to be checked individually ante and post mortem. Technical methods applied at meat inspection is suitable to detect even the slightest tuberculotic lesions. The legal provisions for tuberculosis require that the organs, together with the lymphnodes belonging to them, shall be sent to the Central Agricultural Office, Veterinary Diagnostic Directorate (former Central Veterinary Institute) for further laboratory examination, if during post mortem inspection of a slaughtered animal the tuberculotic lesions are revealed. In case of animals ordered to be slaughtered for establishing the reason for unclarified positive or inconclusive reactions during intradermal tuberculin testing, a set of lymph nodes belonging to several organs and systems, as listed in the Annex 3 of the Decree No. 65/2002. (VIII. 9.) FVM and in the Technical Guideline, shall be sent to the Central Agricultural Office, Veterinary Diagnostic Directorate.

Intradermal tuberculin testing

Together with the post mortem control program, the compulsory intradermal tuberculin testing with a yearly interval of the whole Hungarian cattle population (older than six weeks), as well as case by case testing of animals moved from one herd to another, has been maintained and executed.

##### Frequency of the sampling

See above.

##### Methods of sampling (description of sampling techniques)

According to the Annex 3 of the Decree No. 65/2002. (VIII.9) FVM the rules of taking samples are the followings:

Â·samples taken from animals with a large body (cattle, swine) must include the organs showing signs of the disease and the adjacent lymphatic glands, in case of birds and smaller animals the sample must be an entire carcass;

Â·samples used for confirming paraallergic reaction must include the tonsils, pharyngal, mesenteric and portal lymphatic glands of the slaughtered animal;

Â·the purpose of detecting the presence of mycobacteria from the feedingstuffs, litter, soil etc. 20-50 gramm samples must be taken, 20 gramm samples from faeces, 50cm3 from urine and 5 litres from drinking water. The samples must be sent to the CVI with a view to carry out tests to detect tuberculosis and confirm the presence of mycobacteria.

### Case definition

An animal is considered  a positive case, if the presence of tuberculosis is confirmed by the isolation of M. bovis from its lymph node(s) or parenchymatous organs on laboratory examination.
Suspension or withdrawal of the free status of a herd is based upon the analysis of the results of the intradermal tuberculin tests (if necessary, repeated and completed by simultaneous testing), post mortem examinations and laboratory tests. According to the Annex 1 of the  Decree No. 65/2002. (VIII.9) the officially tuberculosis -free status of the herd have to be withdrawn if the presence of tuberculosis is confirmed by the isolation of M. bovis on laboratory examination.

### Diagnostic/analytical methods used

The identification of Mycobacterium bovis is carried out only the Central Agricultural Office, Veterinary Diagnostic Directorate(VDD) (Budapest). The VDD works according to the OIE Manual of Standards for Diagnostic tests and Vaccines, Forth Edition, Chapter 2.3.3. (bovine tuberculosis).

Annex 7. of the Decree No. 65/2002. (VIII.9) FVM contains the standards for the tuberculin (bovine and avian) to be used during the intradermal tests. These rules are fully compatible with Annex B point 2.1. of Council Directive 64/432/EEC.
Annex 2., which contains  the standards for the test procedures is fully compatible with Council Directive 64/432/EEC.

## Vaccination policy

Preventive vaccination against M. bovis is prohibited by Decree No. 65/2002. (VIII. 9.) FVM.

## Control program/mechanisms

### The control program/strategies in place

The whole cattle population is continuously monitored for bovine tuberculosis on a yearly basis by the intradermal tuberculine tests and by post-mortem inspections.
For measures taken in case of single cases, see "Measures in case of the positive findings or single cases".

### Recent actions taken to control the zoonoses

Guidelines have been issued first by the Ministry of Agriculture and Rural Development and later by the Central Agricultural Office (the currently valid guideline was issued in March 2010) about the carrying out the tuberculin test in cattle herds taking into consideration the fals positive or interference reactions as well as the data collection, and reporting by the regional authorities.

## Measures in case of the positive findings or single cases

When an animal is considered to be a positive reactor in the intradermal tests, it is removed from the herd and slaughtered. The post-mortem, laboratory and epidemiological examinations shall be carried out. The status of the herd will remain suspended until the all laboratory examinations have been completed. If the presence of tuberculosis is not confirmed, the suspension of the officially tuberculosis-free status may be lifted following a test of all animals over six weeks of age with negative results at least 42 days after the removal of the reactor animal.
According to the Annex 1 of the  Decree No. 65/2002. (VIII.9) the officially tuberculosis -free status of the herd have to be withdrawn if the presence of tuberculosis is confirmed by the isolation of M. bovis on laboratory examination.

The district chief veterinarian may initiate a procedure to withdraw the tuberculosis-free status of the herd, and the animal health and food control station  may withdraw the status, if

Â·the conditions for retention of the officially free status are not complied with, or
Â·classical lesions of tuberculosis are seen at post-mortem examination,
Â·an epidemiological enquiry establishes the likelihood of infection,
Â·it is deemed necessary to control of bovine tuberculosis in the herd for any other reason.

## Notification system in place

Bovine tuberculosis is compulsory notifiable by virtue of the Veterinary Act No CLXXVI. of 2005, which replaced the Veterinary Act No XCI of 1995, from 1 September 2008 by the Decree No 113/2008 (VIII. 30.) of the Ministry of Agriculture and Rural Development (MARD) on notification of animal diseases. The detailed rules regarding bovine tuberculosis are laid down by the Decree No. 65/2002. (VIII.9) FVM of the Minister of Agriculture and Rural Development, which texts replaced the relevant parts of the Zoo-Sanitary Code implemented by the Decree No 41/1997. (V. 28.) FM of the Minister of Agriculture. As regards keeping and movements of the bovine animals the Zoosanitary Code is applied further. Before the 1st of July of 1997 the Decree No. 28/1981. (XII. 30.) MEM of the Minister of Agriculture and Alimentation contained the rules for the bovine tuberculosis and keeping or movements of the bovine animals. It is very important that the former legislative rules were essentially the same as the current ones.

## Results of the investigation

During the past consecutive seven years the rate of herds infected with bovine tuberculosis has never reached 0,1 % and at least 99,9% of herds have achieved officially tuberculosis free status each year during this period.

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

Hungary is free of bovine tuberculosis. However, sporadic cases are reported.

## Table Tuberculosis in other animals

| | Source of information | Sampling strategy | Sampler | Sample type | Sample Origin | Sampling unit | Units tested | Total units positive for Mycobacterium | M. bovis | M. tuberculosis | Mycobacterium spp., unspecified |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Deer - wild - fallow deer - from hunting - Monitoring | NFCSO-VDD | | Official sampling | animal sample | | Animal | 2 | 0 | 0 | 0 | 0 |
| Deer - wild - red deer - from hunting - Monitoring - active | NFCSO-VDD | | Official sampling | animal sample | | Animal | 64 | 16 | 0 | 0 | 7 |
| Deer - wild - roe deer - from hunting - Monitoring - active | NFCSO-VDD | | Official sampling | animal sample | | Animal | 4 | 1 | 0 | 0 | 1 |
| Foxes - wild - unspecified - Monitoring | NFCSO-VDD | | Official sampling | animal sample | | Animal | 2 | 0 | 0 | 0 | 0 |
| Wild boars - wild - from hunting - Monitoring - active | NFCSO-VDD | | Official sampling | animal sample | | Animal | 104 | 31 | 9 | 0 | 21 |

| | M. avium complex |
|---|---|
| Deer - wild - fallow deer - from hunting - Monitoring | 0 |
| Deer - wild - red deer - from hunting - Monitoring - active | 9 |
| Deer - wild - roe deer - from hunting - Monitoring - active | 0 |
| Foxes - wild - unspecified - Monitoring | 0 |
| Wild boars - wild - from hunting - Monitoring - active | 1 |

Table Tuberculosis in other animals

# 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 | | | |
| Baranya | 401 | 28291 | 400 | 99.75 | 0 | 0 | once a year | 24254 | 706 | 74 | 0 |
| Borsod-Abaúj-Zemplén | 926 | 41956 | 925 | 99.89 | 0 | 0 | once a year | 38635 | 2490 | 34 | 0 |
| Budapest | 35 | 1092 | 35 | 100 | 0 | 0 | once a year | 1037 | 0 | 0 | 0 |
| Bács-Kiskun | 2028 | 64109 | 2028 | 100 | 0 | 0 | once a year | 50436 | 3629 | 24 | 0 |
| Békés | 1461 | 62212 | 1461 | 100 | 0 | 0 | once a year | 53860 | 2221 | 14 | 0 |
| Csongrád | 1388 | 39454 | 1388 | 100 | 0 | 0 | once a year | 33206 | 2524 | 28 | 0 |
| Fejér | 493 | 44371 | 493 | 100 | 0 | 0 | once a year | 42592 | 2554 | 6 | 0 |
| Győr-Moson-Sopron | 868 | 50789 | 868 | 100 | 0 | 0 | once a year | 47337 | 5041 | 0 | 0 |
| Hajdú-Bihar | 2197 | 91206 | 2197 | 100 | 0 | 0 | once a year | 77121 | 969 | 16 | 0 |
| Heves | 341 | 13627 | 340 | 99.71 | 0 | 0 | once a year | 11717 | 711 | 1 | 0 |
| Jász-Nagykun-Szolnok | 1259 | 53639 | 1259 | 100 | 0 | 0 | once a year | 44070 | 4304 | 27 | 0 |
| Komárom-Esztergom | 240 | 14087 | 239 | 99.58 | 0 | 0 | once a year | 12618 | 1312 | 13 | 0 |

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

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nógrád | 300 | 14442 | 299 | 99.67 | 0 | 0 | once a year | 12573 | 1061 | 6 | 0 |
| Pest | 1279 | 50368 | 1279 | 100 | 0 | 0 | once a year | 44252 | 7853 | 42 | 0 |
| Somogy | 506 | 32403 | 502 | 99.21 | 1 | .2 | once a year | 43787 | 22111 | 236 | 4 |
| Szabolcs-Szatmár-Bereg | 983 | 39365 | 983 | 100 | 0 | 0 | once a year | 32785 | 1641 | 0 | 0 |
| Tolna | 410 | 22772 | 410 | 100 | 0 | 0 | once a year | 19156 | 3044 | 39 | 0 |
| Vas | 594 | 28878 | 594 | 100 | 0 | 0 | once a year | 26143 | 3059 | 0 | 0 |
| Veszprém | 410 | 39412 | 410 | 100 | 0 | 0 | once a year | 35111 | 4198 | 3 | 0 |
| Zala | 489 | 24248 | 489 | 100 | 0 | 0 | once a year | 18039 | 17024 | 1 | 0 |
| Total : [1)] | 16608 | 756721 | 16599 | 99.95 | 1 | .01 | N.A. | 668729 | 86452 | 564 | 4 |

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

Hungary is practically free of Brucellosis in bovine, ovine and caprine populations. For detailed information, please refer to the specific texts.

## 2.6.2 Brucellosis in humans

### A. Brucellosis in humans

#### Reporting system in place for the human cases

1.Reporting system in place for the human cases:
There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system makes online connection amid the three levels (municipal, county and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case and the infection is laboratory confirmed.

#### Diagnostic/analytical methods used

A serological test (Widal type tube agglutination) is used to confirm the brucellosis diagnose in Hungary. The test preparation is a TTC stained B. melitensis biovar. abortus HNCMB 93007 strain (internationally used diagnostic strain). Result is positive: titre 1:80; uncertain: titre 1:40; negative titre between 1:20 - 1:10. The acute illness is confirmed by the increasing titre of paired sera.

#### Notification system in place

The disease has been notifiable since 1950 in Hungary. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS. Hungary has also a laboratory based surveillance system, and the NPHMOS has representative dataset from most of the microbiological laboratories about the cases investigated by the laboratory

#### History of the disease and/or infection in the country

The disease has been notifiable since 1950 in Hungary. The annual number of reported cases ranged between 0 – 132 (incidence: 0 – 1.3/100 000 inhabitants/year, median 21 case/year – 0.2/100 000 inhabitant/year). In the 1950s and 1960s the number of registered cases was about 40 – 60/year. The most cases were registered between 1970 and 1975 (110 – 135 cases/year – incidence:1.1 – 1.3/100 000 inhabitant/year). Between 1976 and 1986 the number of registered cases decreased to 10 cases/year. 11 death cases occurred between 1950 and 1978. The case fatality rate ranged between 0 – 6.5% (median 0%).

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

There were five cases registered in 2000 - 2001 (2000: 1, 2001: 4 cases), no case was reported between 2002 and 2004 , in 2006 and 2008, and only 1-1 case was identified in 2005 and 2007 in Hungary. (The data of laboratory surveillance: 2000 – 4 800 tests, 23 positive; 2001 - 4 900 tests, 30 positive; between 2002 and 2003: about 3 900 tests/year, 6 – 9 /year positive.) No death was registered in this period. One case in 2001 was imported from abroad, in the four other cases between 2000-2001 the place and source of infection could not be identified. Cases registered in 2005 and 2007 were imported cases.

## 2.6.3 Brucella in animals

### A. Brucella abortus in bovine animals

#### Status as officially free of bovine brucellosis during the reporting year

##### The entire country free

The nationwide programme for eradication of bovine brucellosis in Hungary has successfully been completed by the 31st of August 1985. and the brucellosis free status of the country were declared to the OIE. Since then no evidence of the presence of infection in more than 0,2 % of our herds has been found.

#### Monitoring system

##### Sampling strategy

Together with the random blood sampling of the Hungarian cattle population, as well as case-by-case testing of animals moved from one herd to another, a system of checking abortions and irregular parturition has been maintained.

##### Frequency of the sampling

The whole cattle population in Hungary is subject to regular checks. Investigation of abortion and related cases is the key point of the system. Random, yearly serological testing is a complementary element. 10 % of cows in herds containing 50 or more animals shall be tested yearly, after calving. If necessary, the district veterinary officer is entitled to extend the testing to the whole herd.

Small herds are serologically tested every three years, linked to the EBL screening.

##### Type of specimen taken

Blood

##### Methods of sampling (description of sampling techniques)

Blood, milk and semen samples are taken at farm. In case of abortion, the aborted fetus, its chorions and a blood sample from the aborted cattle shall be sent to the laboratory.

##### Case definition

An animal is considered to be infected with B. abortus, when
- it shows clinical signs of the disease and pathological lesions can be detected on its internal organs or on its fetus or on the chorions; or
- bacteria of B. abortus could be isolated from its body fluids, its chorions or from the organs of the fetus, or
- it was suspected to be infected with B. abortus and the serological or bacteriological investigations were positive for that animal.

##### Diagnostic/analytical methods used

For the diagnosis of B. abortus the following diagnostic methods are used:

-pathology
-bacteriology
-immunology (CFT, ELISA, SAT)

#### Vaccination policy

Preventive vaccination against B. abortus is prohibited in the whole territory of Hungary.

#### Control program/mechanisms

### Recent actions taken to control the zoonoses

Continuous monitoring of bovine herds and investigation of aborted fetuses as well as pre-movement checks are continued.

## Measures in case of the positive findings or single cases

Infected male animals are
to be killed as soon as possible but not later than five days or,
to be castrated and placed under movement prohibition until it is slaughtered.
Female animals must be placed under breeding prohibition and movement control. They must be slaughtered within 15 days after the acute period or the recovery after the abortion.

## Notification system in place

Bovine brucellosis (B. abortus) is compulsorily notifiable by virtue of the Act on Food Chain Safety and its official control No XLVI of 2008 that is effective since 1 September 2008 and the Decree of the Minister of Agriculture No 12/2008 (II. 14.) on detailed rules of the protection regarding certain Brucella species. Notification, as well as investigation of cases of abortion is compulsory. In case of abortion or irregular parturition, the veterinarian in charge has to send a set of samples, listed in the decree mentioned above, for further laboratory examination. Until thorough clarification of the case, the animal is kept separated and, if necessary, repeatedly tested.

## Results of the investigation

During the last 24 years no infection of B. abortus has been found.

## B. Brucella melitensis in goats

### Status as officially free of caprine brucellosis during the reporting year

#### The entire country free

Ovine and caprine brucellosis (B. melitensis) has been a compulsorily notifiable animal disease in Hungary since 1982. Further to the existing rules laid down in the Zoo-Sanitary Code, the recent legal provisions give the power to the Ministry of Agriculture to introduce any additional measures, should an outbreak of a disease caused by B. melitensis occur in our country.

Neither a single clinical case, nor any positive serological or bacteriological test result for B. melitensis has ever occurred in Hungary.

### Monitoring system

#### Sampling strategy

Given, that B. melitensis is not an agent which can be spread under Hungaryâ€™s geographical and climatic conditions, furthermore no sign of the disease has ever been revealed, there was no scientifically based reason for an extended serological survey. In 2007, all caprine animals tested for B. melitensis were negative.

#### Frequency of the sampling

Approximately 5% of the caprine population is sampled and tested for B. melitensis.

#### Type of specimen taken

Blood

#### Methods of sampling (description of sampling techniques)

Blood samples are taken at farm.

#### Case definition

An animal is considered to be infected with B. melitensis, when
- it shows clinical signs of the disease and pathological lesions can be detected on its internal organs or on its fetus or on the chorions; or
- bacteria of B. melitensis could be isolated from its body fluids, its chorions or from the organs of the fetus, or
- it was suspected to be infected with B. melitensis and the serological or bacteriological investigations were positive for that animal.

#### Diagnostic/analytical methods used

For the diagnosis of B. melitensis in goats, the CFT is used.

### Vaccination policy

Vaccines for B. melitensis have never been registered in Hungary and the using of vaccines without the registration is banned in the country. Therefore no vaccination against this disease has ever been practised in the territory of Hungary.

### Control program/mechanisms

#### The control program/strategies in place

In 2007, Hungary was free of B. melitensis. However, monitoring of ovine and caprine populations is continuously done.

### Measures in case of the positive findings or single cases

In case of positive findings the positive animals have to be killed without delay. The herd containing the positive animal is subject to movement control. The further measures affecting the herd shall be decided

following screening of the animals and epidemiological investigation.

## Notification system in place

Ovine and caprine brucellosis (B. melitensis) are compulsorily notifiable by virtue of the Veterinary Act No CLXXVI. of 2005 (which replaced the Veterinary Act No XCI of 1995) and the Zoo-Sanitary Code implemented by the Decree No 41/1997. (V. 28.) FM of the Minister of Agriculture. These legal texts replaced the former regulations, namely Law Decree No 3. of 1981. and Decree No. 28/1981. (XII. 30.) MÃ‰M of the Minister of Agriculture and Alimentation, which have contained the same provisions for the diseases mentioned above. Therefore we can declare that ovine and caprine brucellosis is compulsory since 1 January 1982 on the basis of Decree No. 28/1981. (XII. 30.) MÃ‰M of the Minister of Agriculture and Alimentation.

## Results of the investigation

No evidence of infection with B. melitensis were found in 2007.

## C. Brucella melitensis in sheep

### Status as officially free of ovine brucellosis during the reporting year

#### The entire country free

Ovine and caprine brucellosis (B. melitensis) has been a compulsorily notifiable animal disease in Hungary since 1982. Further to the existing rules laid down in the Zoo-Sanitary Code, the recent legal provisions give the power to the Ministry of Agriculture to introduce any additional measures, should an outbreak of a disease caused by B. melitensis occur in our country.

Neither a single clinical case, nor any positive serological or bacteriological test result for B. melitensis has ever occurred in Hungary.

### Monitoring system

#### Sampling strategy

Given, that B. melitensis is not an agent which can be spread under Hungary's geographical and climatic conditions, furthermore no sign of the disease has ever been revealed, there was no scientifically based reason for an extended serological survey. However, between 1997 and 2000 a limited serological screening was carried out and all results were negative. Since 2001 an extended serological survey has been started to demonstrate the B. melitensis free status of Hungary. During 2001, 2002 and 2003 more than 10% of the ovine animals over six months of age were tested serologically for B. melitensis and all results were negative. In 2007, all ovine animals tested for B. melitensis were negative.

#### Frequency of the sampling

Approximately 10% of the ovine population were tested.

#### Type of specimen taken

Blood

#### Methods of sampling (description of sampling techniques)

Blood samples are taken at farm.

#### Case definition

An animal is considered to be infected with B. melitensis, when
- it shows clinical signs of the disease and pathological lesions can be detected on its internal organs or on its fetus or on the chorions; or
- bacteria of B. melitensis could be isolated from its body fluids, its chorions or from the organs of the fetus, or
- it was suspected to be infected with B. melitensis and the serological or bacteriological investigations were positive for that animal.

#### Diagnostic/analytical methods used

For the diagnostic serological tests of B. melitensis the CFT is used.

### Vaccination policy

Vaccines for B. melitensis have never been registered in Hungary and the using of vaccines without the registration is banned in the country. Therefore no vaccination against this disease has ever been practised in the territory of Hungary.

### Control program/mechanisms

#### The control program/strategies in place

In 2007, Hungary was free of B. melitensis. However, monitoring of ovine and caprine populations is continuously done.

### Measures in case of the positive findings or single cases

In case of positive findings the positive animals have to be killed without delay. The herd containing the positive animal is subject to movement control. The further measures affecting the herd shall be decided following screening of the animals and epidemiological investigation.

### Notification system in place

Ovine and caprine brucellosis (B. melitensis) are compulsorily notifiable by virtue of the Veterinary Act No CLXXVI. of 2005 (which replaced the Veterinary Act No XCI of 1995) and the Zoo-Sanitary Code implemented by the Decree No 41/1997. (V. 28.) FM of the Minister of Agriculture. These legal texts replaced the former regulations, namely Law Decree No 3. of 1981. and Decree No. 28/1981. (XII. 30.) MEM of the Minister of Agriculture and Alimentation, which have contained the same provisions for the diseases mentioned above. Therefore we can declare that ovine and caprine brucellosis is compulsory since 1 January 1982 on the basis of Decree No. 28/1981. (XII. 30.) MEM of the Minister of Agriculture and Alimentation.

### Results of the investigation

No evidence of infection with B. melitensis were found.

## 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 | NFCSO-VDD | | Official sampling | animal sample | | Animal | 49408 | 4 | 0 | 0 | 4 |
| Wild boars - wild - from hunting - Surveillance | NFCSO-VDD | | Official sampling | animal sample | | Animal | 119 | 8 | 0 | 0 | 8 |

| | Brucella spp., unspecified |
|---|---|
| Pigs | 0 |
| Wild boars - wild - from hunting - Surveillance | 0 |

# 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 microbio logically | Number of animals positive microbio logically | Number of suspended herds |
| Magyarország | 6612 | 865594 | 6612 | 100 | 0 | 0 | 2547 | 50089 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total : [1)] | 6612 | 865594 | 6612 | 100 | 0 | 0 | 2547 | 50089 | 0 | 0 | 0 | 0 | 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.

| Region | 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 |
| | | | | | | | | | | | | | | | | | | Sero logically | BST | | |
| Baranya | 401 | 28291 | 401 | 100 | 0 | 0 | 247 | 13196 | 0 | 0 | 0 | 0 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Borsod-Abaúj-Zemplén | 926 | 41956 | 924 | 99.78 | 0 | 0 | 813 | 24375 | 0 | 0 | 0 | 0 | 118 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Budapest | 35 | 1092 | 35 | 100 | 0 | 0 | 24 | 698 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bács-Kiskun | 2028 | 64109 | 2028 | 100 | 0 | 0 | 1584 | 32013 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Békés | 1461 | 62212 | 1461 | 100 | 0 | 0 | 1210 | 29573 | 0 | 0 | 0 | 0 | 157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Csongrád | 1388 | 39454 | 1388 | 100 | 0 | 0 | 1127 | 17164 | 0 | 0 | 0 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fejér | 493 | 44371 | 493 | 100 | 0 | 0 | 375 | 20794 | 0 | 16 | 3558 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Győr-Moson-Sopron | 868 | 50789 | 868 | 100 | 0 | 0 | 447 | 25112 | 0 | 6 | 1338 | 0 | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hajdú-Bihar | 2197 | 91206 | 2197 | 100 | 0 | 0 | 1837 | 51323 | 0 | 0 | 0 | 0 | 164 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Heves | 341 | 13627 | 340 | 99.71 | 0 | 0 | 295 | 9059 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jász-Nagykun-Szolnok | 1259 | 53639 | 1259 | 100 | 0 | 0 | 636 | 24289 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Komárom-Esztergom | 240 | 14087 | 239 | 99.58 | 0 | 0 | 202 | 7140 | 0 | 1 | 306 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nógrád | 300 | 14442 | 300 | 100 | 0 | 0 | 294 | 8781 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pest | 1279 | 50368 | 1279 | 100 | 0 | 0 | 1108 | 30337 | 0 | 7 | 3183 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Somogy | 506 | 32403 | 506 | 100 | 0 | 0 | 377 | 27400 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Szabolcs-Szatmár-Bereg | 983 | 39365 | 983 | 100 | 0 | 0 | 983 | 18128 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tolna | 410 | 22772 | 410 | 100 | 0 | 0 | 209 | 9743 | 0 | 4 | 629 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vas | 594 | 28878 | 594 | 100 | 0 | 0 | 481 | 17500 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Veszprém | 410 | 39412 | 410 | 100 | 0 | 0 | 410 | 21590 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Zala | 489 | 24248 | 489 | 100 | 0 | 0 | 415 | 9869 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total : [1)] | 16608 | 756721 | 16604 | 99.98 | 0 | 0 | 13074 | 398084 | 0 | 34 | 9014 | 0 | 1073 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Comments:

[1)] N.A.

# 2.7 YERSINIOSIS

## 2.7.1 General evaluation of the national situation

### A. Yersinia enterocolitica general evaluation

Additional information

diagnostic methods: bacteriological examination and PCR

## 2.7.2 Yersiniosis in humans

### A. Yersinosis in humans

#### Reporting system in place for the human cases

There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system makes online connection between the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case when the Yersinia infection is laboratory confirmed.

#### Diagnostic/analytical methods used

Yersinia isolates are obtained by culturing the faeces samples of the patients on selective-differentiating media, which is followed by biochemical tests and serotyping. Earlier the sera of the patient was tested by Widal-typed method, beside this test the ELISA method has been also in use since 2003.

#### Notification system in place

Human cases have been notifiable since 1998. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS. Hungary has also a laboratory based surveillance system, and the NPHMOS has representative dataset from most of the microbiological laboratories about the laboratory investigated cases (since 2003 antibiotic resistances has also been reported from 20 county institutes and 12 laboratories from universities or hospitals).

The illness is reported firstly as enteritis infectiosa syndrome on the basis of the symptoms. Having the results of the laboratory tests this syndrome-based diagnose is modified to etiology-based diagnose. There is a part of the cases which are reported only subsequently when the result of the laboratory test is available.

#### History of the disease and/or infection in the country

The human cases have been notifiable since 1998. The number of cases varied between 68 – 176/year (incidence: 0,7 – 1,7/100 000 inhabitant/year, median 125 cases/year - 1,3/100 000 inhabitant/year). There was no death registered. A few number of family outbreaks were investigated, community or institutional outbreaks did not occur. Laboratory or epidemiological evidences are not available to assess the source of infection.

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

Yersiniosis do not influence significantly the epidemiological situation of the human acut gastroenteritis caused by zoonotic agents. Between 2000 -2004 the dominant serotype is Y.enterocolitica O3. It is confirmed also by the results of culture and serologic methods.

# 2.8 TRICHINELLOSIS

## 2.8.1 General evaluation of the national situation

### A. Trichinellosis general evaluation

#### History of the disease and/or infection in the country

In Hungary, mandatory testing for Trichinella spp. is in place since 1960. Slaughtered susceptible animals intended to be placed on the market are subject to mandatory testing for Trichinella spp.

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

Trichinellosis was a significant zoonotic disease in Hungary in the 1950s and 1960s. Due to the introduction of control strategies, the average annual incidence of trichinellosis decreased to 0-0.7 cases per 100,000 for the early 1990s. In the past 15 years, the annual incidence dropped to 0-0.07 cases per 100,000, and no mortality in men caused by the parasite was observed in the same period. The decrease of incidence observed in men is similar to that of prevalence seen in swine at slaughterhouses. Nevertheless, some increasing trends of incidence might be observed in both men and swine in the past years. Trichinella spiralis still persists in the southern and eastern border region of the country. Sporadic Trichinella infections (in average few cases per year) were also detected in wild boars and in less than 1.8% of red foxes. In wild boars, both T. spiralis and Trichinella britovi were detected. In foxes, T. britovi is the dominant species; nevertheless, T. spiralis and Trichinella pseudospiralis were also reported from this species.

#### Recent actions taken to control the zoonoses

Mandatory testing during meat inspection in all susceptible cases (swine, horse, nutria, wild boar).

## 2.8.2 Trichinellosis in humans

### A. Trichinellosis in humans

#### Reporting system in place for the human cases

There are about 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system provides online connection between the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case when the Trichinella infection is laboratory confirmed.
Probable case: a clinically compatible case that is not confirmed by laboratory investigation, but it has an epidemiological link to a confirmed trichinellosis outbreak.

#### Diagnostic/analytical methods used

Microprecipitic test on live larvae as diagnostic method has been used since 1983 in the Helmithozoonotic Reference Laboratory of the National Centre of Epidemiology. Parallel with this test an ELISA test (NOVATEC TRICHINELLA SPIRALIS IgG-ELISA, NovaTec Immundiagnostica, Germany) was introduced in 2002. The positive results of the previously mentioned tests have been confirmed by WB (TRICHINELLA WESTERN BLOT IgG, Ldbio Diagnostics, France) since 2004.

#### Notification system in place

Human cases have been notifiable since 1960. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS.

#### History of the disease and/or infection in the country

Human cases have been notifiable since 1960. The number of cases varied between 0 – 121 (incidence 0 – 1,2/100 000 inhabitants/year – the highest one was registered in 1964). Between 1960 and 2004 the 85% of cases had epidemiological link to an outbreak. Only one death case has been registered during the Hungarian history of trichinellosis.
Between 1960 and 1975 the swine were the source of infection in 18 outbreaks (83% of all outbreaks) and wild boar in 17% of outbreaks. The significance of swine as the source of infection decreased between 1976 and 1995: 3 outbreaks (23%) were caused by swine, and 10 outbreaks (77%) were associated with consumption of wild boar meat. (Indigenous swine were the source of two outbreaks in 1978 and 1990, and swine imported from Romania and processed at home were the source of one outbreak in 1995).

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

In the last ten years the number of reported cases ranged between 0 – 7/year (incidence 0 – 0,07/100 000 inhabitants/year), there was no death in this period. All cases linked to family outbreaks and most of sporadic cases were imported from the neighbouring counties. The indigenous cases were linked to the

consumption of indigenous wild boar meat. All human cases were caused by T.spiralis.

## 2.8.3 Trichinella in animals

### A. Trichinella in pigs

#### Monitoring system

##### Sampling strategy

Trichinella sampling and testing is mandatory for all pigs intended to be placed on the market.

##### Frequency of the sampling

Every slaughtered animal is sampled

##### Type of specimen taken

Diaphragm muscle

##### Methods of sampling (description of sampling techniques)

Methods specified in Regulation 2075/2005/EC

##### Case definition

Animal with one or more Trichinella larva in the official examination.

##### Diagnostic/analytical methods used

Artificial digestion method of collective samples

#### Vaccination policy

None.

#### Control program/mechanisms

##### The control program/strategies in place

See above.

#### Measures in case of the positive findings or single cases

Positive cases are considered not to be eligible for human consumption.

#### Results of the investigation

All slaughtered swine were investigated in 2010, there was no positive finding for Trichinella.

## B. Trichinella in horses

### Monitoring system

#### Sampling strategy

Trichinella testing is mandatory, all animal is sampled.

#### Frequency of the sampling

Every slaughtered animal is sampled

#### Type of specimen taken

Diaphragm muscle

#### Methods of sampling (description of sampling techniques)

2075/2005/EC regulation

#### Case definition

Animal with one or more Trichinella larva in the official examination

#### Diagnostic/analytical methods used

Artificial digestion method of collective samples

### Vaccination policy

None.

### Measures in case of the positive findings or single cases

Positive cases are considered not to be eligible for human consumption.

### Results of the investigation

All the 36 slaughtered horses (as all other susceptible animals) were investigated in 2008. There was no positive finding for trichinella.

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

Trichinella infection has never been detected in horses in Hungary.

## 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 - fattening pigs | VDD | | Official sampling | animal sample > organ/tissue | | Animal | 4158314 | 0 | 0 | 0 | 0 |
| Pigs - breeding animals | VDD | | Official sampling | animal sample > organ/tissue | | Animal | 171516 | 0 | 0 | 0 | 0 |
| Solipeds, domestic - horses - at slaughterhouse - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | 486 | 0 | 0 | 0 | 0 |
| Wild boars - wild - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | 54039 | 8 | 3 | 0 | 5 |

# 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

Echinococcus granulosus

Cystic echinococcosis caused by E. granulosus was a significant zoonosis in Hungary in the 1960s and 1970s. Due to the introduction of integrated control strategies, the average annual incidence of human cystic echinococcosis decreased to 0.08-0.2 case per 100,000 population for the early 1990s. The decrease of incidence observed in man is almost parallel with that of overall prevalence seen in swine, sheep and cattle at slaughterhouses.

Echinococcus multilocularis was not detected in man or animals in Hungary until 2002.

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

Echinococcus granulosus

In the past decade, the annual incidence was 0.05-0.1 case per 100,000 human population. The prevalence was under 0.2% in sheep, cattle and swine at slaughterhouses. Genotype identification of slaughterhouse isolates was intitiated in 2010.

Echinococcus multilocularis

E. multilocularis was first detected in red foxes (Vulpes vulpes) in Hungary in the northern border area in 2002. Between 2002 and 2004, the parasite was described in 7 northern counties with low overall prevalence (8.7%) in foxes. In the study carried out in 2009, E. multilocularis was detected in foxes of 16 out of the 19 Hungarian counties and in the suburban areas of the capital, Budapest. The prevalence of infection was significantly higher in the north-western half (16.2%) than in the south-eastern half (4.2%) of the country. The multi-locus microsatellite analysis of the isolates indicate that Hungary should be considered as a peripheral area of a single European focus, where the dispersal movement of foxes resulted in the spreading of E. multilocularis within a time period short enough to avoid a substantial genetic drift.

## 2.9.2 Echinococcosis in humans

### A. Echinococcus spp. in humans

#### Reporting system in place for the human cases

There are about 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system provides online connection amid the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case when the Echinococcus infection is laboratory confirmed

#### Diagnostic/analytical methods used

The punctatum originated from cyst or sample from extracted cyst is investigated by microscopic methods. IHA (CELLOGNOST ECHINOCOCCOSIS for IHA, Dade Behring, Germany) and ELISA (HYDATIDOSIS ELISA IgG, Vircell, Spain) screening methods have been used parallel since 2002 in the Helminthozoonoses Reference Laboratory in 'Johan Béla' National Centre for Epidemiology. The positive results are confirmed by Western blot method (WB) (ECHINOCOCCUS WESTERN BLOT IgG, Ldbio Diagnostics, France).

#### Notification system in place

The disease has been notifiable since 1950 in Hungary. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The specialist of the institute records data immediately in the electronic system of the NPHMOS.

#### History of the disease and/or infection in the country

Complement-fixed test has been used since 1934 in Hungary to identify the presence of anti-Echinococcus antibody titre. The human cases have been notifiable since 1960. The „home made" indirect hemagglutination (IHA) was introduced in 1985, and the „home made" ELISA method in 1987. The number of registered cases ranged between 0 – 18 /year (more then 10 cases registered in the 1980s only), the incidence varied between 0 – 0.2 cases/100 000 inhabitants/year. There were 0 – 4 death cases reported yearly (the median of case fatality rate: 20%). Since 1991 there has not been any death case with this diagnosis.

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

The number of annually reported cases varied between 5 and 13 in the last five years, there was no death registered. All the reported cases were caused by E. granulosus confirmed in the reference laboratory by Western immunoblot method. In Hungary, autochtonous human case has not been identified as E. multilocularis infection.

## 2.9.3 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cattle (bovine animals) - at slaughterhouse - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | | 98600 | 8 | 8 | 0 |
| Sheep - at slaughterhouse - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | | 33484 | 2 | 2 | 0 |
| Goats - at slaughterhouse - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | | 69 | 0 | 0 | 0 |
| Pigs - at slaughterhouse - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | | 4329830 | 9 | 9 | 0 |
| Solipeds, domestic - horses - at slaughterhouse - Surveillance | VDD | | Official sampling | animal sample > organ/tissue | | Animal | | 486 | 0 | 0 | 0 |

| | Echinococcus spp., unspecified |
|---|---|
| Cattle (bovine animals) - at slaughterhouse - Surveillance | 0 |
| Sheep - at slaughterhouse - Surveillance | 0 |
| Goats - at slaughterhouse - Surveillance | 0 |
| Pigs - at slaughterhouse - Surveillance | 0 |

## Table Echinococcus in animals

| | Echinococcus spp., unspecified |
|---|---|
| Solipeds, domestic - horses - at slaughterhouse - Surveillance | 0 |

# 2.10 TOXOPLASMOSIS

## 2.10.1 General evaluation of the national situation

## 2.10.2 Toxoplasmosis in humans

### A. Toxoplasmosis in humans

#### Reporting system in place for the human cases

There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system makes online connection amid the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: a clinically compatible case when the Toxoplasma infection is laboratory confirmed.

#### Diagnostic/analytical methods used

The anti-Toxoplasma ELISA IgG and IgM methods (TOXONOSTIKA IgG, TOXONOSTIKA IgM, Organon Teknika, Hollandia) are used in the everyday diagnostic work since 1986 in Hungary. Today the specific anti-Toxoplasma IgG (PLATELIA® Toxo IgG, Bio-Rad, France), IgM (PLATELIA® Toxo IgM, Bio-Rad, France), IgA ELISA-t (PLATELIA® Toxo IgA, Bio-Rad, France), IgG avidity identification (VIDAS, BioMérieux S/A, France) is used to test for the anti-Toxoplasma serologic profile.
The PCR method (classical: PRODECT TOXO B1, Bioanalisi Centro Sud s.n.c., Italy; and the light cycler method: LIGHTCYCLER FASTSTART DNA MASTERPLUS HYBRIDIZATION PROBES, Roche (Hungary) Ltd.), further the IgG/IgM Western blot test comparing the immunprofile of mother and child (TOXOPLASMA WESTERN BLOT IgG/IgM, Ldbio Diagnostics, France) are applied. For quality assurance purposes the Toxoplasma Reference Laboratory participate twice in a year in proficiency test, and the Reference Laboratory also organise proficiency tests for laboratory of NPHMOS.

#### History of the disease and/or infection in the country

Anti-Toxoplasma antibody assay (Sabin-Feldman dye test) has been in use since 1958 in Hungary. The human cases have been notifiable since 1967. The „home made" complement-fixed assay and indirect hemagglutination methods (IHA) were introduced in 1969.
The annual number of registered cases ranged between 0 – 333 (median: 136 case/year), so the incidence varied 0 – 3.1/100 000 inhabitants/year (median 1.3/100 000/year). Between 1970 and 1985 the highest number of death cases reported was 1 – 5 deaths/year (max. case fatality rate 10%). Only two death cases occurred between 1985 and 2004.

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

The number of annually registered cases ranged between 292 - 107 /year (incidence 2,9 – 1,1/100 000 inhabitant/year – median 1,8/100 000 inhabitant/year), the trend of the incidence is decreasing. There was no death registered in this period. It was a seroprevalence survey performed by Helmithozoonotic Reference Laboratory of National Centre for Epidemiology in 2001. 6 985 persons without sings or symptoms were tested by serologic method for the presence of Toxoplasma antibodies. The proportion of positive persons ranged between 22,8% - 41,3% by county. The proportion of positive persons was 75% among pupils aged more than 60 years.

# 2.11 RABIES

## 2.11.1 General evaluation of the national situation

### A. Rabies general evaluation

#### History of the disease and/or infection in the country

At the beginning of the twentieth century, rabies predominantly occurred in Hungary in its urban form and was transmitted to humans mainly by dogs. Therefore, in the 1930's strict animal health regulations were introduced, the main elements of these remained unchanged till recent days. These measures included nationwide mandatory regular vaccination of dogs over three months of age.
During World War II, epidemiological actions were hindered, which resulted in a re-emergence of urban rabies in 1946-47.
The re-introduction of regulatory measures as well as mandatory preventive vaccination, urban rabies seems to be sporadic in Hungary. The register of the annual vaccination of dogs show that around 1.5 Million of dogs are vaccinated every year.
In recent days, together with the disappearing of rabies from dogs, rabies in cats is considered to be of high importance. Preventive vaccination of cats against rabies is recommended but not mandatory and special epidemiological aspects are to be considered. (The movement of animals is hard to control and there is a relative large number of semi-wild living animals of this species.)
Sylvatic rabies reached the North-Eastern part of Hungary in the year 1954. Until 1966 cases remained sporadic (a total of 97 foxes, 16 badgers and wild cats confirmed positive for rabies). In the same timeframe, 35 dogs and 96 domestic cats were confirmed positive for the disease.
In 1967, sylvatic rabies crossed the Danube and by 1971 the whole country was infected. At this time, intensive attempts were executed in order to lower the number of foxes, with minimum results. These actions were suspended in 1987.
Between 1988 and 1996 around 1000 rabies cases in foxes were diagnosed per year. Oral vaccination of foxes was introduced in Hungary in 1997. From that year, the rabies cases in foxes decreased year by year, as the vaccination zone was extended from the western part of the country to the whole territory of Hungary. From 1988, rabies cases in foxes decreased by 90%.

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

It is of high importance that the countrywide oral vaccination of foxes is continued. This practice should be extended to neighbouring countries which do not apply such measures.

#### Recent actions taken to control the zoonoses

In order to eradicate rabies from Hungary and to protect public health, regulatory measures on domestic animals are in place. Regular preventive vaccination of dogs is mandatory from 3 months of age.
Unattended dogs are removed from public areas and are vaccinated against the disease.
Oral vaccination of foxes is done on the whole territory of Hungary.

## 2.11.2 Rabies in humans

### A. Rabies in humans

#### Reporting system in place for the human cases

There are around 80 communicable diseases notifiable in Hungary based on legal background. The physician (in primary health care, specialist care, inpatient medical institution or pathology) who first diagnoses a case of a notifiable communicable disease (even the suspicion of the disease!) immediately reports data of case to the first level of the epidemiological network (municipal institute) of National Public Health and Medical Officer's Service (NPHMOS). The suspicion of the human lyssa is obligatory to be reported immediately also by telephone. Data must be reported both at the beginning and at end of the illness (recovery/death, result of laboratory test). The NPHMOS has a nationwide electronic system for registering and analysing data of communicable diseases in a combined national database, so the system provides online connection between the three levels (municipal, regional and national level – National Centre of Epidemiology - NCE) of the organization. The NCE prepares reports regularly (weekly, monthly, yearly) to the Chief Medical Officer, the MoH and the Hungarian Central Statistical Office.

#### Case definition

Confirmed case: Clinical picture compatible with human lyssa and the antigen/genetic material/specific antibodies are identified or viruses have been isolated from appropriate sample.
Suspected case: Clinical picture compatible with human lyssa and the patient has anamnestic data about exposure by a rabies suspected animal

#### Diagnostic/analytical methods used

The identification of the virus in vivo from cornea imprint of the patient by immunofluorescence method, or to determine the specific antibody titre of the blood or liquor by immunofluorescence method during the second week of the illness. Post mortem: detection of the Negri-body in the brain tissue, or the antigen by immunofluorescence method, or identification of the viral genetic material by PCR, or isolation of the virus in mouse.

#### Notification system in place

Human cases have been notifiable since 1950 in Hungary, injury suspected to lyssa-infection has been notifiable since 1964. The physician reports data of case on a "case report form" by mail to the municipal institute of NPHMOS. The suspicion of the human lyssa is obligatory to be reported immediately also by telephone. The specialist of the institute records data immediately in the electronic system of the NPHMOS.

#### History of the disease and/or infection in the country

Human cases have been notifiable since 1950 in Hungary, injury suspect to human lyssa-infection has been notifiable since 1964. 8 human lyssa cases have been reported since 1950 in Hungary. Seven cases were indigenous; only one case was presumably imported from Africa. Cat was the source of infection in four of the cases, fox in two cases, and one case was caused by a dog. The origin of the imported case remained unknown. The vaccine based on brain-extract was used for post exposure prophylaxis in Hungary until 1989. Since then the cell cultured vaccine has been used. The change in the vaccine used and not in the epidemiological situation of lyssa is reflected in the statistics of vaccinated persons (1985 – 1988.: 2000 – 3000 person vaccinated/year, 1994 – 1998. 8000 – 10 500/year, 1999 - 2003.: 9 500 – 11 000/year).

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

No human lyssa case has been registered since 1994 in Hungary.

## 2.11.3 Lyssavirus (rabies) in animals

### 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cattle (bovine animals) | NFCSO-VDD | Unspecified | Official sampling | animal sample | | Animal | Magyarország | 28 | 0 | | |
| Sheep | NFCSO-VDD | Unspecified | Official sampling | animal sample | | Animal | Magyarország | 18 | 0 | | |
| Dogs - stray dogs | NFCSO-VDD | Unspecified | Official sampling | animal sample | | Animal | Magyarország | 315 | 0 | | |
| Cats - stray cats | NFCSO-VDD | Unspecified | Official sampling | animal sample | | Animal | Magyarország | 366 | 0 | | |
| Bats - wild - Monitoring | | Unspecified | Not applicable | animal sample | | Animal | Budapest | 18 | 2 | | 2 |
| Foxes - wild - Monitoring | | Objective sampling | Official sampling | animal sample | | Animal | Magyarország | 4575 | 0 | | |

| | EBLV-2 | Lyssavirus (unspecified virus) |
|---|---|---|
| Cattle (bovine animals) | | |
| Sheep | | |
| Dogs - stray dogs | | |
| Cats - stray cats | | |
| Bats - wild - Monitoring | | |
| Foxes - wild - Monitoring | | |

## Table Rabies in animals

Footnote:

The bats were tested for Rabies in the frame passive surveillance.

## 2.12 STAPHYLOCOCCUS INFECTION

### 2.12.1 General evaluation of the national situation

## 2.13 Q-FEVER

### 2.13.1 General evaluation of the national situation

A. Coxiella burnetii (Q-fever) general evaluation

Additional information

Diagnostic methods : Complement fixation test (CFT) and immunohistochemical test

# 3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

# 3.1 ESCHERICHIA COLI, NON-PATHOGENIC

## 3.1.1 General evaluation of the national situation

## 3.1.2 Antimicrobial resistance in Escherichia coli, non-pathogenic

Table Antimicrobial susceptibility testing of E. coli in Meat from bovine animals

| Escherichia coli, non-pathogenic | E.coli, non-pathogenic, unspecified | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 9 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 9 | 0 |
| Aminoglycosides - Streptomycin | 9 | 3 |
| Amphenicols - Chloramphenicol | 9 | 0 |
| Fluoroquinolones - Ciprofloxacin | 9 | 0 |
| Fluoroquinolones - Enrofloxacin | 0 | |
| Penicillins - Ampicillin | 9 | 1 |
| Quinolones - Nalidixic acid | 9 | 0 |
| Tetracyclines - Tetracycline | 9 | 2 |
| Trimethoprim | 9 | 0 |
| Fully sensitive | 9 | 6 |
| Resistant to 1 antimicrobial | 9 | 1 |
| Resistant to 2 antimicrobials | 9 | 1 |
| Resistant to 3 antimicrobials | 9 | 0 |

## Table Antimicrobial susceptibility testing of E. coli in Meat from bovine animals

| Escherichia coli, non-pathogenic | E.coli, non-pathogenic, unspecified | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 9 | |
| Antimicrobials: | N | n |
| Resistant to 4 antimicrobials | 9 | 1 |
| Resistant to >4 antimicrobials | 9 | 0 |
| Cephalosporins - Cefotaxime | 9 | 0 |
| Sulfonamides - Sulfamethoxazol | 9 | 1 |

## Table Antimicrobial susceptibility testing of E. coli in Meat from pig

| Escherichia coli, non-pathogenic | E.coli, non-pathogenic, unspecified | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 30 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 30 | 0 |
| Aminoglycosides - Streptomycin | 30 | 11 |
| Amphenicols - Chloramphenicol | 30 | 3 |
| Fluoroquinolones - Ciprofloxacin | 30 | 5 |
| Fluoroquinolones - Enrofloxacin | 0 | |
| Penicillins - Ampicillin | 30 | 13 |
| Quinolones - Nalidixic acid | 30 | 4 |
| Tetracyclines - Tetracycline | 30 | 9 |
| Trimethoprim | 30 | 3 |
| Fully sensitive | 30 | 12 |
| Resistant to 1 antimicrobial | 30 | 4 |
| Resistant to 2 antimicrobials | 30 | 3 |
| Resistant to 3 antimicrobials | 30 | 1 |
| Resistant to 4 antimicrobials | 30 | 7 |
| Resistant to >4 antimicrobials | 30 | 3 |
| Cephalosporins - Cefotaxime | 30 | 0 |
| Sulfonamides - Sulfamethoxazol | 30 | 8 |

Table Antimicrobial susceptibility testing of E. coli in Meat from pig

# Table Antimicrobial susceptibility testing of E. coli in Meat from broilers (Gallus gallus)

| Escherichia coli, non-pathogenic | E.coli, non-pathogenic, unspecified | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 57 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 57 | 1 |
| Aminoglycosides - Streptomycin | 57 | 13 |
| Amphenicols - Chloramphenicol | 57 | 7 |
| Fluoroquinolones - Ciprofloxacin | 57 | 33 |
| Fluoroquinolones - Enrofloxacin | 0 | |
| Penicillins - Ampicillin | 57 | 24 |
| Quinolones - Nalidixic acid | 57 | 38 |
| Tetracyclines - Tetracycline | 57 | 25 |
| Trimethoprim | 57 | 10 |
| Fully sensitive | 57 | 10 |
| Resistant to 1 antimicrobial | 57 | 5 |
| Resistant to 2 antimicrobials | 57 | 11 |
| Resistant to 3 antimicrobials | 57 | 10 |
| Resistant to 4 antimicrobials | 57 | 8 |
| Resistant to >4 antimicrobials | 57 | 13 |
| Cephalosporins - Cefotaxime | 57 | 2 |
| Sulfonamides - Sulfamethoxazol | 57 | 15 |

Table Antimicrobial susceptibility testing of E. coli in Meat from broilers (Gallus gallus)

## Table Antimicrobial susceptibility testing of E. coli in Meat from other poultry species

| Escherichia coli, non-pathogenic | E.coli, non-pathogenic, unspecified | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 34 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 34 | 0 |
| Aminoglycosides - Streptomycin | 34 | 9 |
| Amphenicols - Chloramphenicol | 34 | 8 |
| Fluoroquinolones - Ciprofloxacin | 34 | 19 |
| Fluoroquinolones - Enrofloxacin | 0 | |
| Penicillins - Ampicillin | 34 | 20 |
| Quinolones - Nalidixic acid | 34 | 21 |
| Tetracyclines - Tetracycline | 34 | 20 |
| Trimethoprim | 34 | 5 |
| Fully sensitive | 34 | 6 |
| Resistant to 1 antimicrobial | 34 | 3 |
| Resistant to 2 antimicrobials | 34 | 5 |
| Resistant to 3 antimicrobials | 34 | 4 |
| Resistant to 4 antimicrobials | 34 | 5 |
| Resistant to >4 antimicrobials | 34 | 11 |
| Cephalosporins - Cefotaxime | 34 | 0 |
| Sulfonamides - Sulfamethoxazol | 34 | 11 |

Table Antimicrobial susceptibility testing of E. coli in Meat from other poultry species

# Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E.coli, non-pathogenic, unspecified | Meat from bovine animals - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 15 | 9 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 3 | 1 | 0 | | | |
| Aminoglycosides - Streptomycin | 13 | 9 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 1 | 0 | 1 | | | | | | | | | |
| Amphenicols - Chloramphenicol | 15 | 8 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 1 | 1 |
| Cephalosporins - Cefotaxime | 28 | 10 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fluoroquinolones - Ciprofloxacin | 30 | 9 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Penicillins - Ampicillin | 16 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | |
| Quinolones - Nalidixic acid | 18 | 9 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 4 | 0 | 1 | 1 |
| Tetracyclines - Tetracycline | 13 | 9 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 3 | 1 | | |
| Trimethoprim | 16 | 9 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 2 |
| Sulfonamides - Sulfamethoxazol | 15 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 0 |

| E.coli, non-pathogenic, unspecified | Meat from bovine animals - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 9 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | 0 | 0 | 0 | | | | |

## Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E.coli, non-pathogenic, unspecified | Meat from bovine animals - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 9 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Cephalosporins - Cefotaxime | 0 | 0 | 0 | 0 | 1 | 1 | 8 |
| Fluoroquinolones - Ciprofloxacin | 0 | 0 | 0 | 0 | 2 | 0 | 7 |
| Penicillins - Ampicillin | | | | | | | |
| Quinolones - Nalidixic acid | | | | | | | |
| Tetracyclines - Tetracycline | | | | | | | |
| Trimethoprim | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Sulfonamides - Sulfamethoxazol | | | | | | | |

# Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E.coli, non-pathogenic, unspecified | Meat from pig - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 30 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 15 | 30 | 0 | | | | | | | | | | 0 | 0 | 0 | 1 | 5 | 4 | 3 | 9 | 5 | 2 | 1 | 0 | | |
| Aminoglycosides - Streptomycin | 13 | 30 | 0 | 2 | 4 | 1 | 0 | 1 | 1 | 0 | 2 | 3 | 5 | 4 | 2 | 2 | 2 | 1 | 0 | | | | | | | |
| Amphenicols - Chloramphenicol | 15 | 30 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 5 | 6 | 4 | 3 | 1 |
| Cephalosporins - Cefotaxime | 28 | 30 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fluoroquinolones - Ciprofloxacin | 30 | 30 | 0 | | | | | | | | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Penicillins - Ampicillin | 16 | 30 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 4 | 2 | 1 | 1 | 1 | 2 | 0 |
| Quinolones - Nalidixic acid | 18 | 30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 7 | 6 | 4 | 2 | 0 | 0 |
| Tetracyclines - Tetracycline | 13 | 30 | 0 | 5 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 6 | 5 | 1 | 0 | |
| Trimethoprim | 16 | 30 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 2 | 1 | 9 | 3 | 4 |
| Sulfonamides - Sulfamethoxazol | 15 | 29 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 3 | 0 | 2 | 3 | 2 | 3 |

| E.coli, non-pathogenic, unspecified | Meat from pig - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 30 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | 1 | 0 | 1 | 0 | | | |

## Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E.coli, non-pathogenic, unspecified | Meat from pig - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 30 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Cephalosporins - Cefotaxime | 0 | 0 | 2 | 6 | 9 | 1 | 12 |
| Fluoroquinolones - Ciprofloxacin | 1 | 1 | 0 | 1 | 2 | 4 | 18 |
| Penicillins - Ampicillin | | | | | | | |
| Quinolones - Nalidixic acid | 0 | 0 | 0 | 1 | 0 | | |
| Tetracyclines - Tetracycline | | | | | | | |
| Trimethoprim | 0 | 3 | 0 | 0 | 1 | 0 | |
| Sulfonamides - Sulfamethoxazol | 1 | 1 | 1 | 0 | | | |

# Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E.coli, non-pathogenic, unspecified | Meat from turkey - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 15 | 34 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 1 | 8 | 7 | 9 | 3 | 3 | 1 | 2 | 0 | |
| Aminoglycosides - Streptomycin | 13 | 34 | 0 | 6 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 5 | 6 | 6 | 5 | 1 | 1 | 1 | 0 | | | | | | |
| Amphenicols - Chloramphenicol | 15 | 34 | 0 | 5 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 2 | 4 | 1 | 4 | 2 |
| Cephalosporins - Cefotaxime | 28 | 34 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fluoroquinolones - Ciprofloxacin | 30 | 34 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 1 |
| Penicillins - Ampicillin | 16 | 34 | 0 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 4 | 2 | 1 | 3 | 0 |
| Quinolones - Nalidixic acid | 18 | 34 | 0 | 14 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 2 | 5 | 1 | 0 | |
| Tetracyclines - Tetracycline | 13 | 34 | 0 | 9 | 2 | 6 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 3 | 1 | 1 | 1 |
| Trimethoprim | 16 | 34 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 6 | 6 |
| Sulfonamides - Sulfamethoxazol | 15 | 34 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 8 | 2 | 4 | 0 |

| E.coli, non-pathogenic, unspecified | Meat from turkey - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 34 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | 3 | 3 | 1 | 1 | 0 | | |

## Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E.coli, non-pathogenic, unspecified | Meat from turkey - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 34 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Cephalosporins - Cefotaxime | 0 | 0 | 2 | 3 | 5 | 2 | 22 |
| Fluoroquinolones - Ciprofloxacin | 4 | 3 | 1 | 0 | 2 | 0 | 12 |
| Penicillins - Ampicillin | | | | | | | |
| Quinolones - Nalidixic acid | | | | | | | |
| Tetracyclines - Tetracycline | 2 | 0 | | | | | |
| Trimethoprim | 2 | 3 | 2 | 2 | 1 | 0 | |
| Sulfonamides - Sulfamethoxazol | 2 | 1 | 0 | 1 | 0 | | |

# Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E.coli, non-pathogenic, unspecified | Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 57 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 15 | 57 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 11 | 15 | 16 | 4 | 1 | 0 | | |
| Aminoglycosides - Streptomycin | 13 | 57 | 0 | 4 | 2 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 6 | 9 | 16 | 7 | 5 | 1 | 0 | | | | | | | |
| Amphenicols - Chloramphenicol | 15 | 57 | 0 | 3 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 4 | 8 | 10 | 11 | 6 |
| Cephalosporins - Cefotaxime | 28 | 57 | 0 | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Fluoroquinolones - Ciprofloxacin | 30 | 57 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 6 | 4 | 2 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 2 | 1 | 2 |
| Penicillins - Ampicillin | 16 | 57 | 0 | 23 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 8 | 6 | 2 | 2 |
| Quinolones - Nalidixic acid | 18 | 57 | 0 | 34 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 2 | 4 | 6 | 1 | 1 | 0 |
| Tetracyclines - Tetracycline | 13 | 57 | 0 | 7 | 6 | 3 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 6 | 4 | 11 | 6 |
| Trimethoprim | 16 | 57 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 12 | 5 |
| Sulfonamides - Sulfamethoxazol | 15 | 57 | 0 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 4 | 8 | 11 | 2 | 6 | 2 |

| E.coli, non-pathogenic, unspecified | Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 57 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | 3 | 1 | 1 | 1 | 0 | | |

## Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E.coli, non-pathogenic, unspecified | Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 57 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Cephalosporins - Cefotaxime | 0 | 0 | 1 | 1 | 6 | 7 | 40 |
| Fluoroquinolones - Ciprofloxacin | 3 | 2 | 2 | 3 | 3 | 0 | 16 |
| Penicillins - Ampicillin | 1 | 0 | | | | | |
| Quinolones - Nalidixic acid | | | | | | | |
| Tetracyclines - Tetracycline | 2 | 1 | 0 | | | | |
| Trimethoprim | 4 | 5 | 6 | 1 | 2 | 0 | |
| Sulfonamides - Sulfamethoxazol | 3 | 0 | | | | | |

## Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Animals

| 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 | |
| Fluoroquinolones | Ciprofloxacin | | 0.03 | |
| Penicillins | Ampicillin | | 8 | |
| Quinolones | Nalidixic acid | | 16 | |
| Sulfonamides | Sulfonamides | | 256 | |
| Tetracyclines | Tetracycline | | 8 | |
| Trimethoprim | Trimethoprim | | 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 | |
| Fluoroquinolones | Ciprofloxacin | | 0.03 | |
| Penicillins | Ampicillin | | 8 | |
| Quinolones | Nalidixic acid | | 16 | |
| Sulfonamides | Sulfonamides | | 256 | |
| Tetracyclines | Tetracycline | | 8 | |
| Trimethoprim | Trimethoprim | | 2 | |

## Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Food

| Test Method Used |
|---|
| Disc diffusion |

| Standard methods used for testing |
|---|
| NCCLS/CLSI |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | EFSA | 2 | 15 |
| | Streptomycin | EFSA | 16 | 13 |
| Amphenicols | Chloramphenicol | EFSA | 16 | 15 |
| Cephalosporins | Cefotaxime | EFSA | 0.25 | 28 |
| Fluoroquinolones | Ciprofloxacin | EFSA | 0.03 | 30 |
| Penicillins | Ampicillin | EFSA | 8 | 16 |
| Quinolones | Nalidixic acid | EFSA | 16 | 18 |
| Sulfonamides | Sulfonamides | EFSA | 256 | |
| | Sulfamethoxazol | | | 15 |
| Tetracyclines | Tetracycline | EFSA | 8 | 13 |
| Trimethoprim | Trimethoprim | EFSA | 2 | 16 |

# 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 Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat

| Enterococcus, non-pathogenic | E. faecalis | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 113 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 113 | 15 |
| Aminoglycosides - Streptomycin | 113 | 18 |
| Amphenicols - Chloramphenicol | 113 | 4 |
| Penicillins - Ampicillin | 113 | 0 |
| Tetracyclines - Tetracycline | 113 | 83 |
| Fully sensitive | 113 | 24 |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 113 | 1 |
| Macrolides - Erythromycin | 113 | 39 |
| Oxazolidines - Linezolid | 113 | 6 |
| Resistant to 1 antimicrobial | 113 | 45 |
| Resistant to 2 antimicrobials | 113 | 22 |
| Resistant to 3 antimicrobials | 113 | 14 |
| Resistant to 4 antimicrobials | 113 | 5 |

## Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat

| Enterococcus, non-pathogenic | E. faecalis | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 113 | |
| Antimicrobials: | N | n |
| Resistant to >4 antimicrobials | 113 | 3 |
| Streptogramins - Pristinamycin | 113 | 0 |

## Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat

| Enterococcus, non-pathogenic | E. faecalis | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 31 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 31 | 3 |
| Aminoglycosides - Streptomycin | 31 | 4 |
| Amphenicols - Chloramphenicol | 31 | 0 |
| Penicillins - Ampicillin | 31 | 0 |
| Tetracyclines - Tetracycline | 31 | 29 |
| Fully sensitive | 31 | 2 |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 31 | 1 |
| Macrolides - Erythromycin | 31 | 13 |
| Oxazolidines - Linezolid | 31 | 5 |
| Resistant to 1 antimicrobial | 31 | 13 |
| Resistant to 2 antimicrobials | 31 | 9 |
| Resistant to 3 antimicrobials | 31 | 5 |
| Resistant to 4 antimicrobials | 31 | 2 |
| Resistant to >4 antimicrobials | 31 | 0 |
| Streptogramins - Pristinamycin | 31 | 0 |

## Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat

| Enterococcus, non-pathogenic | E. faecalis | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 53 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 53 | 5 |
| Aminoglycosides - Streptomycin | 53 | 7 |
| Amphenicols - Chloramphenicol | 53 | 5 |
| Penicillins - Ampicillin | 53 | 0 |
| Tetracyclines - Tetracycline | 53 | 31 |
| Fully sensitive | 53 | 17 |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 53 | 0 |
| Macrolides - Erythromycin | 53 | 8 |
| Oxazolidines - Linezolid | 53 | 6 |
| Resistant to 1 antimicrobial | 53 | 25 |
| Resistant to 2 antimicrobials | 53 | 3 |
| Resistant to 3 antimicrobials | 53 | 3 |
| Resistant to 4 antimicrobials | 53 | 3 |
| Resistant to >4 antimicrobials | 53 | 2 |
| Streptogramins - Pristinamycin | 53 | 0 |

## Table Antimicrobial susceptibility testing of Enterococcus, non-pathogenic in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat

| Enterococcus, non-pathogenic | E. faecalis | |
|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | |
| Number of isolates available in the laboratory | 9 | |
| Antimicrobials: | N | n |
| Aminoglycosides - Gentamicin | 9 | 0 |
| Aminoglycosides - Streptomycin | 9 | 4 |
| Amphenicols - Chloramphenicol | 9 | 0 |
| Penicillins - Ampicillin | 9 | 0 |
| Tetracyclines - Tetracycline | 9 | 5 |
| Fully sensitive | 9 | 4 |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 9 | 0 |
| Macrolides - Erythromycin | 9 | 2 |
| Oxazolidines - Linezolid | 9 | 0 |
| Resistant to 1 antimicrobial | 9 | 2 |
| Resistant to 2 antimicrobials | 9 | 1 |
| Resistant to 3 antimicrobials | 9 | 2 |
| Resistant to 4 antimicrobials | 9 | 0 |
| Resistant to >4 antimicrobials | 9 | 0 |
| Streptogramins - Pristinamycin | 9 | 0 |

# Table Antimicrobial susceptibility testing of E. faecalis in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E. faecalis | Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 113 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 10 | 113 | 15 | 6 | 0 | 0 | 2 | 7 | 5 | 8 | 15 | 15 | 15 | 17 | 6 | 5 | 3 | 5 | 1 | 1 | 1 | 1 | | | | |
| Aminoglycosides - Streptomycin | 12 | 113 | 18 | 13 | 2 | 1 | 0 | 1 | 0 | 1 | 0 | 5 | 2 | 8 | 29 | 10 | 11 | 16 | 8 | 2 | 2 | 0 | 2 | | | |
| Amphenicols - Chloramphenicol | 12 | 113 | 4 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 13 | 17 | 27 | 15 | 12 | 8 | 8 | 1 | 1 | |
| Penicillins - Ampicillin | 19 | 113 | 0 | | | | | | | | | | | | | | | | | | 0 | 2 | 25 | 21 | 21 | 17 |
| Tetracyclines - Tetracycline | 17 | 113 | 83 | 56 | 2 | 12 | 10 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 9 | 2 | 11 | 4 | | | |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 17 | 112 | 1 | | | | | | | | | | 0 | 1 | 0 | 15 | 44 | 38 | 10 | 3 | 1 | 0 | 0 | | | |
| Macrolides - Erythromycin | 18 | 113 | 39 | 31 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 10 | 5 | 6 | 12 | 10 | 14 | 5 | 4 | 3 |
| Oxazolidines - Linezolid | 22 | 113 | 6 | | | | | | | | | | | | | | | 0 | 2 | 4 | 14 | 24 | 22 | 25 | 12 | 7 |
| Streptogramins - Pristinamycin | 11 | 113 | 0 | | | | | | | | | | 10 | 14 | 18 | 16 | 12 | 18 | 12 | 4 | 3 | 0 | 2 | 0 | 3 | 1 |

| E. faecalis | Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 113 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | | | | | | | |
| Penicillins - Ampicillin | 8 | 6 | 3 | 4 | 4 | 2 | |

## Table Antimicrobial susceptibility testing of E. faecalis in Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E. faecalis | Meat from broilers (Gallus gallus) - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 113 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Tetracyclines - Tetracycline | | | | | | | |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | | | | | | | |
| Macrolides - Erythromycin | 2 | 1 | 0 | | | | |
| Oxazolidines - Linezolid | 0 | 3 | 0 | | | | |
| Streptogramins - Pristinamycin | 0 | | | | | | |

# Table Antimicrobial susceptibility testing of E. faecalis in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E. faecalis | Meat from turkey - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 31 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 10 | 31 | 3 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 4 | 6 | 4 | 2 | 4 | 4 | 2 | 1 | 1 | 0 | | | | | |
| Aminoglycosides - Streptomycin | 12 | 31 | 4 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 8 | 3 | 5 | 1 | 0 | 0 | 2 | 1 | 0 | | |
| Amphenicols - Chloramphenicol | 12 | 31 | 0 | | | | | | | | | 0 | 1 | 1 | 1 | 4 | 4 | 7 | 3 | 3 | 4 | 0 | 2 | 1 | 0 | |
| Penicillins - Ampicillin | 19 | 30 | 0 | | | | | | | | | | | | | | | | | | 0 | 3 | 1 | 4 | 3 | 4 |
| Tetracyclines - Tetracycline | 17 | 31 | 29 | 19 | 0 | 5 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 17 | 31 | 1 | | | | | | | | | | | 0 | 1 | 5 | 15 | 6 | 3 | 1 | 0 | 0 | | | | |
| Macrolides - Erythromycin | 18 | 31 | 12 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 8 | 1 | 3 | 1 |
| Oxazolidines - Linezolid | 22 | 31 | 5 | | | | | | | | | | | | | | 0 | 1 | 2 | 2 | 6 | 3 | 4 | 3 | 5 | 1 |
| Streptogramins - Pristinamycin | 11 | 27 | 0 | | | | | | | | | 0 | 2 | 3 | 4 | 4 | 7 | 1 | 2 | 0 | 1 | 1 | 2 | 0 | | |

| E. faecalis | Meat from turkey - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 31 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | | | | | | | |
| Penicillins - Ampicillin | 1 | 3 | 5 | 3 | 2 | 1 | 0 |

## Table Antimicrobial susceptibility testing of E. faecalis in Meat from turkey - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E. faecalis | Meat from turkey - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 31 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Tetracyclines - Tetracycline | | | | | | | |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | | | | | | | |
| Macrolides - Erythromycin | 0 | 1 | | | | | |
| Oxazolidines - Linezolid | 0 | 2 | 2 | 0 | | | |
| Streptogramins - Pristinamycin | | | | | | | |

# Table Antimicrobial susceptibility testing of E. faecalis in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E. faecalis | Meat from pig - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 53 | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 10 | 53 | 0 | 2 | 0 | 0 | 2 | 1 | 1 | 3 | 3 | 10 | 8 | 5 | 6 | 4 | 3 | 1 | 2 | 2 | 0 | | | | | |
| Aminoglycosides - Streptomycin | 12 | 53 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 13 | 4 | 7 | 6 | 1 | 3 | 1 | 1 | 2 | 1 | 0 | |
| Amphenicols - Chloramphenicol | 12 | 53 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 4 | 4 | 9 | 7 | 6 | 8 | 4 | 1 | 2 | 0 | |
| Penicillins - Ampicillin | 19 | 53 | 0 | | | | | | | | | | | | | | | | | 0 | 5 | 4 | 5 | 12 | 7 | 7 |
| Tetracyclines - Tetracycline | 17 | 53 | 0 | 23 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 5 | 5 | 3 | 4 | 0 | 0 |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 17 | 53 | 0 | | | | | | | | | | | | 0 | 8 | 25 | 14 | 4 | 1 | 1 | 0 | | | | |
| Macrolides - Erythromycin | 18 | 53 | 0 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 6 | 7 | 6 | 5 | 7 | 4 | 2 | 0 |
| Oxazolidines - Linezolid | 22 | 53 | 0 | | | | | | | | | | | | | | | 0 | 1 | 5 | 7 | 8 | 9 | 7 | 11 | 2 |
| Streptogramins - Pristinamycin | 11 | 53 | 0 | | | | | | | | | 0 | 3 | 4 | 6 | 8 | 7 | 7 | 9 | 2 | 0 | 0 | 1 | 3 | 3 | 0 |

| E. faecalis | Meat from pig - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 53 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | | | | | | | |
| Penicillins - Ampicillin | 2 | 3 | 2 | 2 | 0 | 1 | 3 |

## Table Antimicrobial susceptibility testing of E. faecalis in Meat from pig - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E. faecalis | Meat from pig - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 53 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Tetracyclines - Tetracycline | 0 | 1 | 0 | | | | |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | | | | | | | |
| Macrolides - Erythromycin | 0 | 0 | 0 | 1 | 0 | | |
| Oxazolidines - Linezolid | 0 | 2 | 1 | 0 | | | |
| Streptogramins - Pristinamycin | | | | | | | |

# Table Antimicrobial susceptibility testing of E. faecalis in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

Zone diameter (mm), number of isolates with a zone of inhibition equal to

| E. faecalis | Meat from bovine animals - meat products - in total - Monitoring - active | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of isolates available in the laboratory | 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimicrobials: | Cut-off value | N | n | <=6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| Aminoglycosides - Gentamicin | 10 | 9 | 0 | | | | | | | | 0 | 1 | 0 | 0 | 3 | 1 | 1 | 1 | 1 | 1 | 0 | | | | | |
| Aminoglycosides - Streptomycin | 12 | 9 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | | |
| Amphenicols - Chloramphenicol | 12 | 9 | 0 | | | | | | | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 1 | 0 | 2 | 0 | | |
| Penicillins - Ampicillin | 19 | 9 | 0 | | | | | | | | | | | | | | | | | | | 0 | 3 | 2 | 1 | 0 |
| Tetracyclines - Tetracycline | 17 | 9 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | | |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | 17 | 9 | 0 | | | | | | | | | | | | 0 | 2 | 2 | 1 | 3 | 1 | 0 | | | | | |
| Macrolides - Erythromycin | 18 | 9 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 2 | 0 | 1 |
| Oxazolidines - Linezolid | 22 | 9 | 0 | | | | | | | | | | | | | | | | | | 0 | 1 | 1 | 3 | 2 | 2 |
| Streptogramins - Pristinamycin | 11 | 9 | 0 | | | | | | | | | | | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 |

| E. faecalis | Meat from bovine animals - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 9 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Aminoglycosides - Gentamicin | | | | | | | |
| Aminoglycosides - Streptomycin | | | | | | | |
| Amphenicols - Chloramphenicol | | | | | | | |
| Penicillins - Ampicillin | 0 | 3 | 0 | | | | |

## Table Antimicrobial susceptibility testing of E. faecalis in Meat from bovine animals - meat products - in total - Monitoring - active - Objective sampling - Official sampling - food sample - meat - quantitative data [Diffusion method]

| E. faecalis | Meat from bovine animals - meat products - in total - Monitoring - active | | | | | | |
|---|---|---|---|---|---|---|---|
| Isolates out of a monitoring program (yes/no) | yes | | | | | | |
| Number of isolates available in the laboratory | 9 | | | | | | |
| Antimicrobials: | 29 | 30 | 31 | 32 | 33 | 34 | >=35 |
| Tetracyclines - Tetracycline | | | | | | | |
| Glycopeptides (Cyclic peptides, Polypeptides) - Vancomycin | | | | | | | |
| Macrolides - Erythromycin | 0 | | | | | | |
| Oxazolidines - Linezolid | 0 | | | | | | |
| Streptogramins - Pristinamycin | | | | | | | |

## 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 | |
| Glycopeptides (Cyclic peptides, Polypeptides) | Vancomycin | | 4 | |
| Macrolides | Erythromycin | | 4 | |
| Oxazolidines | Linezolid | | 4 | |
| Penicillins | Ampicillin | | 4 | |
| Streptogramins | Quinupristin/Dalfopristin | | 32 | |
| Tetracyclines | Tetracycline | | 2 | |

## 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 | |
| Glycopeptides (Cyclic peptides, Polypeptides) | Vancomycin | | 4 | |
| Macrolides | Erythromycin | | 4 | |
| Oxazolidines | Linezolid | | 4 | |
| Penicillins | Ampicillin | | 4 | |
| Streptogramins | Quinupristin/Dalfopristin | | 32 | |
| Tetracyclines | Tetracycline | | 2 | |

## Table Cut-off values for antibiotic resistance of E. faecalis in Food

| Test Method Used | Standard methods used for testing |
|---|---|
| Disc diffusion | NCCLS/CLSI<br>EFSA |

| | | | Concentration (microg/ml) | Zone diameter (mm) |
|---|---|---|---|---|
| | | Standard | Resistant > | Resistant <= |
| Aminoglycosides | Gentamicin | EFSA | 32 | 10 |
| | Streptomycin | EFSA | 512 | 12 |
| Amphenicols | Chloramphenicol | EFSA | 32 | 12 |
| Glycopeptides (Cyclic peptides, Polypeptides) | Vancomycin | EFSA | 4 | 17 |
| Macrolides | Erythromycin | EFSA | 4 | 18 |
| Oxazolidines | Linezolid | EFSA | 4 | 22 |
| Penicillins | Ampicillin | EFSA | 4 | 19 |
| Streptogramins | Quinupristin/Dalfopristin | EFSA | 32 | |
| | Pristinamycin | | | 11 |
| Tetracyclines | Tetracycline | EFSA | 2 | 17 |

## 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 | |
| Glycopeptides (Cyclic peptides, Polypeptides) | Vancomycin | | 4 | |
| Macrolides | Erythromycin | | 4 | |
| Oxazolidines | Linezolid | | 4 | |
| Penicillins | Ampicillin | | 4 | |
| Streptogramins | Quinupristin/Dalfopristin | | 1 | |
| Tetracyclines | Tetracycline | | 2 | |

## 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 | |
| Glycopeptides (Cyclic peptides, Polypeptides) | Vancomycin | | 4 | |
| Macrolides | Erythromycin | | 4 | |
| Oxazolidines | Linezolid | | 4 | |
| Penicillins | Ampicillin | | 4 | |
| Streptogramins | Quinupristin/Dalfopristin | | 1 | |
| Tetracyclines | Tetracycline | | 2 | |

## 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 | |
| Glycopeptides (Cyclic peptides, Polypeptides) | Vancomycin | | 4 | |
| Macrolides | Erythromycin | | 4 | |
| Oxazolidines | Linezolid | | 4 | |
| Penicillins | Ampicillin | | 4 | |
| Streptogramins | Quinupristin/Dalfopristin | | 1 | |
| Tetracyclines | Tetracycline | | 2 | |

# 4. INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS

# 4.1 ENTEROBACTER SAKAZAKII

## 4.1.1 General evaluation of the national situation

## 4.1.2 Cronobacter in foodstuffs

Table Enterobacter sakazakii in food

| | Source of information | Sampling strategy | Sampler | Sample type | Sample Origin | Sampling unit | Sample weight | Units tested | Total units positive for Cronobacter | Cronobacter spp, unspecified |
|---|---|---|---|---|---|---|---|---|---|---|
| Infant formula - dried - at retail - Surveillance | NFCSO FSSD | Objective sampling | Official sampling | food sample | | Single | 10 gramms | 32 | 0 | 0 |
| Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - at retail - Surveillance | NFCSO FSSD | Objective sampling | Official sampling | food sample | | Single | 10 gramms | 35 | 0 | 0 |
| Cereals and meals - at retail - Surveillance [1)] | NFCSO FSSD | Objective sampling | Official sampling | food sample | | Single | 10 gramms | 25 | 0 | 0 |

Comments:

[1)] cereal based babyfood

# 4.2 HISTAMINE

## 4.2.1 General evaluation of the national situation

## 4.2.2 Histamine 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 maturated - at retail - Surveillance | NFCSO FSSD | Objective sampling | Official sampling | food sample | | Batch | 5 gramms | 13 | 0 | 14 | 0 |
| Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - at retail - imported - Unspecified | NFCSO FSSD | Unspecified | HACCP and owns check | food sample | | Batch | 5 gramms | 1 | 0 | 1 | 0 |

| | >200 - <= 400 mg/kg | > 400 mg/kg |
|---|---|---|
| Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - at retail - Surveillance | 0 | 0 |
| Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - at retail - imported - Unspecified | 0 | 0 |

Table Histamine in food

# 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

There is no direct sampling strategy, samples containing more than 100.000 coagulase positive staphyloccocci/gram are tested for the presence of enterotoxin.
Only those product groups are routinely tested for coagulase positive staphyloccocci, for which there is a criterion in 2073/2005/EC.

Type of specimen taken

milk products

Definition of positive finding

If ELFA test shows a positive result,the product is considered to be positive.

Diagnostic/analytical methods used

Validated detection method of the CRL based on VIDAS enterotoxin test is used.

## 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 - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance [1)] | NFCSO FFSD | Selective sampling | Official sampling | food sample | | Single | 25 gramms | 1 | 0 |
| Cheeses, made from unspecified milk or other animal milk - fresh - at processing plant - Unspecified | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 1 | 1 |
| Meat from pig - meat preparation - intended to be eaten cooked - at catering - Clinical investigations | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 1 | 1 |
| Meat from pig - meat products - cooked, ready-to-eat - at catering - Clinical investigations | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 2 | 1 |
| Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Clinical investigations | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 2 | 2 |
| Other processed food products and prepared dishes - unspecified - ready-to-eat foods - at catering - Clinical investigations | NFCSO FFSD | Suspect sampling | Official sampling | food sample | | Single | 25 gramms | 4 | 0 |

Comments:

[1)] enterotoxin testing because of high staphylococcus count

# 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, epidemological investigations and reporting of foodborne outbreaks

Data on foodborne outbreaks have been collected in Hungary by legal background at the Public Health Authority since 1931. There are two surveillance systems in Hungary since 1st January 2007. One of them is for collection of communicable diseases included the human data of foodborne outbreaks (based on the obligatory reports of a physician and microbiological laboratories). The reporting system of human cases belongs to the institutes of the National Public Health and Medical Officers' Service (National Center for Epidemiologie = NCE and National Institute for Food and Nutrition Science = NIFNS). The other surveillance system is operated by the Central Agricultural Office, (since 15 March 2012 it's name is National Food Chain Safety Office = NFCSO), which is working under the supervision of Ministry of Agriculture. This system based on the reports of the food business operators, the drinking water suppliers and the data of the communicable disease reporting system. The role of the NFCSO is in this topic to investigate which food was the sourse of the outbreaks, collection and analysis of obtained data – in all events if the outbreak was general or the supposed product is produced by the food industry and/or catering, and not located to a household. The household outbreaks are investigated by the Public Health Authority. The investigation of an outbreak is usually initiated with the information about the human cases provided by the public health service. The two authorities cooperate in the whole process of investigation.

### Description of the types of outbreaks covered by the reporting:

Outbreak: At least two cases with epidemiological link (exposed by the same food).
Household outbreak: At least two related cases in the same household.
General outbreak: At least two related cases in a community (school, kindergarten, hospital, events etc.).

### National evaluation of the reported outbreaks in the country:

#### Trends in numbers of outbreaks and numbers of human cases involved

Altogether there were 174 general and household outbreaks verified as foodborne in 2011 (2010: 299) in Hungary. 1631 cases (2010: 1970) were linked to the outbreaks, among them 220 (13,5%) hospitalised cases (2010: 421 (21,4%). Although the number of the outbreakes significantly decreased (58%), the number of the cases didn't decrease so much (82,8%). Nobody have died.

There were 49 foodborne general outbreaks with strong or weak evidence based on the data collected by National Food Chain Safety Office in 2011 in Hungary . There were 1140 cases linked to these outbreaks. 105 patients were hospitalised, nobody died.
The number of foodborne outbreaks registrated by National Food Chain Safety Office was slightly more than in 2010, but the number of cases decreased compared to the previous year.
42,9 % (21) of the outbreaks was caused by Salmonella spp., 16,3 % (7) Norovirus, 2 % (1) Bacillus cereus, 2 % (1) Clostridium botulinum, 2 % (1) tick-borne encephalitis virus, 12,3 % (6) high microbial count and 22,5 % (11) outbreaks had unknown etiology. The proportion of Salmonella etiology increased compared to 2010 (37 %), 1/3 of the outbreaks caused by facultative agents.
There was no major change in the type of food vehicles. The most foodborne outbreaks (53,1 %) were caused by mixed foods. The number of cases caused by broiler meats and products thereof decreased.
The most food borne events occurred in public canteens and the number of events increased compared to 2010 (2011: 63,3 %, 2010: 53,3 %). 28,6 % of the outbreaks occured in catering services (restaurant, bar, cafe, etc.), the number of cases decreased compared to the previous year.

#### Relevance of the different causative agents, food categories and the agent/food category combinations

Salmonellosis

NCE registered 6250 sporadic salmonellosis cases or linked to outbreaks, it is a slightly increase (+3,2%) compared to 2010 (6250). The number of outbreaks were 171 (2010: 170, 2009: 178). The most frequent serotypes were: S.Enteritidis (60,7%, 2010: 55,6%, 2009: 60,1%); S.Typhimurium (10,5%, 2010: 16,8%, 2009: 16,9%); monophasic S.Typhimurium 1.4.[5].12:i:- (3,5%, 2010: 3,1%), S.Infantis (7,2%, 2010: 6,9%, 2009: 7,3%,).

1530 (39,1%) S.Enteritidis strains from human origin were phage typed, the most frequent phage type was PT2 (44,2%, 2010: 36,4%), followed by PT8 (18,0%, 2010: 14,8%), PT21 (10,8%, 2010: 15,3%), PT51 (8,0%, 2010: 6,9%) and PT4 (7,0%, 2010: 9,6%).

308 (45,6%) S.Typhimurium strains were phage typed, 22,1% were PT104b, 22,1% PT 193, 13,3% were PT195, 10,4% PT 104.

Campylobacteriosis

The campylobacteriosis was the second most frequent zoonosis in 2011 in Hungary. NCE registered 6135 (2010: 7201) cases and 43 (2010:55) outbreaks. 19,4% (2010: 17,5%) of strains were C.jejuni, 4,5% (2010: 2,9%) were C.coli, 0,3% (2010: 1%) were C.lari, and 75,8% (2010:78,6%) were not typed.

## Table Foodborne Outbreaks: summarised data

| | Weak evidence or no vehicle outbreaks | | | | | |
|---|---|---|---|---|---|---|
| | Number of outbreaks | Human cases | Hospitalized | Deaths | Strong evidence Number of Outbreaks | Total number of outbreaks |
| Salmonella - S. Typhimurium | 4 | 13 | 0 | 0 | 2 | 6 |
| Salmonella - S. Enteritidis | 85 | 565 | 108 | 0 | 8 | 93 |
| Salmonella - Other serovars | 12 | 36 | 14 | 0 | 0 | 12 |
| Campylobacter | 19 | 41 | 2 | 0 | 0 | 19 |
| Listeria - Listeria monocytogenes | 0 | 0 | 0 | 0 | 0 | 0 |
| Listeria - Other Listeria | 0 | 0 | 0 | 0 | 0 | 0 |
| Yersinia | 0 | 0 | 0 | 0 | 0 | 0 |
| Escherichia coli, pathogenic - Verotoxigenic E. coli (VTEC) | 1 | 2 | 0 | 0 | 0 | 1 |
| Bacillus - B. cereus | 0 | 0 | 0 | 0 | 1 | 1 |
| Bacillus - Other Bacillus | 1 | 44 | 44 | 0 | 0 | 1 |
| Staphylococcal enterotoxins | 0 | 0 | 0 | 0 | 0 | 0 |
| Clostridium - Cl. botulinum | 0 | 0 | 0 | 0 | 1 | 1 |
| Clostridium - Cl. perfringens | 0 | 0 | 0 | 0 | 1 | 1 |

| | Weak evidence or no vehicle outbreaks | | | | | |
|---|---|---|---|---|---|---|
| | Number of outbreaks | Human cases | Hospitalized | Deaths | Strong evidence Number of Outbreaks | Total number of outbreaks |
| Clostridium - Other Clostridia | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Bacterial agents - Brucella | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Bacterial agents - Shigella | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Bacterial agents - Other Bacterial agents | 5 | 185 | 5 | 0 | 0 | 5 |
| Parasites - Trichinella | 0 | 0 | 0 | 0 | 0 | 0 |
| Parasites - Giardia | 0 | 0 | 0 | 0 | 0 | 0 |
| Parasites - Cryptosporidium | 0 | 0 | 0 | 0 | 0 | 0 |
| Parasites - Anisakis | 0 | 0 | 0 | 0 | 0 | 0 |
| Parasites - Other Parasites | 0 | 0 | 0 | 0 | 0 | 0 |
| Viruses - Norovirus | 5 | 59 | 0 | 0 | 2 | 7 |
| Viruses - Hepatitis viruses | 0 | 0 | 0 | 0 | 0 | 0 |
| Viruses - Other Viruses | 2 | 8 | 2 | 0 | 0 | 2 |
| Other agents - Histamine | 0 | 0 | 0 | 0 | 0 | 0 |
| Other agents - Marine biotoxins | 0 | 0 | 0 | 0 | 0 | 0 |
| Other agents - Other Agents | 1 | 3 | 3 | 0 | 5 | 6 |

| | Weak evidence or no vehicle outbreaks | | | | | |
|---|---|---|---|---|---|---|
| | Number of outbreaks | Human cases | Hospitalized | Deaths | Strong evidence Number of Outbreaks | Total number of outbreaks |
| Unknown agent | 19 | 183 | 9 | 0 | 0 | 19 |

## Table Foodborne Outbreaks: detailed data for Bacillus

Please use CTRL for multiple selection fields

### B. cereus

| | Value |
|---|---|
| FBO Code | 6 |
| Number of outbreaks | 1 |
| Number of human cases | 62 |
| Number of hospitalisations | 0 |
| Number of deaths | 0 |
| Food vehicle | Pig meat and products thereof |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | General |
| Setting | School, kindergarten |
| Place of origin of problem | Canteen or workplace catering |
| Origin of food vehicle | Domestic market |
| Contributory factors | Cross-contamination |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Table Foodborne Outbreaks: detailed data for Clostridium

Please use CTRL for multiple selection fields

### C. botulinum

| | Value |
|---|---|
| FBO Code | 7 |
| Number of outbreaks | 1 |
| Number of human cases | 3 |
| Number of hospitalisations | 3 |
| Number of deaths | 0 |
| Food vehicle | Pig meat 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 | Household / domestic kitchen |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Household / domestic kitchen |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unprocessed contaminated ingredient |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## C. perfringens

| | Value |
|---|---|
| FBO Code | 46 |
| Number of outbreaks | 1 |
| Number of human cases | 45 |
| Number of hospitalisations | 1 |
| Number of deaths | 0 |
| Food vehicle | Vegetables and juices and other products thereof |
| More food vehicle information | |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | General |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Restaurant/Café/Pub/Bar/Hotel/Catering service |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Table Foodborne Outbreaks: detailed data for Other agents

Please use CTRL for multiple selection fields

### Mushroom toxins

| | Value |
|---|---|
| FBO Code | |
| Number of outbreaks | 1 |
| Number of human cases | 2 |
| Number of hospitalisations | 2 |
| Number of deaths | 0 |
| Food vehicle | Mixed food |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | Household / domestic kitchen |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Unknown |
| Origin of food vehicle | Unknown |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Mushroom toxins

| | Value |
|---|---|
| FBO Code | |
| Number of outbreaks | 1 |
| Number of human cases | 3 |
| Number of hospitalisations | 3 |
| Number of deaths | 0 |
| Food vehicle | Mixed food |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | Household / domestic kitchen |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Unknown |
| Origin of food vehicle | Unknown |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Mushroom toxins

| | Value |
|---|---|
| FBO Code | |
| Number of outbreaks | 1 |
| Number of human cases | 2 |
| Number of hospitalisations | 2 |
| Number of deaths | 0 |
| Food vehicle | Mixed food |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | Household / domestic kitchen |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Unknown |
| Origin of food vehicle | Unknown |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Mushroom toxins

| | Value |
|---|---|
| FBO Code | |
| Number of outbreaks | 1 |
| Number of human cases | 7 |
| Number of hospitalisations | 7 |
| Number of deaths | 1 |
| Food vehicle | Mixed food |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | Household / domestic kitchen |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Unknown |
| Origin of food vehicle | Unknown |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Mushroom toxins

| | Value |
|---|---|
| FBO Code | |
| Number of outbreaks | 1 |
| Number of human cases | 5 |
| Number of hospitalisations | 5 |
| Number of deaths | 0 |
| Food vehicle | Mixed food |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | Unknown |
| Setting | Unknown |
| Place of origin of problem | Unknown |
| Origin of food vehicle | Unknown |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Table Foodborne Outbreaks: detailed data for Salmonella

Please use CTRL for multiple selection fields

### S. Enteritidis - PT 8

| | Value |
|---|---|
| FBO Code | 30 |
| Number of outbreaks | 1 |
| Number of human cases | 25 |
| Number of hospitalisations | 2 |
| Number of deaths | 0 |
| Food vehicle | Eggs and egg products |
| More food vehicle information | |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | General |
| Setting | Canteen or workplace catering |
| Place of origin of problem | Canteen or workplace catering |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Enteritidis

| | Value |
|---|---|
| FBO Code | H32.1 |
| Number of outbreaks | 1 |
| Number of human cases | 12 |
| Number of hospitalisations | 3 |
| Number of deaths | 0 |
| Food vehicle | Eggs and egg products |
| More food vehicle information | |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | Household / domestic kitchen |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Household / domestic kitchen |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unprocessed contaminated ingredient |
| Mixed Outbreaks (Other Agent) | |
| Additional information | case-control study |

## S. Enteritidis - PT 7

| | Value |
|---|---|
| FBO Code | 27 |
| Number of outbreaks | 1 |
| Number of human cases | 28 |
| Number of hospitalisations | 1 |
| Number of deaths | 0 |
| Food vehicle | Other foods |
| More food vehicle information | |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | General |
| Setting | Residential institution (nursing home, prison, boarding school) |
| Place of origin of problem | Canteen or workplace catering |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Typhimurium

| | Value |
|---|---|
| FBO Code | 10 |
| Number of outbreaks | 1 |
| Number of human cases | 8 |
| Number of hospitalisations | 5 |
| Number of deaths | 0 |
| Food vehicle | Pig meat and products thereof |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food chain or its environment - Detection of indistinguishable causative agent in humans |
| Outbreak type | General |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Processing plant |
| Origin of food vehicle | Domestic market |
| Contributory factors | Infected food handler |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Enteritidis

| | Value |
|---|---|
| FBO Code | H37.4 |
| Number of outbreaks | 1 |
| Number of human cases | 27 |
| Number of hospitalisations | 1 |
| Number of deaths | 0 |
| Food vehicle | Other foods |
| More food vehicle information | home-made cakes |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | General |
| Setting | School, kindergarten |
| Place of origin of problem | Household / domestic kitchen |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unprocessed contaminated ingredient |
| Mixed Outbreaks (Other Agent) | |
| Additional information | case-controll study |

## S. Enteritidis - PT 2

| | Value |
|---|---|
| FBO Code | 22 |
| Number of outbreaks | 1 |
| Number of human cases | 30 |
| Number of hospitalisations | 6 |
| Number of deaths | 0 |
| Food vehicle | Other foods |
| 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 | School, kindergarten |
| Place of origin of problem | Canteen or workplace catering |
| Origin of food vehicle | Domestic market |
| Contributory factors | Infected food handler |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Typhimurium

| | Value |
|---|---|
| FBO Code | 39 |
| Number of outbreaks | 1 |
| Number of human cases | 19 |
| Number of hospitalisations | 3 |
| Number of deaths | 0 |
| Food vehicle | Broiler meat (Gallus gallus) and products thereof |
| More food vehicle information | |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | General |
| Setting | School, kindergarten |
| Place of origin of problem | Canteen or workplace catering |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Enteritidis - PT 2

| | Value |
|---|---|
| FBO Code | 16 |
| Number of outbreaks | 1 |
| Number of human cases | 75 |
| Number of hospitalisations | 8 |
| Number of deaths | 0 |
| Food vehicle | Other foods |
| 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 market |
| Contributory factors | Infected food handler |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Enteritidis - PT 2

| | Value |
|---|---|
| FBO Code | 21 |
| Number of outbreaks | 1 |
| Number of human cases | 13 |
| Number of hospitalisations | 2 |
| 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 | General |
| Setting | Restaurant, Cafe, Pub, Bar, Hotel |
| Place of origin of problem | Restaurant/Café/Pub/Bar/Hotel/Catering service |
| Origin of food vehicle | Domestic market |
| Contributory factors | Infected food handler |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## S. Enteritidis - PT 8

| | Value |
|---|---|
| FBO Code | 12 |
| Number of outbreaks | 1 |
| Number of human cases | 11 |
| Number of hospitalisations | 0 |
| Number of deaths | 0 |
| Food vehicle | Sweets and chocolate |
| More food vehicle information | |
| Nature of evidence | Detection of causative agent in food chain or its environment - Symptoms and onset of illness pathognomonic to causative agent |
| Outbreak type | General |
| Setting | School, kindergarten |
| Place of origin of problem | Processing plant |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unprocessed contaminated ingredient |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Table Foodborne Outbreaks: detailed data for Viruses

Please use CTRL for multiple selection fields

### Calicivirus - norovirus (Norwalk-like virus)

| | Value |
|---|---|
| FBO Code | 44 |
| Number of outbreaks | 1 |
| Number of human cases | 100 |
| Number of hospitalisations | 1 |
| Number of deaths | 0 |
| Food vehicle | Other foods |
| More food vehicle information | |
| Nature of evidence | Descriptive epidemiological evidence |
| Outbreak type | General |
| Setting | Household / domestic kitchen |
| Place of origin of problem | Restaurant/Café/Pub/Bar/Hotel/Catering service |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unknown |
| Mixed Outbreaks (Other Agent) | |
| Additional information | |

## Calicivirus - norovirus (Norwalk-like virus)

| | Value |
|---|---|
| FBO Code | H8.19 |
| Number of outbreaks | 1 |
| Number of human cases | 15 |
| Number of hospitalisations | 0 |
| Number of deaths | 0 |
| Food vehicle | Other foods |
| More food vehicle information | home-made cake |
| Nature of evidence | Analytical epidemiological evidence |
| Outbreak type | General |
| Setting | School, kindergarten |
| Place of origin of problem | Unknown |
| Origin of food vehicle | Domestic market |
| Contributory factors | Unprocessed contaminated ingredient |
| Mixed Outbreaks (Other Agent) | |
| Additional information | case-control study |