European Food Safety Authority

# ZOONOSES MONITORING

## Hungary

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

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

## IN 2017

# 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 2017.

The information covers the occurrence of these diseases and agents in animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and indicator 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 Union 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 European Union 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 European Union Summary Reports on zoonoses and antimicrobial resistance that are published each year by EFSA.

The national report contains two parts: tables summarising data reported in the Data Collection Framework and the related text forms. The text forms were sent by email as pdf files and they are incorporated at the end of the report.

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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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# ANIMAL POPULATION TABLES

## Table Susceptible animal population

| Animal species | Category of animals | Population animal |
|---|---|---|
| Cattle (bovine animals) | Cattle (bovine animals) | 972,617 |
| Goats | Goats | 28,145 |
| Pigs | Pigs | 2,956,863 |
| Poultry, unspecified | Poultry, unspecified | 57,535,060 |
| Rabbits | Rabbits - farmed | 1,174,000 |
| Sheep | Sheep | 1,007,432 |
| Solipeds, domestic | Solipeds, domestic | 54,700 |

## DISEASE STATUS TABLES

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

| Region | Number of animals serologically tested under investigations of suspect cases | Number of suspended herds under investigations of suspect cases | Number of seropositive animals under investigations of suspect cases | Number of animals positive to BST under investigations of suspect cases | Number of animals positive in microbiological testing under investigations of suspect cases | Number of herds with status officially free | Number of infected herds | Total number of animals | Number of herds tested under surveillance | Number of animals tested under surveillance | Total number of herds | Number of infected herds tested under surveillance | Number of herds tested under surveillance by bulk milk | Number of animals or pools tested under surveillance by bulk milk | Number of infected herds tested under surveillance by bulk milk | Number of notified abortions whatever cause | Number of isolations of Brucella infections | Number of abortions due to Brucella abortus | Number of animals tested by microbiology under investigations of suspect cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HUNGARY | 0 | 0 | 0 | 0 | 0 | 16,652 | 0 | 972,617 | 14,274 | 437,848 | 16,669 | 0 | 23 | 8,155 | 0 | 682 | 0 | 0 | 0 |
| Budapest | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 1,166 | 14 | 374 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pest | 0 | 0 | 0 | 0 | 0 | 1,374 | 0 | 66,865 | 1,122 | 25,845 | 1,374 | 0 | 1 | 800 | 0 | 14 | 0 | 0 | 0 |
| Fejér | 0 | 0 | 0 | 0 | 0 | 544 | 0 | 55,300 | 448 | 24,520 | 544 | 0 | 1 | 791 | 0 | 11 | 0 | 0 | 0 |
| Komárom-Esztergom | 0 | 0 | 0 | 0 | 0 | 309 | 0 | 17,076 | 256 | 7,895 | 309 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 |
| Veszprém | 0 | 0 | 0 | 0 | 0 | 590 | 0 | 49,508 | 581 | 33,020 | 590 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 |
| Győr-Moson-Sopron | 0 | 0 | 0 | 0 | 0 | 859 | 0 | 58,566 | 453 | 27,722 | 859 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 |
| Vas | 0 | 0 | 0 | 0 | 0 | 507 | 0 | 31,246 | 507 | 15,993 | 507 | 0 | 5 | 2,817 | 0 | 40 | 0 | 0 | 0 |
| Zala | 0 | 0 | 0 | 0 | 0 | 563 | 0 | 32,908 | 562 | 13,999 | 567 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Baranya | 0 | 0 | 0 | 0 | 0 | 438 | 0 | 35,812 | 349 | 14,271 | 438 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 |
| Somogy | 0 | 0 | 0 | 0 | 0 | 648 | 0 | 44,733 | 607 | 20,032 | 651 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 |
| Tolna | 0 | 0 | 0 | 0 | 0 | 572 | 0 | 29,812 | 352 | 12,637 | 572 | 0 | 13 | 1,033 | 0 | 13 | 0 | 0 | 0 |
| Borsod-Abaúj-Zemplén | 0 | 0 | 0 | 0 | 0 | 872 | 0 | 54,369 | 863 | 29,220 | 876 | 0 | 0 | 0 | 0 | 74 | 0 | 0 | 0 |
| Heves | 0 | 0 | 0 | 0 | 0 | 325 | 0 | 18,876 | 318 | 10,500 | 325 | 0 | 2 | 1,848 | 0 | 15 | 0 | 0 | 0 |
| Nógrád | 0 | 0 | 0 | 0 | 0 | 407 | 0 | 23,291 | 350 | 14,150 | 409 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hajdú-Bihar | 0 | 0 | 0 | 0 | 0 | 2,297 | 0 | 121,723 | 1,969 | 61,990 | 2,301 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Jász-Nagykun-Szolnok | 0 | 0 | 0 | 0 | 0 | 1,078 | 0 | 67,097 | 701 | 21,044 | 1,078 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 |
| Szabolcs-Szatmár-Bereg | 0 | 0 | 0 | 0 | 0 | 893 | 0 | 54,190 | 893 | 22,132 | 893 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| Bács-Kiskun | 0 | 0 | 0 | 0 | 0 | 1,870 | 0 | 91,805 | 1,635 | 37,594 | 1,870 | 0 | 1 | 866 | 0 | 51 | 0 | 0 | 0 |
| Békés | 0 | 0 | 0 | 0 | 0 | 1,381 | 0 | 70,367 | 1,381 | 25,635 | 1,381 | 0 | 0 | 0 | 0 | 162 | 0 | 0 | 0 |
| Csongrád | 0 | 0 | 0 | 0 | 0 | 1,095 | 0 | 47,907 | 913 | 19,275 | 1,095 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |

## Table Ovine or Caprine brucellosis in countries and regions that do not receive Community co-financing for eradication programme

| Region | Number of animals serologically tested under investigations of suspect cases | Number of suspended herds under investigations of suspect cases | Number of seropositive animals under investigations of suspect cases | Number of animals positive in microbiological testing under investigations of suspect cases | Number of herds with status officially free | Number of infected herds | Total number of animals | Number of herds tested under surveillance | Number of animals tested under surveillance | Total number of herds | Number of infected herds tested under surveillance | Number of animals tested by microbiology under investigations of suspect cases |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HUNGARY | 0 | 0 | 0 | 0 | 9,997 | 0 | 1,035,577 | 2,254 | 47,052 | 9,997 | 0 | 0 |

## DISEASE STATUS TABLES

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

| Region | Number of herds with status officially free | Number of infected herds | Total number of animals | Interval between routine tuberculin tests | Number of animals tested with tuberculin routine testing | Number of tuberculin tests carried out before the introduction into the herds | Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological examinations | Number of animals detected positive in bacteriological examination | Total number of herds |
|---|---|---|---|---|---|---|---|---|---|
| HUNGARY | 16,653 | 2 | 972,617 | 12 | 835,492 | 17,363 | 188 | 150 | 16,669 |

## PREVALENCE TABLES

### Table Campylobacter:CAMPYLOBACTER in food

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Meat from bovine animals - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 26 | 0 | Campylobacter | 0 |
| | Meat from bovine animals - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 110 | 0 | Campylobacter | 0 |
| | Meat from broilers (Gallus gallus) - carcase - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 331 | 51 | Campylobacter | 51 |
| | Meat from broilers (Gallus gallus) - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 99 | 20 | Campylobacter | 20 |
| | Meat from broilers (Gallus gallus) - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 260 | 40 | Campylobacter | 40 |
| | Meat from duck - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 1 | 1 | Campylobacter | 1 |
| | Meat from duck - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 97 | 26 | Campylobacter | 26 |
| | Meat from geese - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 9 | 0 | Campylobacter | 0 |
| | Meat from geese - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 12 | 2 | Campylobacter | 2 |
| | Meat from pig - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 73 | 6 | Campylobacter | 6 |
| | Meat from pig - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 11 | 1 | Campylobacter | 1 |
| | Meat from turkey - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 10272-1:2006 Campylobacter | 189 | 25 | Campylobacter | 25 |
| | Milk, cows' - raw milk - Farm - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | ISO 10272-1:2006 Campylobacter | 76 | 0 | Campylobacter | 0 |

## Table COXIELLA in animal

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Method | Total units tested | Total units positive | N of clinical affected herds | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|
| Not Available | Cattle (bovine animals) - Farm - Not Available - animal sample - blood - Clinical investigations - Industry sampling - Suspect sampling | animal | Complement fixation test (CFT) | 5 | 0 | | Coxiella | 0 |
| | Cattle (bovine animals) - Farm - Not Available - animal sample - blood - Clinical investigations - Industry sampling - Suspect sampling | animal | Enzyme-linked immunosorbent assay (ELISA) | 271 | 74 | | Coxiella burnetii | 74 |
| | Cattle (bovine animals) - Farm - Not Available - animal sample - blood - Unspecified - Private sampling - Other | animal | Enzyme-linked immunosorbent assay (ELISA) | 236 | 6 | | Coxiella burnetii | 6 |
| | Cattle (bovine animals) - Farm - Not Available - animal sample - organ/tissue - Clinical investigations - Industry sampling - Suspect sampling | animal | Immuno Histo Chemistry (IHC) | 2 | 0 | | Coxiella | 0 |
| | Goats - Farm - Not Available - animal sample - blood - Clinical investigations - Industry sampling - Suspect sampling | animal | Complement fixation test (CFT) | 1 | 0 | | Coxiella | 0 |
| | Goats - Farm - Not Available - animal sample - blood - Clinical investigations - Industry sampling - Suspect sampling | animal | Enzyme-linked immunosorbent assay (ELISA) | 17 | 2 | | Coxiella burnetii | 2 |
| | Goats - Farm - Not Available - animal sample - blood - Unspecified - Private sampling - Other | animal | Complement fixation test (CFT) | 10 | 0 | | Coxiella | 0 |
| | Sheep - Farm - Not Available - animal sample - blood - Clinical investigations - Industry sampling - Suspect sampling | animal | Immuno Histo Chemistry (IHC) | 1 | 0 | | Coxiella | 0 |
| | Sheep - Farm - Not Available - animal sample - blood - Clinical investigations - Industry sampling - Suspect sampling | animal | Enzyme-linked immunosorbent assay (ELISA) | 54 | 4 | | Coxiella burnetii | 4 |
| | Sheep - Farm - Not Available - animal sample - blood - Unspecified - Private sampling - Other | animal | Enzyme-linked immunosorbent assay (ELISA) | 100 | 0 | | Coxiella | 0 |
| | Sheep - Farm - Not Available - animal sample - organ/tissue - Clinical investigations - Industry sampling - Suspect sampling | animal | Immuno Histo Chemistry (IHC) | 1 | 0 | | Coxiella | 0 |

## Table Cronobacter:CRONOBACTER in food

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Infant formula - dried - intended for infants below 6 months - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | Not Available | 27 | 0 | Cronobacter | 0 |

## Table Echinococcus:ECHINOCOCCUS in animal

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| HUNGARY | Cattle (bovine animals) - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 1 | 0 | Echinococcus | 0 |
| | Deer - wild - roe deer - Hunting - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 1 | 0 | Echinococcus | 0 |
| | Foxes - Hunting - Not Available - Not Available - Monitoring - Official sampling - Objective sampling | Not Available | animal | 5 | 1 | Echinococcus multilocularis | 1 |
| | Goats - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 2 | 0 | Echinococcus | 0 |
| | Pigs - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 75 | 29 | Echinococcus granulosus | 28 |
| | | | | | | Echinococcus multilocularis | 1 |
| | Sheep - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 11 | 2 | Echinococcus granulosus | 2 |
| KÖZÉP-MAGYARORSZÁG (NUTS level 1) | Foxes - Hunting - Not Available - Not Available - Monitoring - Official sampling - Objective sampling | Not Available | animal | 5 | 1 | Echinococcus multilocularis | 1 |
| DUNÁNTÚL | Cattle (bovine animals) - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 1 | 0 | Echinococcus | 0 |
| | Deer - wild - roe deer - Hunting - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 1 | 0 | Echinococcus | 0 |
| | Goats - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 2 | 0 | Echinococcus | 0 |
| | Pigs - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 49 | 20 | Echinococcus granulosus | 20 |
| | Sheep - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 6 | 1 | Echinococcus granulosus | 1 |
| ALFÖLD ÉS ÉSZAK | Pigs - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 26 | 9 | Echinococcus granulosus | 8 |
| | | | | | | Echinococcus multilocularis | 1 |
| | Sheep - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Suspect sampling | Not Available | animal | 5 | 1 | Echinococcus granulosus | 1 |

## Table Escherichia coli:ESCHERICHIA COLI in food

| Area of sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | total units tested | total units positive | Zoonoses | ANTH | VTX | AG | N units positive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Not Available | Fruits - non-pre-cut - Farm - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 27 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Meat from bovine animals - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 1 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Meat from bovine animals - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 104 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Meat from bovine animals - meat products - raw but intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 1 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Meat from bovine animals - meat products - raw but intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 46 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Meat from bovine animals and pig - minced meat - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 94 | 3 | VTEC other than O157 O26 O103 O111 O145 | Not Available | VT2, gene identified, subtype unspecified | eae negative | 3 |
| | Milk, cows' - raw milk - Farm - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 30 | 1 | VTEC other than O157 O26 O103 O111 O145 | Not Available | VT2, gene identified, subtype unspecified | eae negative | 1 |
| | Seeds, sprouted - ready-to-eat - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 5 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Seeds, sprouted - ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 45 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Vegetables - non-pre-cut - Farm - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 22 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Vegetables - non-pre-cut - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 1 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Vegetables - products - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 7 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |
| | Vegetables - products - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4) | 55 | 0 | Verocytotoxigenic E. coli (VTEC) | Not Available | Not Available | Not Available | 0 |

**Table FLAVIVIRUS in animal**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Vaccination status | Method | Total units tested | Total units positive | Zoonoses | | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| HUNGARY | Birds - wild - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 4 | 0 | | West Nile virus | 0 |
| | Birds - wild - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Hospital or medical care facility - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 3 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 6 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 71 | 1 | | West Nile virus | 1 |
| | Birds - wild - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 5 | 0 | | West Nile virus | 0 |
| | Dogs - pet animals - Veterinary clinics - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 7 | 0 | | West Nile virus | 0 |
| | Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | IgM-capture ELISA (MAC-ELISA) | 154 | 3 | | West Nile virus | 3 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 3 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 2 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | IgM-capture ELISA (MAC-ELISA) | 3 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 5 | 0 | | West Nile virus | 0 |
| KÖZÉP-MAGYARORSZÁG (NUTS level 1) | Birds - wild - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 2 | 0 | | West Nile virus | 0 |
| | Birds - wild - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Hospital or medical care facility - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 2 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 5 | 1 | | West Nile virus | 1 |
| | Birds - wild - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | Enzyme-linked immunosorbent assay (ELISA) | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 3 | 0 | | West Nile virus | 0 |
| | Dogs - pet animals - Veterinary clinics - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 1 | 0 | | West Nile virus | 0 |
| | Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | IgM-capture ELISA (MAC-ELISA) | 54 | 1 | | West Nile virus | 1 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 2 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 2 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 4 | 0 | | West Nile virus | 0 |
| DUNÁNTÚL | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 15 | 0 | | West Nile virus | 0 |
| | Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 3 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | IgM-capture ELISA (MAC-ELISA) | 51 | 1 | | West Nile virus | 1 |
| ALFÖLD ÉS ÉSZAK | Birds - wild - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 2 | 0 | | West Nile virus | 0 |
| | Birds - wild - Hospital or medical care facility - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 5 | 0 | | West Nile virus | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Vaccination status | Method | Total units tested | Total units positive | Zoonoses | | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| ALFÖLD ÉS ÉSZAK | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | Immuno Histo Chemistry (IHC) | 3 | 0 | | West Nile virus | 0 |
| | Birds - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 51 | 0 | | West Nile virus | 0 |
| | Birds - wild - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 3 | 0 | | West Nile virus | 0 |
| | Poultry, unspecified - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | IgM-capture ELISA (MAC-ELISA) | 49 | 1 | | West Nile virus | 1 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | IgM-capture ELISA (MAC-ELISA) | 3 | 0 | | West Nile virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | animal | Unknown | PCR | 1 | 0 | | West Nile virus | 0 |

**Table Listeria:LISTERIA in animal**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| Not Available | Cattle (bovine animals) - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 1 | Listeria | 1 |
| | Cattle (bovine animals) - Farm - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | Not Available | animal | 1 | 1 | Listeria monocytogenes | 1 |
| | Sheep - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 8 | 8 | Listeria | 8 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Total units tested | Total units positive | Method | Zoonoses | N of units tested | N of units positive |
|---|---|---|---|---|---|---|---|---|---|---|
| Not Available | Bakery products - cakes - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 88 | 1 | <= 100 | Listeria monocytogenes | 1 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 1 |
| | Bakery products - cakes - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 88 | 1 | detection | Listeria monocytogenes | 88 | 0 |
| | Bakery products - cakes - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 16 | 0 | detection | Listeria monocytogenes | 16 | 0 |
| | Bakery products - cakes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 137 | 2 | <= 100 | Listeria monocytogenes | 2 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 2 | 1 |
| | Bakery products - cakes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 137 | 2 | detection | Listeria monocytogenes | 137 | 2 |
| | Cereals and meals - flakes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 97 | 0 | <= 100 | Listeria monocytogenes | 18 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 18 | 0 |
| | Cereals and meals - flakes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 97 | 0 | detection | Listeria monocytogenes | 79 | 0 |
| | Cereals and meals - flour/meal or finely ground powder - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 4 | 0 | <= 100 | Listeria monocytogenes | 1 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Cereals and meals - flour/meal or finely ground powder - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 4 | 0 | detection | Listeria monocytogenes | 3 | 0 |
| | Cheeses made from cows' milk - curd - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 8 | 0 | detection | Listeria monocytogenes | 8 | 0 |
| | Cheeses made from cows' milk - curd - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 57 | 0 | detection | Listeria monocytogenes | 57 | 0 |
| | Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 76 | 0 | detection | Listeria monocytogenes | 76 | 0 |
| | Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 135 | 0 | detection | Listeria monocytogenes | 135 | 0 |
| | Cheeses made from goats' milk - hard - made from pasteurised milk - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 25 | 0 | detection | Listeria monocytogenes | 25 | 0 |
| | Cheeses made from goats' milk - soft and semi-soft - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 3 | 0 | detection | Listeria monocytogenes | 3 | 0 |
| | Cheeses made from goats' milk - soft and semi-soft - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 6 | 0 | detection | Listeria monocytogenes | 6 | 0 |
| | Cheeses made from sheep's milk - fresh - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 2 | 0 | detection | Listeria monocytogenes | 2 | 0 |
| | Cheeses made from sheep's milk - fresh - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 85 | 0 | detection | Listeria monocytogenes | 85 | 0 |
| | Cheeses made from sheep's milk - soft and semi-soft - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 2 | 0 | detection | Listeria monocytogenes | 2 | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Total units tested | Total units positive | Method | Zoonoses | N of units tested | N of units positive |
|---|---|---|---|---|---|---|---|---|---|---|
| Not Available | Cheeses made from sheep's milk - soft and semi-soft - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 6 | 0 | <= 100 | Listeria monocytogenes | 1 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Cheeses made from sheep's milk - soft and semi-soft - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 6 | 0 | detection | Listeria monocytogenes | 5 | 0 |
| | Chocolate - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 15 | 0 | <= 100 | Listeria monocytogenes | 1 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Chocolate - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 15 | 0 | detection | Listeria monocytogenes | 14 | 0 |
| | Chocolate - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 79 | 0 | <= 100 | Listeria monocytogenes | 18 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 18 | 0 |
| | Chocolate - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 79 | 0 | detection | Listeria monocytogenes | 61 | 0 |
| | Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 19 | 0 | detection | Listeria monocytogenes | 19 | 0 |
| | Dairy products (excluding cheeses) - fermented dairy products - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 85 | 0 | detection | Listeria monocytogenes | 85 | 0 |
| | Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 3 | 0 | detection | Listeria monocytogenes | 3 | 0 |
| | Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 90 | 0 | detection | Listeria monocytogenes | 90 | 0 |
| | Fish - cooked - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 12 | 0 | detection | Listeria monocytogenes | 12 | 0 |
| | Fish - marinated - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 27 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Fish - marinated - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 27 | 1 | detection | Listeria monocytogenes | 27 | 1 |
| | Fish - smoked - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 125 | 5 | <= 100 | Listeria monocytogenes | 5 | 4 |
| | | | | | | | >100 | Listeria monocytogenes | 5 | 1 |
| | Fish - smoked - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 125 | 5 | detection | Listeria monocytogenes | 125 | 5 |
| | Fishery products, unspecified - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 5 | 0 | detection | Listeria monocytogenes | 5 | 0 |
| | Follow-on formulae - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 37 | 0 | detection | Listeria monocytogenes | 37 | 0 |
| | Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 64 | 0 | detection | Listeria monocytogenes | 64 | 0 |
| | Foodstuffs intended for special nutritional uses - processed cereal-based food for infants and young children - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 57 | 0 | detection | Listeria monocytogenes | 57 | 0 |
| | Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 4 | 0 | detection | Listeria monocytogenes | 4 | 0 |
| | Fruits - non-pre-cut - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 80 | 0 | detection | Listeria monocytogenes | 80 | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Total units tested | Total units positive | Method | Zoonoses | N of units tested | N of units positive |
|---|---|---|---|---|---|---|---|---|---|---|
| Not Available | Fruits - pre-cut - frozen - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 2 | 0 | <= 100 | Listeria monocytogenes | 1 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Fruits - pre-cut - frozen - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 2 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Meat from bovine animals - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 41 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | 25 | Gram | 41 | 1 | >100 | Listeria monocytogenes | 1 | 0 |
| | Meat from bovine animals - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 41 | 1 | detection | Listeria monocytogenes | 41 | 1 |
| | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 13 | 0 | detection | Listeria monocytogenes | 13 | 0 |
| | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 165 | 2 | <= 100 | Listeria monocytogenes | 2 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 2 | 1 |
| | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 165 | 2 | detection | Listeria monocytogenes | 165 | 2 |
| | Meat from deer (venison) - meat products - fermented sausages - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 1 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Meat from deer (venison) - meat products - fermented sausages - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 1 | 1 | detection | Listeria monocytogenes | 1 | 1 |
| | Meat from duck - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 1 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Meat from duck - meat products - raw and intended to be eaten raw - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 2 | 0 | detection | Listeria monocytogenes | 2 | 0 |
| | Meat from duck - meat products - raw and intended to be eaten raw - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 1 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Meat from geese - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 4 | 0 | detection | Listeria monocytogenes | 4 | 0 |
| | Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 24 | 0 | detection | Listeria monocytogenes | 24 | 0 |
| | Meat from pig - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 214 | 0 | detection | Listeria monocytogenes | 214 | 0 |
| | Meat from pig - meat products - fermented sausages - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 56 | 7 | <= 100 | Listeria monocytogenes | 7 | 7 |
| | | | | | | | >100 | Listeria monocytogenes | 7 | 0 |
| | Meat from pig - meat products - fermented sausages - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 56 | 7 | detection | Listeria monocytogenes | 56 | 7 |
| | Meat from pig - meat products - fermented sausages - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 576 | 25 | <= 100 | Listeria monocytogenes | 25 | 25 |
| | | | | | | | >100 | Listeria monocytogenes | 25 | 0 |
| | Meat from pig - meat products - fermented sausages - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 576 | 25 | detection | Listeria monocytogenes | 576 | 25 |
| | Meat from pig - meat products - raw and intended to be eaten raw - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 31 | 0 | detection | Listeria monocytogenes | 31 | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Total units tested | Total units positive | Method | Zoonoses | N of units tested | N of units positive |
|---|---|---|---|---|---|---|---|---|---|---|
| Not Available | Meat from pig - meat products - raw and intended to be eaten raw - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 103 | 4 | <= 100 | Listeria monocytogenes | 4 | 4 |
| | | | | | | | >100 | Listeria monocytogenes | 4 | 0 |
| | Meat from pig - meat products - raw and intended to be eaten raw - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 103 | 4 | detection | Listeria monocytogenes | 103 | 4 |
| | Meat from pig - meat products - unspecified, ready-to-eat - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 45 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Meat from pig - meat products - unspecified, ready-to-eat - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 45 | 1 | detection | Listeria monocytogenes | 45 | 1 |
| | Meat from pig - meat products - unspecified, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 8 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Meat from pig - meat products - unspecified, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 8 | 1 | detection | Listeria monocytogenes | 8 | 1 |
| | Meat from poultry, unspecified - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 2 | 0 | detection | Listeria monocytogenes | 2 | 0 |
| | Meat from turkey - meat products - cooked, ready-to-eat - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 10 | 0 | detection | Listeria monocytogenes | 10 | 0 |
| | Meat from turkey - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 191 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Meat from turkey - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 191 | 1 | detection | Listeria monocytogenes | 191 | 1 |
| | Meat from turkey - meat products - raw and intended to be eaten raw - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 1 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Meat from turkey - meat products - raw and intended to be eaten raw - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 1 | 1 | detection | Listeria monocytogenes | 1 | 1 |
| | Meat from turkey - meat products - raw and intended to be eaten raw - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 11 | 0 | detection | Listeria monocytogenes | 11 | 0 |
| | Milk, cows' - raw milk - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | 1 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Milk, cows' - raw milk - Farm - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Millilitre | 69 | 2 | <= 100 | Listeria monocytogenes | 2 | 2 |
| | | | | | | | >100 | Listeria monocytogenes | 2 | 0 |
| | Milk, cows' - raw milk - Farm - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | 69 | 2 | detection | Listeria monocytogenes | 69 | 2 |
| | Milk, cows' - raw milk - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | 7 | 0 | detection | Listeria monocytogenes | 7 | 0 |
| | Milk, cows' - raw milk - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | 1 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Other processed food products and prepared dishes - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 352 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Other processed food products and prepared dishes - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 352 | 1 | detection | Listeria monocytogenes | 352 | 1 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Total units tested | Total units positive | Method | Zoonoses | N of units tested | N of units positive |
|---|---|---|---|---|---|---|---|---|---|---|
| Not Available | Other processed food products and prepared dishes - legumes based dishes - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 7 | 0 | detection | Listeria monocytogenes | 7 | 0 |
| | Other processed food products and prepared dishes - legumes based dishes - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 1 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Other processed food products and prepared dishes - legumes based dishes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 67 | 11 | <= 100 | Listeria monocytogenes | 11 | 11 |
| | | | | | | | >100 | Listeria monocytogenes | 11 | 0 |
| | Other processed food products and prepared dishes - legumes based dishes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 67 | 11 | detection | Listeria monocytogenes | 67 | 11 |
| | Other processed food products and prepared dishes - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 1 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Other processed food products and prepared dishes - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 40 | 0 | detection | Listeria monocytogenes | 40 | 0 |
| | Other processed food products and prepared dishes - sandwiches - Catering - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 34 | 0 | detection | Listeria monocytogenes | 34 | 0 |
| | Other processed food products and prepared dishes - sandwiches - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 8 | 0 | detection | Listeria monocytogenes | 8 | 0 |
| | Other processed food products and prepared dishes - sandwiches - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 82 | 4 | <= 100 | Listeria monocytogenes | 4 | 4 |
| | | | | | | | >100 | Listeria monocytogenes | 4 | 0 |
| | Other processed food products and prepared dishes - sandwiches - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 82 | 4 | detection | Listeria monocytogenes | 82 | 4 |
| | Seeds, sprouted - ready-to-eat - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 5 | 0 | detection | Listeria monocytogenes | 5 | 0 |
| | Seeds, sprouted - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 46 | 0 | detection | Listeria monocytogenes | 46 | 0 |
| | Spices and herbs - dried - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 3 | 0 | <= 100 | Listeria monocytogenes | 2 | 0 |
| | | | | | | | >100 | Listeria monocytogenes | 2 | 0 |
| | Spices and herbs - dried - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 3 | 0 | detection | Listeria monocytogenes | 1 | 0 |
| | Vegetables - pre-cut - frozen vegetables - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 2 | 0 | detection | Listeria monocytogenes | 2 | 0 |
| | Vegetables - pre-cut - ready-to-eat - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 7 | 0 | detection | Listeria monocytogenes | 7 | 0 |
| | Vegetables - pre-cut - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | 94 | 1 | <= 100 | Listeria monocytogenes | 1 | 1 |
| | | | | | | | >100 | Listeria monocytogenes | 1 | 0 |
| | Vegetables - pre-cut - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | 94 | 1 | detection | Listeria monocytogenes | 94 | 1 |

## Table Lyssavirus:LYSSAVIRUS in animal

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| Not Available | Badgers - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 13 | 0 | Rabies virus | 0 |
| | Bats - wild - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 22 | 0 | Rabies virus | 0 |
| | Cats - Veterinary clinics - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 346 | 0 | Rabies virus | 0 |
| | Cattle (bovine animals) - Farm - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 23 | 0 | Rabies virus | 0 |
| | Deer - wild - roe deer - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 31 | 0 | Rabies virus | 0 |
| | Dogs - Veterinary clinics - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 196 | 0 | Rabies virus | 0 |
| | Foxes - wild - Hunting - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 2667 | 0 | Rabies virus | 0 |
| | Foxes - wild - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 485 | 1 | Rabies virus | 1 |
| | Goats - Farm - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 21 | 2 | Rabies virus | 2 |
| | Jackals - wild - Hunting - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 83 | 0 | Rabies virus | 0 |
| | Jackals - wild - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 10 | 0 | Rabies virus | 0 |
| | Sheep - Farm - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 19 | 0 | Rabies virus | 0 |
| | Solipeds, domestic - Farm - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 9 | 0 | Rabies virus | 0 |
| | Wild boars - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 12 | 0 | Rabies virus | 0 |
| | Wolves - Natural habitat - Not Available - Not Available - Monitoring - passive - Official sampling - Suspect sampling | Indirect Immunofluorescent Antibody test (IFAT) | animal | 1 | 0 | Rabies virus | 0 |

## Table Mycobacterium:MYCOBACTERIUM in animal

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| Not Available | Badgers - wild - Natural habitat - Not Available - Not Available - Monitoring - Official sampling - Selective sampling | Not Available | animal | 8 | 2 | Mycobacterium avium subsp. hominissuis | 1 |
| | | | | | | Mycobacterium avium subsp. silvaticum | 1 |
| | Cattle (bovine animals) - Slaughterhouse - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | Not Available | animal | 112 | 7 | Mycobacterium avium subsp. paratuberculosis | 2 |
| | | | | | | Mycobacterium spp., unspecified | 5 |
| | Cattle (bovine animals) - Slaughterhouse - Not Available - Not Available - Monitoring - Official sampling - Selective sampling | Not Available | animal | 45 | 5 | Mycobacterium avium subsp. hominissuis | 1 |
| | | | | | | Mycobacterium avium subsp. paratuberculosis | 2 |
| | | | | | | Mycobacterium spp., unspecified | 2 |
| | Deer - wild - fallow deer - Hunting - Not Available - Not Available - Monitoring - Official sampling - Selective sampling | Not Available | animal | 2 | 0 | Mycobacterium | 0 |
| | Deer - wild - red deer - Hunting - Not Available - Not Available - Monitoring - Official sampling - Selective sampling | Not Available | animal | 18 | 4 | Mycobacterium caprae | 1 |
| | | | | | | Mycobacterium spp., unspecified | 3 |
| | Deer - wild - roe deer - Hunting - Not Available - Not Available - Monitoring - Official sampling - Selective sampling | Not Available | animal | 3 | 1 | Mycobacterium spp., unspecified | 1 |
| | Elephants - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Other | Not Available | animal | 3 | 0 | Mycobacterium | 0 |
| | Fish - farmed - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 1 | Mycobacterium spp., unspecified | 1 |
| | Foxes - wild - Natural habitat - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | Not Available | animal | 2 | 0 | Mycobacterium | 0 |
| | Monkeys - zoo animal - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Other | Not Available | animal | 1 | 0 | Mycobacterium | 0 |
| | Mouflons - wild - Hunting - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | Not Available | animal | 1 | 1 | Mycobacterium avium subsp. paratuberculosis | 1 |
| | Pigeons - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 1 | Mycobacterium avium | 1 |
| | Pigs - Slaughterhouse - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | Not Available | animal | 1 | 0 | Mycobacterium | 0 |
| | Seals - zoo animals - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 0 | Mycobacterium | 0 |
| | Sheep - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 1 | Mycobacterium | 1 |
| | Turkeys - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 1 | Mycobacterium avium | 1 |
| | Wild boars - wild - Hunting - Not Available - Not Available - Monitoring - Official sampling - Selective sampling | Not Available | animal | 126 | 35 | Mycobacterium avium subsp. avium | 2 |
| | | | | | | Mycobacterium avium subsp. hominissuis | 1 |
| | | | | | | Mycobacterium avium subsp. paratuberculosis | 1 |
| | | | | | | Mycobacterium caprae | 18 |
| | | | | | | Mycobacterium spp., unspecified | 13 |

## Table Salmonella:SALMONELLA in animal

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | N of flocks under control programme | Target verification | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Cattle (bovine animals) - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | | N_A | Not Available | 9 | 2 | Salmonella | 2 |
| | Dogs - pet animals - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | | N_A | Not Available | 1 | 0 | Salmonella | 0 |
| | Ducks - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | herd/flock | | N_A | Not Available | 172 | 15 | Salmonella | 15 |
| | Gallus gallus (fowl) - breeding flocks, unspecified - adult - Farm - Not Available - Not Available - Control and eradication programmes - Official and industry sampling - Census | herd/flock | 812 | Y | Not Available | 812 | 7 | Salmonella Enteritidis | 1 |
| | | | | | | | | Salmonella Other serovars | 2 |
| | | | | | | | | Salmonella Typhimurium, monophasic | 4 |
| | Gallus gallus (fowl) - broilers - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Industry sampling - Census | herd/flock | | N_A | Not Available | 6632 | 918 | Salmonella Infantis | 871 |
| | | | | | | | | Salmonella Kentucky | 4 |
| | | | | | | | | Salmonella Other serovars | 13 |
| | | | | | | | | Salmonella Senftenberg | 16 |
| | | | | | | | | Salmonella Typhimurium | 14 |
| | Gallus gallus (fowl) - broilers - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Official and industry sampling - Census | herd/flock | 6632 | Y | Not Available | 6632 | 918 | Salmonella Infantis | 871 |
| | | | | | | | | Salmonella Kentucky | 4 |
| | | | | | | | | Salmonella Other serovars | 13 |
| | | | | | | | | Salmonella Senftenberg | 16 |
| | | | | | | | | Salmonella Typhimurium | 14 |
| | Gallus gallus (fowl) - broilers - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Official sampling - Objective sampling | herd/flock | | N_A | Not Available | 49 | 0 | Salmonella | 0 |
| | Gallus gallus (fowl) - laying hens - adult - Farm - Not Available - Not Available - Control and eradication programmes - Official and industry sampling - Census | herd/flock | 953 | Y | Not Available | 953 | 37 | Salmonella Bovismorbificans | 4 |
| | | | | | | | | Salmonella Braenderup | 2 |
| | | | | | | | | Salmonella Enteritidis | 16 |
| | | | | | | | | Salmonella Infantis | 4 |
| | | | | | | | | Salmonella Other serovars | 10 |
| | | | | | | | | Salmonella Typhimurium | 1 |
| | Geese - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | herd/flock | | N_A | Not Available | 54 | 14 | Salmonella | 14 |
| | Gulls - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | | N_A | Not Available | 1 | 0 | Salmonella | 0 |
| | Monkeys - Zoo - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | animal | | N_A | Not Available | 2 | 0 | Salmonella | 0 |
| | Partridges - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | herd/flock | | N_A | Not Available | 2 | 1 | Salmonella | 1 |
| | Pheasants - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | herd/flock | | N_A | Not Available | 13 | 0 | Salmonella | 0 |
| | Pigeons - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | herd/flock | | N_A | Not Available | 2 | 2 | Salmonella | 2 |
| | Pigs - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | herd/flock | | N_A | Not Available | 17 | 0 | Salmonella | 0 |
| | Turkeys - breeding flocks, unspecified - adult - Farm - Not Available - Not Available - Control and eradication programmes - Industry sampling - Census | herd/flock | | N_A | Not Available | 119 | 6 | Salmonella Other serovars | 6 |
| | Turkeys - breeding flocks, unspecified - adult - Farm - Not Available - Not Available - Control and eradication programmes - Official and industry sampling - Census | herd/flock | 119 | Y | Not Available | 119 | 6 | Salmonella Other serovars | 6 |
| | Turkeys - breeding flocks, unspecified - adult - Farm - Not Available - Not Available - Control and eradication programmes - Official sampling - Objective sampling | herd/flock | | N_A | Not Available | 36 | 0 | Salmonella | 0 |
| | Turkeys - fattening flocks - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Industry sampling - Census | herd/flock | | N_A | Not Available | 1717 | 412 | Salmonella Bredeney | 41 |
| | | | | | | | | Salmonella Enteritidis | 1 |
| | | | | | | | | Salmonella Hadar | 56 |
| | | | | | | | | Salmonella Infantis | 124 |
| | | | | | | | | Salmonella Kentucky | 19 |
| | | | | | | | | Salmonella Newport | 91 |
| | | | | | | | | Salmonella Other serovars | 20 |
| | | | | | | | | Salmonella Stanley | 60 |
| | Turkeys - fattening flocks - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Official and industry sampling - Census | herd/flock | 1717 | Y | Not Available | 1717 | 412 | Salmonella Bredeney | 41 |
| | | | | | | | | Salmonella Enteritidis | 1 |
| | | | | | | | | Salmonella Hadar | 56 |
| | | | | | | | | Salmonella Infantis | 124 |
| | | | | | | | | Salmonella Kentucky | 19 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | N of flocks under control programme | Target verification | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Turkeys - fattening flocks - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Official and industry sampling - Census | herd/flock | 1717 | Y | Not Available | 1717 | 412 | Salmonella Newport | 91 |
| | | | | | | | | Salmonella Other serovars | 20 |
| | | | | | | | | Salmonella Stanley | 60 |
| | Turkeys - fattening flocks - before slaughter - Farm - Not Available - Not Available - Control and eradication programmes - Official sampling - Objective sampling | herd/flock | | N_A | Not Available | 28 | 0 | Salmonella | 0 |

**Table Salmonella:SALMONELLA in food**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Cereals and meals - flakes - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 99 | 0 | Salmonella | 0 |
| | Cereals and meals - flour/meal or finely ground powder - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 3 | 0 | Salmonella | 0 |
| | Cereals and meals - flour/meal or finely ground powder - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 7 | 0 | Salmonella | 0 |
| | Cereals and meals - flour/meal or finely ground powder - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 76 | 0 | Salmonella | 0 |
| | Cheeses made from cows' milk - curd - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 8 | 0 | Salmonella | 0 |
| | Cheeses made from cows' milk - curd - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 64 | 0 | Salmonella | 0 |
| | Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 79 | 0 | Salmonella | 0 |
| | Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 117 | 0 | Salmonella | 0 |
| | Cheeses made from sheep's milk - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 2 | 0 | Salmonella | 0 |
| | Cheeses made from sheep's milk - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 92 | 0 | Salmonella | 0 |
| | Chocolate - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 15 | 0 | Salmonella | 0 |
| | Chocolate - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 96 | 0 | Salmonella | 0 |
| | Cocoa and cocoa preparations, coffee and tea - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 3 | 0 | Salmonella | 0 |
| | Cocoa and cocoa preparations, coffee and tea - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 93 | 0 | Salmonella | 0 |
| | Coconut - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 66 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - dairy desserts - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 3 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - dairy desserts - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 7 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - dairy desserts - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 57 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - fermented dairy products - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - fermented dairy products - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 4 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - fermented dairy products - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 9 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - ice-cream - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 77 | 0 | Salmonella | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Dairy products (excluding cheeses) - ice-cream - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 214 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - ice-cream - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 201 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 6 | 0 | Salmonella | 0 |
| | Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 103 | 0 | Salmonella | 0 |
| | Egg products - dried - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 26 | 0 | Salmonella | 0 |
| | Egg products - dried - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 10 | 0 | Salmonella | 0 |
| | Egg products - liquid - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | ISO 6579:2002 | 14 | 0 | Salmonella | 0 |
| | Egg products - liquid - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | ISO 6579:2002 | 34 | 0 | Salmonella | 0 |
| | Egg products - liquid - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | ISO 6579:2002 | 21 | 0 | Salmonella | 0 |
| | Eggs - table eggs - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 627 | 0 | Salmonella | 0 |
| | Fish - cooked - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 12 | 0 | Salmonella | 0 |
| | Fish - marinated - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 30 | 0 | Salmonella | 0 |
| | Fish - raw - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 72 | 0 | Salmonella | 0 |
| | Fish - smoked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 135 | 0 | Salmonella | 0 |
| | Fish - unspecified - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 5 | 0 | Salmonella | 0 |
| | Fishery products, unspecified - non-ready-to-eat - chilled - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Fishery products, unspecified - non-ready-to-eat - frozen - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 6 | 0 | Salmonella | 0 |
| | Fishery products, unspecified - ready-to-eat - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Fishery products, unspecified - ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 4 | 0 | Salmonella | 0 |
| | Follow-on formulae - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 37 | 0 | Salmonella | 0 |
| | Foodstuffs intended for special nutritional uses - dried dietary foods for special medical purposes intended for infants below 6 months - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 64 | 0 | Salmonella | 0 |
| | Foodstuffs intended for special nutritional uses - ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 57 | 0 | Salmonella | 0 |
| | Foodstuffs intended for special nutritional uses - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 4 | 0 | Salmonella | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Fruits - non-pre-cut - Farm - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 28 | 0 | Salmonella | 0 |
| | Fruits - non-pre-cut - frozen - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 2 | 0 | Salmonella | 0 |
| | Fruits - non-pre-cut - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 60 | 0 | Salmonella | 0 |
| | Meat from bovine animals - carcase - Slaughterhouse - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 400 | Square centimetre | ISO 6579:2002 | 104 | 0 | Salmonella | 0 |
| | Meat from bovine animals - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 28 | 0 | Salmonella | 0 |
| | Meat from bovine animals - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 114 | 0 | Salmonella | 0 |
| | Meat from bovine animals - meat products - cooked, ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 47 | 0 | Salmonella | 0 |
| | Meat from bovine animals - meat products - raw but intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 65 | 0 | Salmonella | 0 |
| | Meat from bovine animals - minced meat - intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | ISO 6579:2002 | 6 | 0 | Salmonella | 0 |
| | Meat from bovine animals - minced meat - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | ISO 6579:2002 | 129 | 2 | Salmonella Infantis | 1 |
| | | | | | | | | Salmonella Typhimurium, monophasic | 1 |
| | Meat from broilers (Gallus gallus) - carcase - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 339 | 50 | Salmonella I, group O:7 | 2 |
| | | | | | | | | Salmonella Infantis | 48 |
| | Meat from broilers (Gallus gallus) - fresh - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 4 | 0 | Salmonella | 0 |
| | Meat from broilers (Gallus gallus) - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 145 | 24 | Salmonella I, group O:7 | 1 |
| | | | | | | | | Salmonella Infantis | 23 |
| | Meat from broilers (Gallus gallus) - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 513 | 82 | Salmonella Braenderup | 1 |
| | | | | | | | | Salmonella Enteritidis | 2 |
| | | | | | | | | Salmonella Heidelberg | 6 |
| | | | | | | | | Salmonella I, group O:4 | 3 |
| | | | | | | | | Salmonella Infantis | 68 |
| | | | | | | | | Salmonella Newport | 1 |
| | | | | | | | | Salmonella Ohio | 1 |
| | Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 3 | 0 | Salmonella | 0 |
| | Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 97 | 28 | Salmonella Infantis | 27 |
| | | | | | | | | Salmonella Typhimurium | 1 |
| | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 2 | 0 | Salmonella | 0 |
| | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 21 | 0 | Salmonella | 0 |
| | Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 185 | 0 | Salmonella | 0 |
| | Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - frozen - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 2 | 0 | Salmonella | 0 |
| | Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - frozen - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 5 | 0 | Salmonella | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - frozen - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 59 | 0 | Salmonella | 0 |
| | Meat from deer (venison) - carcase - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 5 | 0 | Salmonella | 0 |
| | Meat from deer (venison) - carcase - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 23 | 0 | Salmonella | 0 |
| | Meat from duck - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 100 | 8 | Salmonella Enteritidis | 3 |
| | | | | | | | | Salmonella Indiana | 1 |
| | | | | | | | | Salmonella Livingstone | 3 |
| | | | | | | | | Salmonella Mbandaka | 1 |
| | Meat from geese - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 9 | 1 | Salmonella Enteritidis | 1 |
| | Meat from geese - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 14 | 1 | Salmonella Thompson | 1 |
| | Meat from pig - carcase - Slaughterhouse - Not Available - Not Available - Surveillance - based on Regulation 2073 - Official, based on Regulation 854/2004 - Objective sampling | single (food/feed) | 400 | Square centimetre | ISO 6579:2002 | 2412 | 11 | Salmonella Agona | 1 |
| | | | | | | | | Salmonella Derby | 5 |
| | | | | | | | | Salmonella Goldcoast | 1 |
| | | | | | | | | Salmonella Rissen | 1 |
| | | | | | | | | Salmonella spp., unspecified | 1 |
| | | | | | | | | Salmonella Typhimurium | 1 |
| | | | | | | | | Salmonella Typhimurium, monophasic | 1 |
| | Meat from pig - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 77 | 0 | Salmonella | 0 |
| | Meat from pig - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 137 | 0 | Salmonella | 0 |
| | Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | ISO 6579:2002 | 9 | 0 | Salmonella | 0 |
| | Meat from pig - meat preparation - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | ISO 6579:2002 | 200 | 4 | Salmonella Derby | 1 |
| | | | | | | | | Salmonella Litchfield | 1 |
| | | | | | | | | Salmonella Typhimurium, monophasic | 2 |
| | Meat from pig - meat products - cooked, ready-to-eat - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 3 | 0 | Salmonella | 0 |
| | Meat from pig - meat products - cooked, ready-to-eat - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 65 | 1 | Salmonella Rissen | 1 |
| | Meat from pig - meat products - cooked, ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 300 | 0 | Salmonella | 0 |
| | Meat from pig - meat products - fermented sausages - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 66 | 0 | Salmonella | 0 |
| | Meat from pig - meat products - fermented sausages - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 734 | 3 | Salmonella Derby | 2 |
| | | | | | | | | Salmonella Typhimurium, monophasic | 1 |
| | Meat from pig - meat products - raw and intended to be eaten raw - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 40 | 0 | Salmonella | 0 |
| | Meat from pig - meat products - raw and intended to be eaten raw - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 119 | 0 | Salmonella | 0 |
| | Meat from pig - meat products - raw but intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 2 | 0 | Salmonella | 0 |
| | Meat from pig - meat products - raw but intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 23 | 1 | Salmonella Derby | 1 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Meat from pig - minced meat - intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | ISO 6579:2002 | 9 | 0 | Salmonella | 0 |
| | Meat from pig - minced meat - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 10 | Gram | ISO 6579:2002 | 130 | 2 | Salmonella Indiana | 1 |
| | | | | | | | | Salmonella Typhimurium, monophasic | 1 |
| | Meat from rabbit - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 4 | 0 | Salmonella | 0 |
| | Meat from rabbit - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 5 | 0 | Salmonella | 0 |
| | Meat from turkey - carcase - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 318 | 44 | Salmonella Bredeney | 1 |
| | | | | | | | | Salmonella Hadar | 3 |
| | | | | | | | | Salmonella I, group O:4 | 1 |
| | | | | | | | | Salmonella I, group O:7 | 1 |
| | | | | | | | | Salmonella Infantis | 18 |
| | | | | | | | | Salmonella Newport | 20 |
| | Meat from turkey - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 44 | 2 | Salmonella Bredeney | 1 |
| | | | | | | | | Salmonella Infantis | 1 |
| | Meat from turkey - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 207 | 13 | Salmonella Bredeney | 2 |
| | | | | | | | | Salmonella Hadar | 3 |
| | | | | | | | | Salmonella I, group O:4 | 1 |
| | | | | | | | | Salmonella Newport | 5 |
| | | | | | | | | Salmonella Stanley | 2 |
| | Meat from turkey - meat preparation - intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Meat from turkey - meat preparation - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - cooked, ready-to-eat - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - cooked, ready-to-eat - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 11 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - cooked, ready-to-eat - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 223 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - raw and intended to be eaten raw - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - raw and intended to be eaten raw - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 14 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - raw but intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Meat from turkey - meat products - raw but intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 17 | 0 | Salmonella | 0 |
| | Meat from turkey - minced meat - intended to be eaten cooked - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 6 | 0 | Salmonella | 0 |
| | Meat from turkey - minced meat - intended to be eaten cooked - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 26 | 10 | Salmonella Bredeney | 5 |
| | | | | | | | | Salmonella Hadar | 1 |
| | | | | | | | | Salmonella Infantis | 1 |
| | | | | | | | | Salmonella Newport | 2 |
| | | | | | | | | Salmonella Stanley | 1 |
| | Meat from wild boar - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 5 | 0 | Salmonella | 0 |
| | Meat from wild boar - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 35 | 0 | Salmonella | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Meat from wild game - birds - fresh - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 2 | 0 | Salmonella | 0 |
| | Meat from wild game - birds - fresh - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 28 | 0 | Salmonella | 0 |
| | Milk, cows' - raw milk - Farm - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Millilitre | ISO 6579:2002 | 76 | 0 | Salmonella | 0 |
| | Nuts and nut products - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 6 | 0 | Salmonella | 0 |
| | Nuts and nut products - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 19 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 404 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - noodles - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 23 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - noodles - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 179 | 3 | Salmonella Enteritidis | 1 |
| | | | | | | | | Salmonella II, group O:11 | 1 |
| | | | | | | | | Salmonella Mbandaka | 1 |
| | Other processed food products and prepared dishes - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 6 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 39 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - sandwiches - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 36 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - sandwiches - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 9 | 0 | Salmonella | 0 |
| | Other processed food products and prepared dishes - sandwiches - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 90 | 0 | Salmonella | 0 |
| | Other products of animal origin - gelatin and collagen - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 52 | 0 | Salmonella | 0 |
| | Ready-to-eat salads - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 108 | 0 | Salmonella | 0 |
| | Ready-to-eat salads - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 7 | 0 | Salmonella | 0 |
| | Ready-to-eat salads - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 | 199 | 0 | Salmonella | 0 |
| | Seeds, sprouted - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 1 | 0 | Salmonella | 0 |
| | Seeds, sprouted - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 5 | 0 | Salmonella | 0 |
| | Seeds, sprouted - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 46 | 0 | Salmonella | 0 |
| | Spices and herbs - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 3 | 1 | Salmonella Agona | 1 |
| | Spices and herbs - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 178 | 1 | Salmonella Panama | 1 |
| | Sweets - Catering - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 92 | 0 | Salmonella | 0 |

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Sweets - Processing plant - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 19 | 0 | Salmonella | 0 |
| | Sweets - Retail - Not Available - Not Available - Surveillance - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | ISO 6579:2002 Salmonella | 164 | 0 | Salmonella | 0 |

**Table Salmonella:SALMONELLA in feed**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Compound feedingstuffs for cattle - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 20 | 0 | Salmonella | 0 |
| | Compound feedingstuffs for pigs - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 64 | 0 | Salmonella | 0 |
| | Compound feedingstuffs for poultry (non specified) - final product - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 76 | 0 | Salmonella | 0 |
| | Compound feedingstuffs for poultry, breeders - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 7 | 0 | Salmonella | 0 |
| | Compound feedingstuffs for poultry, broilers - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 45 | 1 | Salmonella Senftenberg | 1 |
| | Compound feedingstuffs for poultry, laying hens - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 31 | 0 | Salmonella | 0 |
| | Feed material of cereal grain origin - barley derived - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 2 | 0 | Salmonella | 0 |
| | Feed material of cereal grain origin - maize derived - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 18 | 0 | Salmonella | 0 |
| | Feed material of cereal grain origin - other cereal grain derived - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 3 | 0 | Salmonella | 0 |
| | Feed material of cereal grain origin - wheat derived - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 7 | 0 | Salmonella | 0 |
| | Feed material of land animal origin - meat meal - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 11 | 0 | Salmonella | 0 |
| | Feed material of marine animal origin - fish meal - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 5 | 0 | Salmonella | 0 |
| | Feed material of oil seed or fruit origin - rape seed derived - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 14 | 0 | Salmonella | 0 |
| | Feed material of oil seed or fruit origin - soya (bean) derived - Feed mill - Not Available - Not Available - Monitoring - active - Official sampling - Objective sampling | single (food/feed) | 25 | Gram | Not Available | 40 | 0 | Salmonella | 0 |

**Table Staphylococcal enterotoxins:STAPHYLOCOCCAL ENTEROTOXINS in food**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Sampling unit | Sample weight | Sample weight unit | Method | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|---|---|
| Not Available | Meat from pig - meat products - fermented sausages - Processing plant - Not Available - Not Available - Unspecified - HACCP and own check - Suspect sampling | single (food/feed) | 25 | Gram | Not Available | 2 | 0 | Staphylococcal enterotoxins | 0 |
| | Meat from pig - meat products - fermented sausages - Unspecified - Not Available - Not Available - Clinical investigations - Official sampling - Suspect sampling | single (food/feed) | 25 | Gram | Not Available | 1 | 0 | Staphylococcal enterotoxins | 0 |
| | Other processed food products and prepared dishes - noodles - Retail - Not Available - Not Available - Unspecified - Official sampling - Suspect sampling | single (food/feed) | 25 | Gram | Not Available | 1 | 0 | Staphylococcal enterotoxins | 0 |

## Table Toxoplasma:TOXOPLASMA in animal

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| Not Available | Goats - Farm - Not Available - animal sample - foetus/stillbirth - Clinical investigations - Private sampling - Suspect sampling | Immuno Histo Chemistry (IHC) | animal | 1 | 0 | Toxoplasma | 0 |
| | Sheep - Farm - Not Available - animal sample - blood - Clinical investigations - Private sampling - Suspect sampling | Complement fixation test (CFT) | animal | 4 | 0 | Toxoplasma | 0 |
| | Sheep - Farm - Not Available - animal sample - foetus/stillbirth - Clinical investigations - Private sampling - Suspect sampling | Immuno Histo Chemistry (IHC) | animal | 3 | 0 | Toxoplasma | 0 |

**Table Trichinella:TRICHINELLA in animal**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| Not Available | Pigs - breeding animals - not raised under controlled housing conditions - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census | Not Available | animal | 118509 | 0 | Trichinella | 0 |
| | Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census | Not Available | animal | 4529124 | 0 | Trichinella | 0 |
| | Solipeds, domestic - Slaughterhouse - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census | Not Available | animal | 1086 | 0 | Trichinella | 0 |
| | Wild boars - Game handling establishment - Not Available - animal sample - organ/tissue - Surveillance - Official sampling - Census | Not Available | animal | 87088 | 9 | Trichinella britovi | 2 |
| | | | | | | Trichinella spiralis | 6 |
| | | | | | | Trichinella, unspecified sp. | 1 |

**Table Yersinia:YERSINIA in animal**

| Area of Sampling | Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy | Method | Sampling unit | Total units tested | Total units positive | Zoonoses | N of units positive |
|---|---|---|---|---|---|---|---|
| Not Available | Pigs - Farm - Not Available - Not Available - Control and eradication programmes - Official sampling - Suspect sampling | Not Available | animal | 5 | 2 | Yersinia | 2 |
| | Sheep - Farm - Not Available - Not Available - Clinical investigations - Industry sampling - Suspect sampling | Not Available | animal | 1 | 1 | Yersinia pseudotuberculosis | 1 |

# FOODBORNE OUTBREAKS TABLES

## Foodborne Outbreaks: summarized data

| | | Outbreak strenght | Strong | | | Weak | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Causative agent** | **Food vehicle** | **N outbreaks** | **N human cases** | **N hospitalized** | **N deaths** | **N outbreaks** | **N human cases** | **N hospitalized** | **N deaths** |
| Bacillus cereus | Other foods | | | | | 1 | 11 | 6 | 0 |
| Clostridium perfringens | Pig meat and products thereof | 1 | 64 | 0 | 0 | | | | |
| | Broiler meat (Gallus gallus) and products thereof | 1 | 28 | 1 | 0 | | | | |
| | Vegetables and juices and other products thereof | 6 | 52 | 1 | 0 | | | | |
| | Other foods | 1 | 17 | 0 | 0 | 2 | 15 | 7 | 3 |
| Microorganisms | Other foods | | | | | 2 | 61 | 0 | 0 |
| Norovirus | Vegetables and juices and other products thereof | 1 | 126 | 0 | 0 | | | | |
| | Other foods | 8 | 449 | 0 | 0 | | | | |
| Salmonella Enteritidis | Other foods | | | | | 2 | 32 | 5 | 0 |
| Salmonella Enteritidis 13 | Other foods | | | | | 1 | 2 | 1 | 0 |
| Salmonella Enteritidis Other | Pig meat and products thereof | | | | | 1 | 11 | 0 | 0 |
| Salmonella Enteritidis PT 1 | Eggs and egg products | 1 | 50 | 4 | 0 | | | | |
| Salmonella Enteritidis PT 2 | Eggs and egg products | | | | | 1 | 9 | 5 | 0 |
| | Other foods | | | | | 3 | 79 | 18 | 0 |
| Salmonella Enteritidis PT 51 | Other foods | | | | | 2 | 62 | 5 | 0 |
| Salmonella Enteritidis PT 8 | Eggs and egg products | 1 | 19 | 4 | 0 | 1 | 6 | 0 | 0 |
| | Other foods | | | | | 1 | 13 | 0 | 0 |
| Unknown | Other foods | | | | | 3 | 195 | 0 | 0 |

## Strong Foodborne Outbreaks: detailed data

| Causative agent | Other Causative Agent | FBO nat. code | Outbreak type | Food vehicle | More food vehicle info | Nature of evidence | Setting | Place of origin of problem | Origin of food vehicle | Contributory factors | Comment | N outbreaks | N human cases | N hosp. | N deaths |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clostridium perfringens | Not Available | Étbi_10 | General | Broiler meat (Gallus gallus) and products thereof | N_A | Analytical epidemiological evidence | School or kindergarten | Canteen or workplace catering | Hungary | Inadequate chilling | N_A | 1 | 28 | 1 | 0 |
| | | Étbi_27 | General | Other foods | N_A | Analytical epidemiological evidence | Canteen or workplace catering | Canteen or workplace catering | Hungary | Inadequate heat treatment | N_A | 1 | 17 | 0 | 0 |
| | | Étbi_6 | General | Vegetables and juices and other products thereof | N_A | Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans | Residential institution (nursing home or prison or boarding school) | Canteen or workplace catering | Hungary | Unknown | N_A | 3 | 25 | 0 | 0 |
| | | Étbi_7 | General | Pig meat and products thereof | N_A | Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Inadequate heat treatment | N_A | 1 | 64 | 0 | 0 |
| | | Étbi_8 | General | Vegetables and juices and other products thereof | N_A | Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans | Canteen or workplace catering | Canteen or workplace catering | Hungary | Inadequate chilling | N_A | 3 | 27 | 1 | 0 |
| Norovirus | Not Available | Étbi_1 | General | Vegetables and juices and other products thereof | N_A | Descriptive epidemiological evidence | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Inadequate chilling | N_A | 1 | 126 | 0 | 0 |
| | | Étbi_26 | General | Other foods | N_A | Descriptive epidemiological evidence | Canteen or workplace catering | Canteen or workplace catering | Hungary | Unknown | N_A | 8 | 449 | 0 | 0 |

| Causative agent | Other Causative Agent | FBO nat. code | Outbreak type | Food vehicle | More food vehicle info | Nature of evidence | Setting | Place of origin of problem | Origin of food vehicle | Contributory factors | Comment | N outbreaks | N human cases | N hosp. | N deaths |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Salmonella Enteritidis PT 1 | Not Available | Étbi_3 | General | Eggs and egg products | N_A | Detection of causative agent in food chain or its environment - Detection of indistinguishable causative agent in humans | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Farm | Hungary | Unprocessed contaminated ingredient | N_A | 1 | 50 | 4 | 0 |
| Salmonella Enteritidis PT 8 | Not Available | Étbi_9 | General | Eggs and egg products | N_A | Analytical epidemiological evidence | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 19 | 4 | 0 |

| Causative agent | Other Causative Agent | FBO nat. code | Outbreak type | Food vehicle | More food vehicle info | Nature of evidence | Setting | Place of origin of problem | Origin of food vehicle | Contributory factors | Comment | N outbreaks | N human cases | N hosp. | N deaths |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bacillus cereus | Not Available | Étbi_13 | General | Other foods | N_A | Unknown | Canteen or workplace catering | Canteen or workplace catering | Hungary | Inadequate heat treatment | N_A | 1 | 11 | 6 | 0 |
| Clostridium perfringens | Not Available | Étbi_2 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 5 | 0 | 0 |
| | | Etbi_21 | General | Other foods | N_A | Unknown | Residential institution (nursing home or prison or boarding school) | Canteen or workplace catering | Hungary | Unknown | N_A | 1 | 10 | 7 | 3 |
| Microorganisms | Not Available | Étbi_23 | General | Other foods | N_A | Unknown | Residential institution (nursing home or prison or boarding school) | Canteen or workplace catering | Hungary | Inadequate chilling | N_A | 1 | 57 | 0 | 0 |
| | | Étbi_28 | General | Other foods | N_A | Unknown | Canteen or workplace catering | Canteen or workplace catering | Hungary | Unknown | N_A | 1 | 4 | 0 | 0 |
| Salmonella Enteritidis | Not Available | Étbi_17 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 8 | 0 | 0 |
| | | Étbi_4 | General | Other foods | N_A | Unknown | School or kindergarten | Canteen or workplace catering | Hungary | Unknown | N_A | 1 | 24 | 5 | 0 |
| Salmonella Enteritidis 13 | Not Available | Étbi_25 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Canteen or workplace catering | Hungary | Infected food handler | N_A | 1 | 2 | 1 | 0 |

| Causative agent | Other Causative Agent | FBO nat. code | Outbreak type | Food vehicle | More food vehicle info | Nature of evidence | Setting | Place of origin of problem | Origin of food vehicle | Contributory factors | Comment | N outbreaks | N human cases | N hosp. | N deaths |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Salmonella Enteritidis Other | Not Available | Étbi_11 | General | Pig meat and products thereof | N_A | Unknown | Residential institution (nursing home or prison or boarding school) | Canteen or workplace catering | Hungary | Infected food handler | N_A | 1 | 11 | 0 | 0 |
| Salmonella Enteritidis PT 2 | Not Available | Étbi_12 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 45 | 9 | 0 |
| | | Étbi_18 | General | Eggs and egg products | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Inadequate heat treatment | N_A | 1 | 9 | 5 | 0 |
| | | Étbi_19 | General | Other foods | N_A | Unknown | Canteen or workplace catering | Canteen or workplace catering | Hungary | Unknown | N_A | 1 | 30 | 8 | 0 |
| | | Étbi_24 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 4 | 1 | 0 |
| Salmonella Enteritidis PT 51 | Not Available | Étbi_15 | General | Other foods | N_A | Unknown | School or kindergarten | Canteen or workplace catering | Hungary | Cross-contamination | N_A | 2 | 62 | 5 | 0 |
| Salmonella Enteritidis PT 8 | Not Available | Étbi_16 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Cross-contamination | N_A | 1 | 13 | 0 | 0 |
| | | Étbi_22 | General | Eggs and egg products | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 6 | 0 | 0 |

| Causative agent | Other Causative Agent | FBO nat. code | Outbreak type | Food vehicle | More food vehicle info | Nature of evidence | Setting | Place of origin of problem | Origin of food vehicle | Contributory factors | Comment | N outbreaks | N human cases | N hosp. | N deaths |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unknown | Not Available | Étbi_14 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Temporary mass catering (fairs or festivals) | Hungary | Unknown | N_A | 1 | 90 | 0 | 0 |
| | | Étbi_20 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 4 | 0 | 0 |
| | | Étbi_5 | General | Other foods | N_A | Unknown | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Restaurant or Cafe or Pub or Bar or Hotel or Catering service | Hungary | Unknown | N_A | 1 | 101 | 0 | 0 |

## ANTIMICROBIAL RESISTANCE TABLES FOR CAMPYLOBACTER

## ANTIMICROBIAL RESISTANCE TABLES FOR SALMONELLA

### Table Antimicrobial susceptibility testing of Salmonella Agona in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | 1 | | | | | | | | |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | 1 | | | | | | | | | | 1 | 1 |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| <=1 | | 1 | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| 4 | | | 1 | | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 16 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Derby in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** |
| **MIC** | **N of resistant isolates** | **3** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2** | **3** | **0** | **2** |
| <=0.015 | | | | | | | 8 | | | | | | | | |
| <=0.03 | | | | | | | | | | 9 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | 9 | | | | | | | | | | 5 | 6 |
| <=0.5 | | | | | 9 | | | | 9 | | | | | | |
| 0.5 | | | | | | | | | | | | | | 4 | 1 |
| <=1 | | 4 | | | | | | 9 | | | | | | | |
| <=2 | | | | | | | | | | | | | 6 | | |
| 2 | | 2 | | | | | | | | | | | | | |
| <=4 | | | | | | | | | | | 9 | | | | |
| <=8 | | | | | | 9 | | | | | | | | | |
| 8 | | | 8 | | | | | | | | | | | | |
| 16 | | | 1 | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | 4 | | | |
| >32 | | | | | | | | | | | | | | | 2 |
| 64 | | | | | | | | | | | | 3 | | | |
| >64 | | 3 | | | | | | | | | | | 3 | | |
| >1024 | | | | | | | | | | | | 2 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Derby in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | 1 | | | | | | | | | | | 1 |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | 1 | |
| <=1 | | | | | | | | 1 | | | | | | | |
| 2 | | 1 | | | | | | | | | | | | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 8 | | | 1 | | | | | | | | | | | | |
| 64 | | | | | | | | | | | | | 1 | | |
| >1024 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Goldcoast in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| 0.03 | | | | | | | 1 | | | | | | | | |
| 0.064 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | 1 | | | | | | | | | | | |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | 1 | 1 |
| <=1 | | | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| 2 | | 1 | | | | | | | | | | | | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 8 | | | 1 | | | | | | | | | | | | |
| 128 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Infantis in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | 1 | | | | | | | | |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | 1 | | | | | | | | | | 1 | 1 |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| <=1 | | 1 | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| 4 | | | 1 | | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 32 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Litchfield in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | 2 | | | | | | | | |
| <=0.03 | | | | | | | | | | 2 | | | | | |
| <=0.25 | | | | 2 | | | | | | | | | | 2 | 2 |
| <=0.5 | | | | | 1 | | | | 2 | | | | | | |
| <=1 | | 2 | | | | | | 2 | | | | | | | |
| 1 | | | | | 1 | | | | | | | | | | |
| <=2 | | | | | | | | | | | | | 2 | | |
| <=4 | | | | | | | | | | | 2 | | | | |
| <=8 | | | | | | 2 | | | | | | | | | |
| 8 | | | 2 | | | | | | | | | | | | |
| 64 | | | | | | | | | | | | 2 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Rissen in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | 1 | | | | | | | | | | 1 | |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | | 1 |
| <=1 | | 1 | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 8 | | | 1 | | | | | | | | | | | | |
| 64 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | 1 | | | | | | | | | | 1 | |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | | 1 |
| <=1 | | 1 | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| 4 | | | 1 | | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 16 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Meat from pig - carcase

Sampling Stage: Slaughterhouse

Sampling Type: food sample - carcase swabs

Sampling Context: Monitoring

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.5** | **2** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **256** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** |
| **MIC** | **N of resistant isolates** | **2** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **0** |
| <=0.015 | | | | | | | 1 | | | | | | | | |
| <=0.03 | | | | | | | | | | 2 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | 2 | | | | | | | | | | 1 | 1 |
| <=0.5 | | | | | 2 | | | | 2 | | | | | | |
| 0.5 | | | | | | | | | | | | | | 1 | |
| <=1 | | | | | | | | 2 | | | | | | | |
| 1 | | | | | | | | | | | | | | | 1 |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 2 | | | | |
| 4 | | | 2 | | | | | | | | | | | | |
| <=8 | | | | | | 2 | | | | | | | | | |
| 32 | | | | | | | | | | | | 1 | | | |
| >64 | | 2 | | | | | | | | | | | 1 | | |
| >1024 | | | | | | | | | | | | 1 | | | |

## ANTIMICROBIAL RESISTANCE TABLES FOR INDICATOR ESCHERICHIA COLI

### Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Austria

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cefotaxime synergy test | Not Available | Not Available | Negative/Absent | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available |
| | Ceftazidime synergy test | Not Available | Not Available | Not Available | Not Available | Not Available | Negative/Absent | Not Available | Not Available | Not Available | Not Available |
| | ECOFF | 0.125 | 0.25 | 0.25 | 8 | 0.5 | 0.5 | 0.06 | 0.5 | 0.125 | 32 |
| | Lowest limit | 0.064 | 0.25 | 0.064 | 0.5 | 0.25 | 0.12 | 0.015 | 0.12 | 0.03 | 0.5 |
| | Highest limit | 32 | 64 | 64 | 64 | 128 | 128 | 2 | 16 | 16 | 64 |
| | N of tested isolates | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| MIC | N of resistant isolates | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| 0.064 | | | | | | | | | | 1 | |
| 0.12 | | | | | | | | 1 | | | |
| 0.25 | | | | | | | | | 1 | | |
| 0.5 | | 1 | | | | | | | | | |
| 8 | | | | | | | 1 | | | | 1 |
| 16 | | | 1 | 1 | | 1 | | | | | |
| >64 | | | | | 1 | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Austria

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | | | | | | | | | | | 1 | |
| <=0.5 | | | | | | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | | 1 |
| <=1 | | | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| 4 | | | 1 | | | | | | | | | | | | |
| >4 | | | | 1 | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| >8 | | | | | 1 | | | | | | | | | | |
| 32 | | | | | | | | | | | | 1 | | | |
| >64 | | 1 | | | | | | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Poland

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| | **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| | **ECOFF** | **0.125** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| | **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.5** | **0.25** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| | **Highest limit** | **32** | **64** | **64** | **64** | **128** | **128** | **2** | **16** | **16** | **64** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **0** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | |
| 0.064 | | | | | | | | 1 | | | |
| <=0.12 | | | | | | | | | 1 | | |
| 0.25 | | 1 | | | | | | | | | |
| 4 | | | | 1 | | | 1 | | | | |
| 8 | | | 1 | | | 1 | | | | | 1 |
| 64 | | | | | 1 | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Poland

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | | | | | | | | | | | | 1 |
| 0.5 | | | | | | | | | | | | | | 1 | |
| <=1 | | | | | | | | 1 | | | | | | | |
| 1 | | | | | | | | | 1 | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| 4 | | | 1 | | | | | | | | | | | | |
| >4 | | | | 1 | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| >8 | | | | | 1 | | | | | | | | | | |
| >64 | | 1 | | | | | | | | | | | | | |
| >1024 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Unknown

| AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **ECOFF** | **0.125** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.5** | **0.25** | **0.12** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| **Highest limit** | **32** | **64** | **64** | **64** | **128** | **128** | **128** | **2** | **16** | **16** | **64** |
| **N of tested isolates** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** |
| **N of resistant isolates** | **7** | **7** | **0** | **0** | **6** | **0** | **0** | **0** | **0** | **0** | **0** |
| **MIC** | | | | | | | | | | | |
| <=0.015 | | | | | | | | 6 | | | |
| <=0.03 | | | | | | | | | | 7 | |
| 0.03 | | | | | | | | 1 | | | |
| <=0.064 | | | 7 | | | | | | | | |
| <=0.12 | | | | | | 6 | 1 | | 6 | | |
| 0.25 | | | | | | | | | 1 | | |
| 0.5 | | | | | 1 | | | | | | |
| 1 | | | | | 1 | | | | | | |
| 2 | 2 | | | | 2 | | | | | | |
| 4 | 1 | | | 4 | | | | | | | 6 |
| 8 | 4 | | | 3 | 3 | | | | | | 1 |
| 16 | | 1 | | | | | | | | | |
| 32 | | 3 | | | | | | | | | |
| 64 | | 3 | | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Unknown

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** |
| **MIC** | **N of resistant isolates** | **7** | **1** | **7** | **6** | **3** | **3** | **0** | **1** | **0** | **2** | **5** | **5** | **0** | **2** |
| <=0.015 | | | | | | | 3 | | | | | | | | |
| <=0.03 | | | | | | | | | | 7 | | | | | |
| 0.03 | | | | | | | 1 | | | | | | | | |
| <=0.25 | | | | | | | | | | | | | | 6 | 2 |
| <=0.5 | | | | | 1 | | | | 4 | | | | | | |
| 0.5 | | | | | | | 1 | | | | | | | 1 | 3 |
| <=1 | | | | | | | | 7 | | | | | | | |
| 1 | | | | | 1 | | | | 2 | | | | | | |
| <=2 | | | 1 | | | | | | | | | | 2 | | |
| 2 | | | | | 2 | | | | | | | | | | |
| <=4 | | | | | | | | | | | 4 | | | | |
| 4 | | | 2 | | | | 1 | | 1 | | | | | | |
| >4 | | | | 7 | | | | | | | | | | | |
| <=8 | | | | | | 4 | | | | | | | | | |
| 8 | | | 3 | | 2 | | 1 | | | | 1 | | | | |
| >8 | | | | | 1 | | | | | | | | | | |
| 16 | | | | | | | | | | | | 1 | | | |
| 32 | | | 1 | | | 1 | | | | | | 1 | | | |
| >32 | | | | | | | | | | | | | | | 2 |
| 64 | | | | | | | | | | | | | 1 | | |
| >64 | | 7 | | | | | | | | | | | 4 | | |
| 128 | | | | | | 1 | | | | | | | | | |
| >128 | | | | | | 1 | | | | | 2 | | | | |

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** | **7** |
| **MIC** | **N of resistant isolates** | **7** | **1** | **7** | **6** | **3** | **3** | **0** | **1** | **0** | **2** | **5** | **5** | **0** | **2** |
| >1024 | | | | | | | | | | | | 5 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Hungary

| AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|
| **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **ECOFF** | **0.125** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.5** | **0.25** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| **Highest limit** | **32** | **64** | **64** | **64** | **128** | **128** | **2** | **16** | **16** | **64** |
| **N of tested isolates** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** |
| **MIC** **N of resistant isolates** | **9** | **9** | **0** | **0** | **9** | **0** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | 7 | | | |
| <=0.03 | | | | | | | | | 9 | |
| 0.03 | | | | | | | 2 | | | |
| <=0.064 | | | 9 | | | | | | | |
| <=0.12 | | | | | | 9 | | 8 | | |
| 0.25 | | | | | | | | 1 | | |
| 1 | | | | | 5 | | | | | |
| 2 | 1 | | | 1 | 2 | | | | | 3 |
| 4 | 5 | | | 6 | 1 | | | | | 5 |
| 8 | 2 | | | 2 | | | | | | 1 |
| 16 | | 2 | | | 1 | | | | | |
| 32 | | 3 | | | | | | | | |
| >32 | 1 | | | | | | | | | |
| 64 | | 2 | | | | | | | | |
| >64 | | 2 | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from bovine animals - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** |
| **MIC** | **N of resistant isolates** | **9** | **0** | **9** | **9** | **7** | **1** | **0** | **0** | **0** | **0** | **8** | **8** | **0** | **0** |
| <=0.015 | | | | | | | 8 | | | | | | | | |
| <=0.03 | | | | | | | | | | 9 | | | | | |
| <=0.25 | | | | | | | | | | | | | | 5 | 7 |
| 0.25 | | | | | | | 1 | | | | | | | | |
| <=0.5 | | | | | | | | | 8 | | | | | | |
| 0.5 | | | | | | | | | | | | | | 4 | 2 |
| <=1 | | | | | | | | 9 | | | | | | | |
| 1 | | | | | 6 | | | | 1 | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| 2 | | | | | 1 | | | | | | | | | | |
| <=4 | | | | | | | | | | | 9 | | | | |
| 4 | | | 6 | | 1 | | | | | | | | | | |
| >4 | | | | 9 | | | | | | | | | | | |
| <=8 | | | | | | 2 | | | | | | 1 | | | |
| 8 | | | 3 | | 1 | | | | | | | | | | |
| 64 | | | | | | 1 | | | | | | | 3 | | |
| >64 | | 9 | | | | | | | | | | | 5 | | |
| 128 | | | | | | 5 | | | | | | | | | |
| >128 | | | | | | 1 | | | | | | | | | |
| >1024 | | | | | | | | | | | | 8 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON pnl2

Analytical Method:

Country of Origin: Hungary

| AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **ECOFF** | **0.125** | **0.25** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.064** | **0.5** | **0.25** | **0.12** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| **Highest limit** | **32** | **64** | **64** | **64** | **64** | **128** | **128** | **128** | **2** | **16** | **16** | **64** |
| **N of tested isolates** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** | **2** |
| **MIC** **N of resistant isolates** | **2** | **2** | **1** | **1** | **1** | **2** | **1** | **1** | **0** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | | 2 | |
| 0.03 | | | | | | | | | 2 | | | |
| <=0.064 | | | 1 | | | | | | | | | |
| 0.25 | | | | | | | 1 | | | 2 | | |
| 0.5 | 1 | | | | | | | | | | | |
| 4 | | | | | 1 | 1 | | | | | | 1 |
| 8 | | 1 | | 1 | | | | 1 | | | | |
| 16 | | | | | | 1 | | | | | | 1 |
| 32 | 1 | | | | | | | | | | | |
| 64 | | | | | 1 | | | | | | | |
| >64 | | 1 | | | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** |
| **MIC** | **N of resistant isolates** | **76** | **4** | **2** | **2** | **29** | **13** | **3** | **3** | **0** | **9** | **54** | **113** | **0** | **44** |
| <=0.015 | | | | | | | 134 | | | | | | | | |
| <=0.03 | | | | | | | | | | 170 | | | | | |
| 0.03 | | | | | | | 23 | | | | | | | | |
| 0.12 | | | | | | | 2 | | | | | | | | |
| <=0.25 | | | | 168 | | | | | | | | | | 149 | 79 |
| 0.25 | | | | | | | 5 | | | | | | | | |
| <=0.5 | | | | | 168 | | | | 125 | | | | | | |
| 0.5 | | | | | | | 2 | | | | | | | 21 | 44 |
| <=1 | 4 | | | | | | | 163 | | | | | | | |
| 1 | | | | | | | | | 39 | | | | | | 3 |
| <=2 | | 20 | | | | | | | | | | | 53 | | |
| 2 | 38 | | | | | | 1 | 4 | 3 | | | | | | |
| <=4 | | | | | | | | | | | 154 | | | | |
| 4 | 48 | 73 | | 1 | | | | 2 | | | | | 4 | | |
| >4 | | | 2 | | | | | | | | | | | | |
| <=8 | | | | | | 137 | | | | | | 81 | | | |
| 8 | 4 | 69 | | | | | 1 | 1 | | | 6 | | | | 1 |
| >8 | | | | 1 | | | 2 | | | | | | | | |
| 16 | 1 | 4 | | | | 4 | | | | | 1 | 30 | | | 1 |
| 32 | | | | | | 3 | | | | | | 3 | 4 | | |
| >32 | | | | | | | | | 3 | | | | | | 42 |
| 64 | 2 | | | | | 11 | | | | | 1 | 2 | 28 | | |
| >64 | 73 | 4 | | | | | | | | | | | 81 | | |

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** | **170** |
| **MIC** | **N of resistant isolates** | **76** | **4** | **2** | **2** | **29** | **13** | **3** | **3** | **0** | **9** | **54** | **113** | **0** | **44** |
| 128 | | | | | | 7 | | | | | 2 | | | | |
| >128 | | | | | | 8 | | | | | 6 | | | | |
| 1024 | | | | | | | | | | | | 1 | | | |
| >1024 | | | | | | | | | | | | 53 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Hungary

| AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **ECOFF** | **0.125** | **0.25** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.064** | **0.5** | **0.25** | **0.12** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| **Highest limit** | **32** | **64** | **64** | **64** | **64** | **128** | **128** | **128** | **2** | **16** | **16** | **64** |
| **N of tested isolates** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** |
| **MIC** / **N of resistant isolates** | **158** | **175** | **37** | **37** | **38** | **170** | **37** | **37** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | | | 140 | | | |
| <=0.03 | | | | | | | | | | | 174 | |
| 0.03 | | | | | | | | | 30 | | | |
| <=0.064 | 6 | | 132 | | | | | | | | | |
| 0.064 | | | | | | | | | 5 | | 1 | |
| <=0.12 | | | | | | | 89 | 4 | | 151 | | |
| 0.12 | 11 | | 6 | | | | | | | | | |
| 0.25 | 18 | | | | | | 35 | 7 | | 23 | | |
| 0.5 | 7 | | | 1 | | 5 | 1 | 2 | | 1 | | |
| 1 | 6 | 3 | | 4 | | 35 | 1 | | | | | |
| 2 | 17 | 11 | | 10 | 23 | 55 | | 7 | | | | 9 |
| 4 | 65 | 10 | 1 | 8 | 92 | 23 | | 8 | | | | 93 |
| 8 | 39 | 23 | | 12 | 22 | 20 | | 14 | | | | 66 |
| 16 | 4 | 38 | | 1 | 4 | 34 | | 7 | | | | 7 |
| 32 | 1 | 45 | | | 8 | 3 | | | | | | |
| >32 | 1 | | | | | | | | | | | |

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cefotaxime synergy test | Not Available | Not Available | Positive/Present | Negative/Absent | Not Available | Not Available | Not Available | | Not Available | Not Available | Not Available | Not Available |
| | Ceftazidime synergy test | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Positive/Present | Negative/Absent | Not Available | Not Available | Not Available | Not Available |
| | ECOFF | 0.125 | 0.25 | 0.25 | 0.25 | 8 | 0.5 | 0.5 | 0.5 | 0.06 | 0.5 | 0.125 | 32 |
| | Lowest limit | 0.064 | 0.25 | 0.064 | 0.064 | 0.5 | 0.25 | 0.12 | 0.12 | 0.015 | 0.12 | 0.03 | 0.5 |
| | Highest limit | 32 | 64 | 64 | 64 | 64 | 128 | 128 | 128 | 2 | 16 | 16 | 64 |
| | N of tested isolates | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 | 175 |
| MIC | N of resistant isolates | 158 | 175 | 37 | 37 | 38 | 170 | 37 | 37 | 0 | 0 | 0 | 0 |
| 64 | | | 29 | | | 24 | | | | | | | |
| >64 | | | 16 | | | 2 | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Pigs - fattening pigs

Sampling Stage: Slaughterhouse

Sampling Type: animal sample - caecum

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** |
| **MIC** | **N of resistant isolates** | **175** | **9** | **175** | **170** | **42** | **63** | **2** | **23** | **0** | **36** | **106** | **114** | **0** | **93** |
| <=0.015 | | | | | | | 91 | | | | | | | | |
| <=0.03 | | | | | | | | | | 173 | | | | | |
| 0.03 | | | | | | | 20 | | | | | | | | |
| 0.064 | | | | | | | 1 | | | 2 | | | | | |
| 0.12 | | | | | | | 2 | | | | | | | | |
| <=0.25 | | | | | | | | | | | | | | 147 | 49 |
| 0.25 | | | | | | | 17 | | | | | | | | |
| <=0.5 | | | | | 5 | | | | 124 | | | | | | |
| 0.5 | | | | | | | 13 | | | | | | | 28 | 28 |
| <=1 | | | | | | | | 171 | | | | | | | |
| 1 | | | | 3 | 36 | | | | 26 | | | | | | 4 |
| <=2 | | | 8 | | | | | | | | | | 57 | | |
| 2 | | | | 10 | 54 | | | 2 | 2 | | | | | | 1 |
| <=4 | | | | | | | | | | | 109 | | | | |
| 4 | | | 53 | 10 | 25 | | | 2 | | | | | 4 | | |
| >4 | | | | 152 | | | | | | | | | | | |
| <=8 | | | | | | 129 | | | | | | 35 | | | |
| 8 | | | 95 | | 25 | | 16 | | 1 | | 19 | | | | |
| >8 | | | | | 30 | | 15 | | | | | | | | |
| 16 | | | 10 | | | 4 | | | 5 | | 11 | 22 | | | |
| 32 | | | 4 | | | 6 | | | 6 | | 1 | 10 | | | |
| >32 | | | | | | | | | 11 | | | | | | 93 |
| 64 | | | 1 | | | 7 | | | | | 1 | 2 | 30 | | |

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** | **175** |
| **MIC** | **N of resistant isolates** | **175** | **9** | **175** | **170** | **42** | **63** | **2** | **23** | **0** | **36** | **106** | **114** | **0** | **93** |
| >64 | | 175 | 4 | | | | | | | | | | 84 | | |
| 128 | | | | | | 18 | | | | | 3 | | | | |
| >128 | | | | | | 11 | | | | | 31 | | | | |
| >1024 | | | | | | | | | | | | 106 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Austria

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| | **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| | **ECOFF** | **0.125** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| | **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.5** | **0.25** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| | **Highest limit** | **32** | **64** | **64** | **64** | **128** | **128** | **2** | **16** | **16** | **64** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **1** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | | 1 | | | |
| <=0.03 | | | | | | | | | | 1 | |
| <=0.064 | | | | 1 | | | | | | | |
| <=0.12 | | | | | | | 1 | | 1 | | |
| 4 | | 1 | | | | 1 | | | | | 1 |
| 8 | | | | | 1 | | | | | | |
| 32 | | | 1 | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Austria

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | 1 | | | | | | | | |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | | | | | | | | | | | | 1 |
| <=0.5 | | | | | | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | 1 | |
| <=1 | | | | | | | | 1 | | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 1 | | | | |
| 4 | | | | | 1 | | | | | | | | | | |
| >4 | | | | 1 | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 8 | | | 1 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | 1 | | | |
| >64 | | 1 | | | | | | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Poland

| AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|
| **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **ECOFF** | **0.125** | **0.25** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.064** | **0.5** | **0.25** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| **Highest limit** | **32** | **64** | **64** | **64** | **64** | **128** | **128** | **2** | **16** | **16** | **64** |
| **N of tested isolates** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** |
| **MIC** / **N of resistant isolates** | **3** | **3** | **2** | **2** | **2** | **2** | **2** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | | 1 | | | |
| <=0.03 | | | | | | | | | | 2 | |
| <=0.064 | | | 1 | | | | | | | | |
| 0.064 | | | | | | | | 2 | | 1 | |
| <=0.12 | | | | | | | 1 | | 1 | | |
| 0.25 | 1 | | | | | | | | 1 | | |
| 0.5 | 1 | | | | | 1 | | | 1 | | |
| 2 | 1 | | | | | | | | | | 1 |
| 4 | | | | | 1 | | | | | | |
| 8 | | | | 1 | | | | | | | 2 |
| 16 | | 3 | | 1 | | 1 | 2 | | | | |
| 32 | | | | | | 1 | | | | | |
| >64 | | | | | 2 | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Poland

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** | **3** |
| **MIC** | **N of resistant isolates** | **3** | **0** | **3** | **2** | **1** | **1** | **0** | **0** | **0** | **1** | **3** | **1** | **0** | **1** |
| <=0.03 | | | | | | | | | | 2 | | | | | |
| 0.03 | | | | | | | 2 | | | | | | | | |
| 0.064 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | | | | | | | | | | | 3 | 2 |
| <=0.5 | | | | | 1 | | | | 1 | | | | | | |
| <=1 | | | | | | | | 3 | | | | | | | |
| 1 | | | | | | | | | 2 | | | | | | |
| <=2 | | | | | | | | | | | | | 1 | | |
| <=4 | | | | | | | | | | | 2 | | | | |
| 4 | | | | | | | | | | | | | 1 | | |
| >4 | | | | 3 | | | | | | | | | | | |
| <=8 | | | | | | 2 | | | | | | | | | |
| 8 | | | 3 | | | | 1 | | | | | | | | |
| >8 | | | | | 2 | | | | | | | | | | |
| >32 | | | | | | | | | | | | | | | 1 |
| 64 | | | | | | | | | | | | | 1 | | |
| >64 | | 3 | | | | | | | | | | | | | |
| >128 | | | | | | 1 | | | | | 1 | | | | |
| >1024 | | | | | | | | | | | | 3 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Unknown

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cefotaxime synergy test | Not Available | Not Available | Positive/Present | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available |
| | Ceftazidime synergy test | Not Available | Not Available | Not Available | Not Available | Not Available | Positive/Present | Not Available | Not Available | Not Available | Not Available |
| | ECOFF | 0.125 | 0.25 | 0.25 | 8 | 0.5 | 0.5 | 0.06 | 0.5 | 0.125 | 32 |
| | Lowest limit | 0.064 | 0.25 | 0.064 | 0.5 | 0.25 | 0.12 | 0.015 | 0.12 | 0.03 | 0.5 |
| | Highest limit | 32 | 64 | 64 | 64 | 128 | 128 | 2 | 16 | 16 | 64 |
| | N of tested isolates | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| MIC | N of resistant isolates | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| <=0.03 | | | | | | | | | | 1 | |
| 0.03 | | | | | | | | 1 | | | |
| <=0.064 | | | | 1 | | | | | | | |
| <=0.12 | | | | | | | 1 | | 1 | | |
| 2 | | | | | | 1 | | | | | |
| 4 | | | | | 1 | | | | | | 1 |
| 8 | | 1 | | | | | | | | | |
| 16 | | | 1 | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Unknown

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **0** | **1** | **1** | **1** | **1** | **0** | **0** | **0** | **1** | **1** | **1** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | | | | | | | | | | | 1 | |
| <=0.5 | | | | | | | | | 1 | | | | | | |
| 0.5 | | | | | | | | | | | | | | | 1 |
| <=1 | | | | | | | | 1 | | | | | | | |
| 2 | | | | | 1 | | | | | | | | | | |
| >4 | | | | 1 | | | | | | | | | | | |
| 8 | | | 1 | | | | 1 | | | | | | | | |
| >64 | | 1 | | | | | | | | | | | 1 | | |
| 128 | | | | | | 1 | | | | | | | | | |
| >128 | | | | | | | | | | | 1 | | | | |
| >1024 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Germany

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| | **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| | **ECOFF** | **0.125** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| | **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.5** | **0.25** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| | **Highest limit** | **32** | **64** | **64** | **64** | **128** | **128** | **2** | **16** | **16** | **64** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **1** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **0** |
| <=0.03 | | | | | | | | | | 1 | |
| 0.03 | | | | | | | | 1 | | | |
| <=0.064 | | | | 1 | | | | | | | |
| <=0.12 | | | | | | | 1 | | | | |
| 0.25 | | | | | | | | | 1 | | |
| 2 | | | | | | 1 | | | | | |
| 4 | | | | | | | | | | | 1 |
| 16 | | 1 | | | 1 | | | | | | |
| 64 | | | 1 | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Germany

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** | **1** |
| **MIC** | **N of resistant isolates** | **1** | **1** | **1** | **1** | **0** | **1** | **0** | **0** | **0** | **1** | **1** | **1** | **0** | **1** |
| <=0.03 | | | | | | | | | | 1 | | | | | |
| <=0.25 | | | | | | | | | | | | | | 1 | |
| <=1 | | | | | | | | 1 | | | | | | | |
| 1 | | | | | | | | | 1 | | | | | | |
| 2 | | | | | 1 | | | | | | | | | | |
| >4 | | | | 1 | | | | | | | | | | | |
| <=8 | | | | | | 1 | | | | | | | | | |
| 8 | | | | | | | 1 | | | | | | | | |
| >32 | | | | | | | | | | | | | | | 1 |
| >64 | | 1 | 1 | | | | | | | | | | 1 | | |
| >128 | | | | | | | | | | | 1 | | | | |
| >1024 | | | | | | | | | | | | 1 | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON pnl2

Analytical Method:

Country of Origin: Hungary

| AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cefotaxime synergy test** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **Ceftazidime synergy test** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Not Available** | **Positive/Present** | **Negative/Absent** | **Not Available** | **Not Available** | **Not Available** | **Not Available** |
| **ECOFF** | **0.125** | **0.25** | **0.25** | **0.25** | **8** | **0.5** | **0.5** | **0.5** | **0.06** | **0.5** | **0.125** | **32** |
| **Lowest limit** | **0.064** | **0.25** | **0.064** | **0.064** | **0.5** | **0.25** | **0.12** | **0.12** | **0.015** | **0.12** | **0.03** | **0.5** |
| **Highest limit** | **32** | **64** | **64** | **64** | **64** | **128** | **128** | **128** | **2** | **16** | **16** | **64** |
| **N of tested isolates** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** |
| **MIC** **N of resistant isolates** | **8** | **9** | **2** | **2** | **2** | **8** | **2** | **2** | **0** | **0** | **0** | **0** |
| <=0.015 | | | | | | | | | 7 | | | |
| <=0.03 | | | | | | | | | | | 9 | |
| 0.03 | | | | | | | | | 2 | | | |
| <=0.064 | | | 7 | | | | | | | | | |
| <=0.12 | | | | | | | 6 | 1 | | 6 | | |
| 0.12 | 1 | | | | | | | | | | | |
| 0.25 | 1 | | | | | | | | | 3 | | |
| 0.5 | 1 | | | | | 1 | | | | | | |
| 1 | 1 | | | | | | | | | | | |
| 2 | 2 | | | | 1 | 2 | | | | | | 1 |
| 4 | 2 | 3 | | 2 | 3 | 1 | | 1 | | | | 4 |
| 8 | | 2 | | | 3 | 4 | | 1 | | | | 4 |
| 16 | | | | | | 1 | | | | | | |
| 32 | | 3 | | | | | | | | | | |
| >32 | 1 | | | | | | | | | | | |
| 64 | | | | | 2 | | | | | | | |

| | AM substance | Cefepime | Cefotaxim | Cefotaxime + Clavulanic acid | | Cefoxitin | Ceftazidim | Ceftazidime + Clavulanic acid | | Ertapenem | Imipenem | Meropenem | Temocillin |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cefotaxime synergy test | Not Available | Not Available | Positive/Present | Negative/Absent | Not Available | Not Available | Not Available | | Not Available | Not Available | Not Available | Not Available |
| | Ceftazidime synergy test | Not Available | Not Available | Not Available | Not Available | Not Available | Not Available | Positive/Present | Negative/Absent | Not Available | Not Available | Not Available | Not Available |
| | ECOFF | 0.125 | 0.25 | 0.25 | 0.25 | 8 | 0.5 | 0.5 | 0.5 | 0.06 | 0.5 | 0.125 | 32 |
| | Lowest limit | 0.064 | 0.25 | 0.064 | 0.064 | 0.5 | 0.25 | 0.12 | 0.12 | 0.015 | 0.12 | 0.03 | 0.5 |
| | Highest limit | 32 | 64 | 64 | 64 | 64 | 128 | 128 | 128 | 2 | 16 | 16 | 64 |
| | N of tested isolates | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| MIC | N of resistant isolates | 8 | 9 | 2 | 2 | 2 | 8 | 2 | 2 | 0 | 0 | 0 | 0 |
| >64 | | | 1 | | | | | | | | | | |

## Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from pig - fresh

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: ESBL MON

Analytical Method:

Country of Origin: Hungary

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** |
| **MIC** | **N of resistant isolates** | **9** | **0** | **9** | **8** | **5** | **5** | **0** | **2** | **0** | **2** | **6** | **4** | **0** | **3** |
| <=0.015 | | | | | | | 2 | | | | | | | | |
| <=0.03 | | | | | | | | | | 9 | | | | | |
| 0.03 | | | | | | | 2 | | | | | | | | |
| <=0.25 | | | | | | | | | | | | | | 7 | 3 |
| 0.25 | | | | | | | 2 | | | | | | | | |
| <=0.5 | | | | | 1 | | | | 4 | | | | | | |
| 0.5 | | | | | | | 1 | | | | | | | 2 | 3 |
| <=1 | | | | | | | | 9 | | | | | | | |
| 1 | | | | | | | | | 2 | | | | | | |
| <=2 | | | | | | | | | | | | | 3 | | |
| 2 | | | | 1 | 2 | | | | 1 | | | | | | |
| <=4 | | | | | | | | | | | 5 | | | | |
| 4 | | | 4 | 2 | 3 | | | | | | | | 2 | | |
| >4 | | | | 6 | | | | | | | | | | | |
| <=8 | | | | | | 4 | | | | | | 2 | | | |
| 8 | | | 5 | | 1 | | | | | | 2 | | | | |
| >8 | | | | | 2 | | 2 | | | | | | | | |
| 32 | | | | | | | | | 2 | | | 1 | | | |
| >32 | | | | | | | | | | | | | | | 3 |
| 64 | | | | | | 2 | | | | | | | 1 | | |
| >64 | | 9 | | | | | | | | | | | 3 | | |
| 128 | | | | | | 1 | | | | | | | | | |
| >128 | | | | | | 2 | | | | | 2 | | | | |

| | AM substance | Ampicillin | Azithromycin | Cefotaxim | Ceftazidim | Chloramphenicol | Ciprofloxacin | Colistin | Gentamicin | Meropenem | Nalidixic acid | Sulfamethoxazole | Tetracycline | Tigecycline | Trimethoprim |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **ECOFF** | **8** | **16** | **0.25** | **0.5** | **16** | **0.064** | **2** | **2** | **0.125** | **16** | **64** | **8** | **1** | **2** |
| | **Lowest limit** | **1** | **2** | **0.25** | **0.5** | **8** | **0.015** | **1** | **0.5** | **0.03** | **4** | **8** | **2** | **0.25** | **0.25** |
| | **Highest limit** | **64** | **64** | **4** | **8** | **128** | **8** | **16** | **32** | **16** | **128** | **1024** | **64** | **8** | **32** |
| | **N of tested isolates** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** | **9** |
| **MIC** | **N of resistant isolates** | **9** | **0** | **9** | **8** | **5** | **5** | **0** | **2** | **0** | **2** | **6** | **4** | **0** | **3** |
| >1024 | | | | | | | | | | | | 6 | | | |

## OTHER ANTIMICROBIAL RESISTANCE TABLES

## Specific monitoring of ESBL-/AmpC-/carbapenemase-producing bacteria and specific monitoring of carbapenemase-producing bacteria, in the absence of isolate detected

| Programme Code | Matrix Detailed | Zoonotic Agent Detailed | Sampling Strategy | Sampling Stage | Sampling Details | Sampling Context | Sampler | Sample Type | Sampling Unit Type | Sample Origin | Comment | Total Units Tested | Total Units Positive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CARBA MON | Meat from bovine animals - fresh | Escherichia coli, non-pathogenic, unspecified | Objective sampling | Retail | sampOrigs are variable | Monitoring | Official sampling | food sample - meat | batch (food/feed) | Unknown | N_A | 184 | 0 |
| | Meat from pig - fresh | Escherichia coli, non-pathogenic, unspecified | Objective sampling | Retail | sampOrigs are variable | Monitoring | Official sampling | food sample - meat | batch (food/feed) | Unknown | N_A | 298 | 0 |
| | Pigs - fattening pigs | Escherichia coli, non-pathogenic, unspecified | Objective sampling | Slaughterhouse | N_A | Monitoring | Official sampling | animal sample - caecum | slaughter animal batch | Hungary | N_A | 249 | 0 |

European Food Safety Authority

# Latest Transmission set

| Table Name | Last submitted dataset transmission date |
|---|---|
| Antimicrobial Resistance | 26-Jul-2018 |
| Esbl | 26-Jul-2018 |
| Animal Population | 26-Jul-2018 |
| Disease Status | 26-Jul-2018 |
| Food Borne Outbreaks | 26-Jul-2018 |
| Prevalence | 26-Jul-2018 |

# Hungary, Text Forms 2017

**Table of contents**

## 1. Institutions and Laboratories involved in zoonoses monitoring and reporting

National Food Chain Safety Office, Veterinary Diagnostic Directorate

## 2. Animal population

**1. Sources of information and the date(s) (months, years) the information relates to**

Central database, National reports and the Central Statistical Office

**2. Definitions used for different types of animals, herds, flocks and holdings as well as the production types covered**

We report the population data by animal.

## 3. General evaluation: Mycobacterium

**1. History of the disease and/or infection in the country**

Hungary is official free from bovine tuberculosis.

**3. Any recent specific action in the Member State or suggested for the European Union**

All farm workers have to be checked (including also sreening for TBC) 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**.**

## 4. General evaluation: Brucella

**1. History of the disease and/or infection in the country**

Hungary is free from bovine brucellosis. Ovine and caprine brucellosis never occured in Hungary and Hungary is officially free from Brucella melitensis.

## 5. General evaluation: Salmonella

**1. 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. 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. Due to the control programs, salmonella prevalence decreased significally in the last decades. EU prevalence aims were reached first in 2012. In the last three years the prevalence remained under the limit in all types of poultry, with the exception of Gg breeders in 2013 (1,1%) and in Gallus gallus layers in 2016 (2,2%). Relevant salmonella serotypes in turkey breeders have not been observed for years, until 2016, when mST was found at one farm.

**3. Any recent specific action in the Member State or suggested for the European Union**

Vaccination is not compulsory in flocks of Gallus gallus and Meleagris gallopavo. The rules of using vaccination and treatment are laid down in Commission Regulation (EC) No 200/2010 of implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry.

## 6. General evaluation: Campylobacter

**2. Evaluation of status, trends and relevance as a source for humans**

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.

**3. Any recent specific action in the Member State or suggested for the European Union**

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.

## 7. General evaluation: Listeria

**2. Evaluation of status, trends and relevance as a source for humans**

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 microorganismFrom 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 less than 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.

**3. Any recent specific action in the Member State or suggested for the European Union**

Based on Reg. 2073/2005/EC.

## 8. General evaluation: Yersinia

**4. Additional information**

diagnostic methods: bacteriological examination and PCR

## 9. General evaluation: Trichinella

**1. 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.

**2. Evaluation of status, trends and relevance as a source for humans**

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.

**3. Any recent specific action in the Member State or suggested for the European Union**

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

## 10. General evaluation: Echinococcus

**1. History of the disease and/or infection in the country**

Echinococcus granulosusCystic 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.

**2. Evaluation of status, trends and relevance as a source for humans**

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.

## 11. General evaluation: Rabies

**1. History of the disease and/or infection in the country**

At the beginning of the twentieth century, the urban rabies was present in Hungary (affecting domestic animals) and was transmitted to humans mainly by dogs. Therefore, in the 1930's strict animal health regulations were introduced. 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. As a result of the re-introduction of regulatory measures as well as mandatory preventive vaccination, urban rabies became sporadic in Hungary. The register of the annual vaccination of dogs shows that around 1.1-1.5 million dogs are vaccinated every year Preventive vaccination of cats against rabies is recommended but not mandatory and special epidemiological aspects are to be considered. 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 reduce 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 1992. 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 (2005-2007). The efficacy of the oral immunization of foxes can be demonstrated by the drastic decrease in the number of rabies cases in the country. During the recent years the number of the detected positive cases remained under ten cases. In the calendar years 2005 only 9, in 2006 only 3, in 2007 only 4, in 2008 only 7 and in 2009 only 2 positive cases could be detected for the whole territory of the country. In 2010 11 rabies cases happened in Hungary: 1 dog, 9 foxes and 1 bat (EBLV-1). In 2011 and 2012 no rabies cases were diagnosed in domestic animals or wildlife (except 3 bats, EBLV-1). In September 2013 rabies was diagnosed in a red fox originating from Bács-Kiskun county, a territory that had not been vaccinated since 2008. In 2013, 24 cases were detected in 3,5 moths. An emergency ring vaccination was implemented in autumn 2013. In 2014, 23 cases were detected while vaccination area was extended to the north up to highway M3 (E71) and in this area a double baiting density was applied (40 baits/km2). After 3 consecutive campaigns in the infected area, no further cases were found. The epidemic concerned 3 counties (Bács-Kiskun, Pest, Jász-Nagykun-Szolnok), and 47 cases were found in total, of which 4 in domestic animals (2 cattle, 1 goat, 1 dog) and 43 in wild animals (1 roe deer, 42 foxes). Only two of the cases were detected in the frame of active surveillance. In 2015, vaccination area was further extended to the north and no rabies cases were diagnosed in domestic animals or wildlife. Only one bat (EBLV-1, Pest county) and one fox was found positive (Békés county, vaccine induced case, confirmed by the EURL as well.) Last human rabies case in Hungary occurred in 1994.

**2. Evaluation of status, trends and relevance as a source for humans**

After the set back of years 2013-2014, the territory under oral vaccination campaigns has been extended respectively. In 2015 there were no rabies cases in Hungary. (1 bat, EBLV-1 and 1 vaccine induced case in fox). In February 2016, a rabid fox was found in Borsod-Abaúj-Zemplén county. The outbreak occurred within the ragular vaccination area. The virus strain isolated from the sample was different from the strain detected during the 2013-2014 rabies outbreak in Hungary. In the same area, in March 2017 a rabid fox was detected and two goats were infected too.

**3. Any recent specific action in the Member State or suggested for the European Union**

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 two times between 3 months of age and under 1 year of age with monovalent vaccine. After 1 year of age vaccination shall be repeated

annually. Stray dogs are removed from public areas and are vaccinated against the disease. Oral vaccination of foxes is performed twice yearly in a specific part of Hungary's territory. During the spring oral vaccination campaign in 2016, an emergency ring vaccination was performed within the area of an 50 km circle around the outbreak (500 m flight lines, 40 baits/km2). Shooting of an extra number of foxes from the area has been ordered but no further cases were detected in 2016. ). In March 2017, in the same area, a red fox showing neurological symptoms was found positive again. The strain was identical to the one isolated in 2016.
In 2016, in the framework of an awareness campaign, leaflets have been produced and distributed, explaining the importance of rabies and describing the symptoms of the disease and the way of reporting the suspicion of the disease to the veterinary services. A website has been developed as well, specifically dedicated for rabies, in order to provide information about the disease to the public (veszettsegmentesites.hu). In 2017, the awareness activities were continued by broadcasting TV spots and purchasing advertising services (billboards along public roads).

Golden jackals are a species of concern in some areas of Hungary. Sampling and laboratory testing of golden jackals was within the framework of monitoring of effectiveness of OV was not eligible for co-financing until 2016. We welcome the decision of the Commission to finance the testing of this species as of 2016.

## 12. General evaluation: Coxiella (Q-fever)

**4. Additional information**

Diagnostic methods : Complement fixation test (CFT) and immunohistochemical test

## 13. Description of Monitoring/Surveillance/Control programmes system: Mycobacterium

**1. Monitoring/Surveillance/Control programmes 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 National Food Chain Safety Office, Veterinary Diagnostic Directorate 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 National Food Chain Safety Office, Veterinary Diagnostic Directorate. Intradermal tuberculin testingTogether 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.

Methods of sampling (description of sampling techniques)

Hungary - 2016 4 According to the Annex 3 of the Decree No. 65/2002. (VIII.9) FVM the rules of taking samples are the followings: All 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; All samples used for confirming non-specific reaction must include the tonsils, pharyngal, mesenteric and portal lymphatic glands of the slaughtered animal; For 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 VDD 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 in the National Food Chain Safety Office, Veterinary Diagnostic Directorate (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.

**2. Measures in place**

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

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 bypost-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 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 the conditions for retention of the officially free status are not complied with,

orclassical lesions of tuberculosis are seen at post-mortem examination,an epidemiological enquiry stablishes the likelihood of infection, it is deemed necessary to control of bovine tuberculosis in the herd for any other reason.

**3. Notification system in place to the national competent authority**

Yes. Bovine tuberculosis is compulsory notifiable by virtue 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.

**4. Results of investigations and national evaluation of the situation, the trends and sources of infection**

Hungary is free of bovine tuberculosis. In some years sporadic cases are reported.

## 14. Description of Monitoring/Surveillance/Control programmes system: Brucella abortus

**1. Monitoring/Surveillance/Control programmes 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.

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
For the diagnosis of B. abortus the following diagnostic methods are used:-pathology-bacteriology-immunology (CFT, ELISA, SAT)

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.

**2. Measures in place**

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.

**3. Notification system in place to the national competent authority**

Yes. 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 for further laboratory examination. Until thorough clarification of the case, the animal is kept separated and, if necessary, repeatedly tested.

**4. Results of investigations and national evaluation of the situation, the trends and sources of infection**

Since 1985 no infection of B. abortus has been found.

## 15. Description of Monitoring/Surveillance/Control programmes system: Brucella melitensis

**1. Monitoring/Surveillance/Control programmes 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. Since 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.

**2. Measures in place**

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
Hungary is 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

**3. Notification system in place to the national competent authority**

Yes. Ovine and caprine brucellosis (B. melitensis) are compulsorily notifiable since 1 January 1982.

**4. Results of investigations and national evaluation of the situation, the trends and sources of infection**

No evidence of infection with B. melitensis was ever found.

## 16. Description of Monitoring/Surveillance/Control programmes system: Salmonella in food - Cattle (bovine animals) - food sample

**1. Monitoring/Surveillance/Control programmes 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 owncontinuous 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

## 17. Description of Monitoring/Surveillance/Control programmes system: Salmonella in food - Meat from broilers (Gallus gallus) - food sample

**1. Monitoring/Surveillance/Control programmes 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

**2. Measures in place**

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.

**4. Results of investigations and national evaluation of the 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 wellknown 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.

## 18. Description of Monitoring/Surveillance/Control programmes system: Salmonella in food - Meat from pig - food sample

**1. Monitoring/Surveillance/Control programmes 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

## 19. Description of Monitoring/Surveillance/Control programmes system: Thermophilic Campylobacter spp., unspecified in food - Meat from broilers (Gallus gallus) – animal sample

**1. Monitoring/Surveillance/Control programmes 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

**4. Results of investigations and national evaluation of the 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.

## 20. Description of Monitoring/Surveillance/Control programmes system: Listeria in food - All foodstuffs - food sample

**1. Monitoring/Surveillance/Control programmes system**

Sampling strategy
monitoring, objective sampling

Type of specimen taken
At the production plant
RTE
At retail
RTE

Methods of sampling (description of sampling techniques)
At the production plant
single sample
At retail
single sample

Definition of positive finding
At the production plant
Listeria monocytogenes is isolated
At retail
Listeria monocytogenes is isolated

Diagnostic/analytical methods used
At the production plant
ISO 11290-1, ISO 11290-2
At retail
ISO 11290-1, ISO 11290-2

## 21. Description of Monitoring/Surveillance/Control programmes system: Trichinella in animal - Pigs - food sample

**1. Monitoring/Surveillance/Control programmes 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 1375/2015/EU

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

Diagnostic/analytical methods used
Artificial digestion method of collective samples.

**2. Measures in place**

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.

## 22. Description of Monitoring/Surveillance/Control programmes system: Trichinella in animal - Solipeds, domestic - horses - food sample

**1. Monitoring/Surveillance/Control programmes 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)
1375/2015/EU regulation

Case definition
Animal with one or more Trichinella larva in the official examination

Diagnostic/analytical methods used
Artificial digestion method of collective samples

**2. Measures in place**

Vaccination policy
None.

Measures in case of the positive findings or single cases
Positive cases are considered not to be eligible for human consumption.

**4. Results of investigations and national evaluation of the situation, the trends and sources of infection**

Trichinella infection has never been detected in horses in Hungary.

## 23. Description of Monitoring/Surveillance/Control programmes system: Lyssavirus (rabies) in animal - All animals - wild - animal sample

**1. Monitoring/Surveillance/Control programmes system**

Sampling strategy
Passive monitoring of dead foxes and all susceptible species (suspect animals as well as road kills) in the whole territory of the country and active monitoring to control the effectiveness of oral vaccinationin the vaccinated area.

Frequency of the sampling
In the dedicated period of the year in a definite number: sampling period starts 30 day after the completion of each vaccination campaign and the minimum number of foxes to be sampled is 4 foxes/100 km2/year (2 foxes/100 km2/campaign)

Type of specimen taken
Whole fox carcasses are submitted to the veterinary authority by hunters in the framework of monitoring of OV. Transversal tooth section is performed to detect presence of tetracycline, and ELISA test is carried out to detect antibodies from blood samples.

Methods of sampling (description of sampling techniques)
Whole carcasses of healthy shot foxes, suspect foxes or suspect individuals of other species are submitted to the laboratory. Brain tissue sample is taken in the laboratory from all categories. Mandible and blood sample is taken in the laboratory from foxes shot in the framework of monitoring effectiveness of OV.

Case definition
Rabid animal: an animal in which, with laboratory examinations, rabies had been confirmed undoubtedly. Suspect animals: 1. animals showing clinical signs of rabies; 2. animals not showing clinical signs of rabies but injured by a rabid or a rabies suspected animal; 3. all wild mammals that are showing abnormal behavior or attack humans. Potentially rabies infected animal: animals that had possibly had contacted rabid or suspect animals within 90 days. Rabies-risky animals: 1. all mammals not showing clinical signs or abnormal behavior and not in contact with rabid or suspect animals, but attacking or injuring humans, 2. as well as dogs without a valid rabies vaccination.

Diagnostic/analytical methods used
Direct immunfluorescence (fluorescent antibody test -FAT) of brain imprints with a monovalent anti-nucleocapside conjugate is the primary diagnostic test applied. Furthermore, isolation of the virus in mice, isolation of the virus in the neuroblastoma cells cultures, PCR and serological (ELISA) test are performed in some cases. All FAT positive results are confirmed by 1. qRT-PCR (Picard-Meyer et. al., 2004.) with Rotor-Gene SYBR-Green RT-PCR kit QIAGEN 2. RTCIT (OIE Manual Chapter 2.1.13. Rabies (NB: Version adopted in May 2013) with N2A cells and Fujirebio monoclonal globulins (FDI) The inconclusive results are examined beside these above mentioned methods with 3. IHC (“in house” developed) 4. MIT (OIE Manual Chapter 2.1.13. Rabies (NB: Version adopted in May 2013) 5. RT-PCR (Heaton et. al., 1997) 6. Sequencing (Sanger et. al., 1977) In the framework of he monitoring of efficiency of the oral immunization of foxes the following tests are performed: - direct immunfluorescence (fluorescent antibody test -FAT) of imprints of the brain - Transversal tooth section – test for the presence of tetracycline - serological (ELISA) test

**2. Measures in place**

Vaccination policy
South and East border zone of Hungary (50 km zone along the borders to countries that are not free from rabies) and most of East Hungary covering the previously infected territories. Two vaccination campaigns per year (April and October)

Control program/mechanisms
The control program/strategies in place
Decree No 81/2002 of the MARD on the animal health issues of the protection against zoonotic diseases
Decree No 164/2008 of the MARD on detailed rules of the protection against rabies

Recent actions taken to control the zoonoses
Enlarging the territory of fox oral vaccination campaigns in 2015.

Measures in case of the positive findings or single cases
Tracing human contacts, animal contacts. Vaccination of cats and farm animals upon the decision of the veterinary authority. Emergency ring vaccination.

**3. Notification system in place to the national competent authority**

Yes. Rabies is a notifiable disease in Hungary according to Decree No 113/2008 of Ministry of Agriculture and Rural Development (MARD) on the order of the notification of animal diseases Moreover, rules regarding the notification of rabies suspected animals are detailed in the Decree No 164/2008 of the MARD on detailed rules of the protection against rabies.

**4. Results of investigations and national evaluation of the situation, the trends and sources of infection**

One rabies case (a fox) in 2017.

National evaluation of the recent situation, the trends and sources of infection
Genom sequencing was performed in all cases of the past years, identifiyng the closest related strains. The way of introduction of rabies into the country could not be proved.

Results of the investigation
Investigations of the human contacts with positive cases
All positive cases shall be reported to the human health service according to national legislation. Decision about immunization of a person in contact with a rabies positive animal is the competence of the human health authorities.

**5. Additional information**

Cooperation with Ukraine to conduct oral vaccination of foxes in a 50 km wide buffer zone in Ukraine along the border. In 2015, 2016 and 2017 one vaccination campaign each year was performed successfully in the buffer zone.

## 24. Description of Monitoring/Surveillance/Control programmes system: Lyssavirus (rabies) in animal - Dogs - animal sample

**1. Monitoring/Surveillance/Control programmes system**

Sampling strategy
In case of dogs and other domestic animals, only suspect animals are sampled. Animals showing symptoms of rabies (=suspect animals) are killed and tested for rabies. Animals not showing the clinical signs of rabies but contacted and injured by a rabid or a rabies suspected animal are considered as suspects as well and are killed and tested for rabies (or in certain circumstances, when they have been vaccinated against rabies earlier and that vaccination is still valid, they can be put under official observation for 90 days.) Animals that had possibly had contacted rabid or suspect animals are put under official observation for 90 days. Animals not showing clinical signs or abnormal behavior but causing human injuries, as well as dogs without a valid rabies vaccination, are put under official observation for 14 days. If the animal perishes during the time of official observation, it will be sampled and tested for rabies.

Frequency of the sampling
Passive surveillance – Sampling only in case of suspicion (see point 1.).

Type of specimen taken
Whole carcass / head / brain tissue.

Methods of sampling (description of sampling techniques)
Whole carcasses of suspect dogs or other species are submitted to the laboratory. Brain tissue sample is taken in the laboratory.

Case definition
Rabid animal: an animal in which, with laboratory examinations, rabies had been confirmed undoubtedly. Suspect animals: 1. animals showing clinical signs of rabies; 2. animals not showing clinical signs of rabies but injured by a rabid or a rabies suspected animal; 3. all wild mammals that are showing abnormal behavior or attack humans. Potentially rabies infected animal: animals that had possibly had contacted rabid or suspect animals within 90 days. Rabies-risky animals: 1. all mammals not showing clinical signs or abnormal behavior and not in contact with rabid or suspect animals, but attacking or injuring humans, 2. as well as dogs without a valid rabies vaccination.

Diagnostic/analytical methods used
Direct immunfluorescence (fluorescent antibody test -FAT) of brain imprints with a monovalent anti-nucleocapside conjugate is the primary diagnostic test applied. Furthermore, isolation of the virus in mice, isolation of the virus in the neuroblastoma cells cultures, PCR and serological (ELISA) test are performed in some cases. All FAT positive results are confirmed by 1. qRT-PCR (Picard-Meyer et. al., 2004.) with Rotor-Gene SYBR-Green RT-PCR kit QIAGEN 2. RTCIT (OIE Manual Chapter 2.1.13. Rabies (NB: Version adopted in May 2013) with N2A cells and Fujirebio monoclonal globulins (FDI) The inconclusive results are examined beside these above mentioned methods with 3. IHC (“in house” developed) 4. MIT (OIE Manual Chapter 2.1.13. Rabies (NB: Version adopted in May 2013) 5. RT-PCR (Heaton et. al., 1997) 6. Sequencing (Sanger et. al., 1977)

**2. Measures in place**

Vaccination policy
Obligatory vaccination of dogs, once a year. According to national legislation in force, dogs shall be vaccinated against rabies two times between 3 months of age and under 1 year of age with monovalent vaccine. After 1 year of age vaccination shall be repeated annually. Vaccination of cats is recommended. In case of an outbreak, taking into consideration the epidemiological situation, the veterinary authority can order obligatory vaccination of cats and farm animals.

Other preventive measures than vaccination in place
In the framework of an awareness campaign, leaflets have been produced and distributed, explaining the importance of rabies and describing the symptoms of the disease and the way of reporting the suspicion of the disease to the veterinary services. A website has been developed as well, specifically dedicated for rabies, in order to provide information about the disease to the public (veszettsegmentesites.hu).

The control program/strategies in place
Decree No 81/2002 of the MARD on the animal health issues of the protection against zoonotic diseases; Decree No 164/2008 of the MARD on detailed rules of the protection against rabies

Measures in case of the positive findings or single cases
Tracing human contacts, animal contacts. Vaccination of cats and farm animals upon the decision of the veterinary authority. Emergency ring vaccination.

**3. Notification system in place to the national competent authority**

Yes. Rabies is a notifiable disease in Hungary according to Decree No 113/2008 of Ministry of Agriculture and Rural Development (MARD) on the order of the notification of animal diseases Moreover, rules regarding the notification of rabies suspected animals are detailed in the Decree No 164/2008 of the MARD on detailed rules of the protection against rabies.

**4. Results of investigations and national evaluation of the situation, the trends and sources of infection**

No classical rabies cases in 2017.

National evaluation of the recent situation, the trends and sources of infection
Genom sequencing was performed in all cases of the past years, identifiyng the closest related strains. The way of introduction of rabies into the country could not be proved, however different theories exist.

Investigations of the human contacts with positive cases
All positive cases shall be reported to the human health service according to national legislation. Decision about immunization of a person in contact with a rabies positive animal is the competence of the human health authorities

## 25. Food-borne Outbreaks

**1. System in place for identification, epidemiological investigations and reporting of food-borne outbreaks**

Data on foodborne outbreaks have been collected in Hungary by legal background at the Public Health Authority since 1961. 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 public health authority. The other surveillance system is operated by the Central Agricultural Office, (since 15 March 2012 its 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.

**3. National evaluation of the reported outbreaks in the country**

The number of food-borne outbreaks registrated by National Food Chain Safety Office was significantly less than in 2016 (2017:28; 2016: 49 event) and the number of human cases was considerably less to the year prior (2017: 1301; 2016: 2684 human cases). There were 3 deaths, this patients dead in the home of the elderly by food poisoning caused by Clostridium perfringens.
The proportion of causative agents:
42,9 % (12) Salmonella enteritidis,
3,6 % (1) Salmonella sp.,
7,1 % (2) Norovirus,
25,0 % (7) C. perfringens,
3,6 % (1) B. cereus $10^5$
7,1 % (2) High microbial count $10^{6-8}$
10,7 % (3) Unknown

The proprtion of Salmonella outbreaks in the food chain was higher than in 2016 (2017: 46,4%; 2016: 42,9%).
1 event was caused by mayonnaise cold kitchen product (it made a catering service), 4 events were caused poultry meat products, 2 events were caused red meat products and 3 events were caused vegetable based food. The number of egg-related events decreased, in 2017 were 4 events (10 events in 2016).
In the current year the number of public catering events continued to decrease (2017: 15; 2016: 19; 2015: 30 events). The decline in data supports the importance and role of the “Quality driven Public Catering Program” (qualification system based on consistent food safety and quality criteria) in prevention, which began in 2015.The number of events in catering services (restaurants, bars, cafe’s, etc.) was significantly lower than in the previous year (2017: 13; 2016: 26 events). We have not a notification outbreak events caused by a food-producing product resulting from a commercial establishment or from a small-scale producer.

## 26. Institutions and laboratories involved in antimicrobial resistance monitoring and reporting

- National Food Chain Safety Office Directorate of Veterinary Diagnostic NRL for AMR
- National Food Chain Safety Office Directorate of Food and Feed Safety Laboratory of NRL for *Salmonella*

## 27. General Description of Antimicrobial Resistance Monitoring; Indicator E. coli from fattening pig - caecal samples

**1. General description of sampling design and strategy**

The number of samples per animal population was planned for the specific ESBL/AmpC monitoring (300).

Sampling technique: Caecum should be cut out and placed into a plastic bag, closed properly and cooled +2 ─ +8 °C, transported within 48h.

- stage of sampling: Samples were taken at slaughterhouses.
- type of sample: Caecal samples taken from fattening pigs
- sampler: competent authorities

Frequency of sampling: Every month, evenly distributed over the whole year.
Procedure of selection of isolates for susceptibility testing: In ESBL/AmpC/Carbapenemase monitoring program: *E. coli* isolates growing on Cefotaxim-McConkey plates were submitted to MIC-determination.
Randomized selection of 200 commensal *E. coli* isolations for general susceptibility tests.

**Method used for collecting data: Along with the samples, a paper form submitted containing the data regarding sampling and origin of sample.**

**2. Stratification procedure per animal population and food category**

The sampling was stratified at slaughterhouse level based on the annual production data of year 2015. Selection of slaughterhouses was made according to their production starting with higher throughput. So, bigger slaughterhouses produced together above the 60% of the total national production were involved into sampling. The number of samples had distributed per slaughterhouse proportionally to the annual throughput of the slaughterhouse.

**3. Randomisation procedure per animal population and food category**

**Sampling days were definied for the availability of courier service by authority. After exclusion of epidemiological units already sampled in that year, samples were randomly collected at slaughterhouses on the day suitable for submission of samples in required time frame with even distribution by date. Samples were randomly collected from different suitable epidemiological units manually.**

**The random sampling was stratified at one level. The central authority (NFCSO) had distributed the sample numbers based on the annual slaughter capacity per slaughterhouses proportionally to the annual throughput of the slaughterhouse starting with the higher**

**producer.**

**4. Analytical method used for detection and confirmation**

Identification of bacterial isolates is performed by chromogenic media ('in house made' Coliform agar), indole and oxidase tests and when necessary additional API ID32E biochemical tests.

Selective isolation of ESBL/AmpC/Carbapenemase-producing *E. coli* is performed by 'in house made' selective MacConkey agar plates supplemented with 1 mg/L cefotaxime.

Selective isolation of Carbapenemase-producing *E. coli* is performed by chromID CarbaSmart (purchased from bioMerieux)

**5. Laboratory methodology used for detection of antimicrobial resistance**

Broth microdilution using the Sensititre system.
Antimicrobals were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel) and cefepime, cefotaxime, cefotaxime+clavulanic acid, cefoxitin, ceftazidime, ceftazidime+clavulanic acid, ertapenem, imipenem, meropenem and temocillin for extended susceptibility testing (second panel).

Results were interpreted using the EFSA published epidemiological cut-off (ECOFF) values.

## 28. General Description of Antimicrobial Resistance Monitoring; Indicator E. coli – meat from pig

**1. General description of sampling design and strategy**

The number of samples per animal population was planned for the specific ESBL/AmpC monitoring (300).

Sampling technique:
Manual pick up of samples from the refrigerator in the shop.

- stage of sampling: Samples were taken at retail outlets.
- type of sample: Fresh meat from pigs
- sampler: competent authorities

Frequency of sampling: Every month
Procedure of selection of isolates for susceptibility testing: *E. coli* isolates growing on Cefotaxim-McConkey plate were submitted to MIC-determination.

**Method used for collecting data: Along with the samples, a paper form submitted containing the data regarding sampling and origin of sample.**

**2. Stratification procedure per animal population and food category**

**The random sampling was stratified geographically by counties based on the human population according to NUTS3 level.**

**3. Randomisation procedure per animal population and food category**

**Samples were randomly collected at retail with even distribution of the date. Retail shops were chosen randomly excluding the shops visited earlier.**

**4. Analytical method used for detection and confirmation**

Identification of bacterial isolates is performed by chromogenic media ('in house made' Coliform agar), indole and oxidase tests and when necessary additional API ID32E biochemical tests.

Selective isolation of ESBL/AmpC/Carbapenemase-producing *E. coli* is performed by 'in house made' selective MacConkey agar plates supplemented with 1 mg/L cefotaxime.

Selective isolation of Carbapenemase-producing *E. coli* is performed by chromID CarbaSmart (purchased from bioMerieux)

**5. Laboratory methodology used for detection of antimicrobial resistance**

Broth microdilution using the Sensititre system.
Antimicrobals were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel) and cefepime, cefotaxime, cefotaxime+clavulanic acid, cefoxitin, ceftazidime, ceftazidime+clavulanic acid, ertapenem, imipenem, meropenem and temocillin for extended susceptibility testing (second panel).

Results were interpreted using the EFSA published epidemiological cut-off (ECOFF) values.

## 29. General Description of Antimicrobial Resistance Monitoring; Indicator E. coli – meat from bovine animal

**1. General description of sampling design and strategy**

The number of samples per animal population was planned for the specific ESBL/AmpC monitoring (300).

Sampling technique:
Manual pick up of samples from the refrigerator in the shop.

- stage of sampling: Samples were taken at retail outlets.
- type of sample: Fresh meat from bovine animals
- sampler: competent authorities

Frequency of sampling: Every month
Procedure of selection of isolates for susceptibility testing: *E. coli* isolates growing on Cefotaxim-McConkey plate were submitted to MIC-determination

**Method used for collecting data: Along with the samples, a paper form submitted containing the data regarding sampling and origin of sample.**

**2. Stratification procedure per animal population and food category**

**The random sampling was stratified geographically by counties based on the human population according to NUTS3 level.**

**3. Randomisation procedure per animal population and food category**

**Samples were randomly collected at retail with even distribution of the date. Retail shops were chosen randomly excluding the shops visited earlier.**

**4. Analytical method used for detection and confirmation**

Identification of bacterial isolates is performed by chromogenic media ('in house made' Coliform agar), indole and oxidase tests and when necessary additional API ID32E biochemical tests.

Selective isolation of ESBL/AmpC/Carbapenemase-producing *E. coli* is performed by 'in house made'

selective MacConkey agar plates supplemented with 1 mg/L cefotaxime.

Selective isolation of Carbapenemase-producing *E. coli* is performed by chromID CarbaSmart (purchased from bioMerieux)

**5. Laboratory methodology used for detection of antimicrobial resistance**

Broth microdilution using the Sensititre system.
Antimicrobals were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel) and cefepime, cefotaxime, cefotaxime+clavulanic acid, cefoxitin, ceftazidime, ceftazidime+clavulanic acid, ertapenem, imipenem, meropenem and temocillin for extended susceptibility testing (second panel).

Results were interpreted using the EFSA published epidemiological cut-off (ECOFF) values.

## 30. General Description of Antimicrobial Resistance Monitoring; Salmonella - carcase of fattening pig

**1. General description of sampling design and strategy**

Sampling technique:
- stage- and frequency of sampling, type of sample: according to regulations
- sampler: competent authorities

Procedure of selection of isolates for susceptibility testing: Randomized
**Method used for collecting data: electronic datasheets**

**2. Stratification procedure per animal population and food category**

**All of the available *Salmonella* isolates were involved into antimicrobial susceptibility testing.**

**3. Randomisation procedure per animal population and food category**

**All of the available *Salmonella* isolates were involved into antimicrobial susceptibility testing.**

**4. Analytical method used for detection and confirmation**

Collected and serotyped at the NRL for *Salmonella* under the Food and Feed Safety Directorate. These isolates are confirmed on selective Rambach agar plates (purchased from VWR) and additional agglutination tests if it is necessary at the NRL-AR.

**5. Laboratory methodology used for detection of antimicrobial resistance**

Antimicrobals included in monitoring for *Salmonella sp*. were ampicillin, azithromycin, cefotaxime, ceftazidime, chloramphenicol, ciprofloxacin, colistin, gentamicin, meropenem, nalidixic acid, sulphamethoxazole, tetracycline, tigecycline and trimethoprim (first panel).