

Portugal

TRENDS AND SOURCES OF ZOONOSES AND ZOOTIC AGENTS IN FOODSTUFFS, ANIMALS AND FEEDSTUFFS

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

IN 2020

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 Portugal during the year 2020.

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.

* 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	slaughter animal (heads)	herd/flock
Cattle (bovine animals)	Cattle (bovine animals)		396,250	
	Cattle (bovine animals) - calves (under 1 year)	351,046		27,963
	Cattle (bovine animals) - dairy cows and heifers	352,378		9,205
	Cattle (bovine animals) - meat production animals	885,096		30,491
Ducks	Ducks	891,502	3,838,328	20
Gallus gallus (fowl)	Gallus gallus (fowl) - breeding flocks, unspecified		2,306,889	
	Gallus gallus (fowl) - broilers	42,315,387	203,837,259	1,161
	Gallus gallus (fowl) - laying hens	12,240,572	4,289,997	206
	Gallus gallus (fowl) - parent breeding flocks, unspecified	4,643,866		110
Leporidae	Rabbits - farmed		4,249,060	
Pigs	Pigs		4,237,378	
	Pigs - breeding animals	227,112		3,551
	Pigs - breeding animals - unspecified - sows and gilts	222,813		2,884
	Pigs - fattening pigs	2,030,724		2,801
	Pigs - fattening pigs - unspecified - piglets		1,177,627	
Quails	Quails		10,010,108	
Ratites (ostrich, emu, nandu)	Ratites (ostrich, emu, nandu) - farmed		10	
Small ruminants	Goats		98,262	
	Goats - animals over 1 year	258,024		10,992
	Goats - animals under 1 year	40,133		3,868
	Goats - meat production animals	194,886		10,245
	Goats - milk goats	88,553		830
	Sheep		722,539	
	Sheep - animals over 1 year	1,685,642		25,053
	Sheep - animals under 1 year (lambs)	556,741		13,885
	Sheep - meat production animals	1,954,429		23,707
	Sheep - milk ewes	251,435		1,486
Solipeds, domestic	Solipeds, domestic	94,103	574	29,288
Turkeys	Turkeys	1,918,404	3,889,720	135

DISEASE STATUS TABLES

Table Bovine brucellosis - data on animals - Community co-financed eradication programmes

Region	Zoonotic agent	Total number of animals	Number of animals to be tested under the program	Number of animals tested	Number of animals tested individually	Number of positive animals	Number of positive animals slaughtered	Total number of animals slaughtered
PORTUGAL	Brucella	1,370,544	813,166	786,973	737,067	189	189	261
Norte	Brucella	283,539	160,861	159,682	124,368	112	121	191
Lisboa	Brucella	181,646	67,585	61,762	55,897	0	0	0
Alentejo	Brucella	693,234	446,384	442,286	435,926	76	67	69
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Brucella	212,125	138,336	123,243	120,876	1	1	1

Table Bovine brucellosis - data on herds - Community co-financed eradication programmes

Region	Zoonotic agent	Number of new positive herds	Number of depopulated herds	Total number of herds	Number of herds under the program	Number of herds under the program tested/checked	Number of positive herds
PORTUGAL	Brucella	23	3	25,771	25,158	20,606	27
Norte	Brucella	13	3	15,038	14,563	12,162	13
Lisboa	Brucella	0	0	1,768	1,653	1,188	0
Alentejo	Brucella	9	0	4,700	4,677	4,572	13
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Brucella	1	0	4,265	4,265	2,684	1

Table Bovine brucellosis - data on status of herds at the end of the period - Community co-financed eradication programmes

Region	Zoonotic agent	Total number of herds under the program, at the end of the period	Total number of animals under the program, at the end of the period	Number of herds with status not free or not officially free and last check positive, at the end of the period	Number of animals with status not free or not officially free and last check positive, at the end of the period	Number of herds with status not free or not officially free and last check negative, at the end of the period	Number of animals with status not free or not officially free and last check negative, at the end of the period	Number of herds with status free or officially free suspended, at the end of the period	Number of animals with status free or officially free suspended, at the end of the period	Number of herds with status free, at the end of the period	Number of animals with status free, at the end of the period	Number of herds with status officially free, at the end of the period	Number of animals with status officially free, at the end of the period
PORTUGAL	Brucella	25,633	1,356,097	3	585	7	806	87	2,377	3,271	138,339	22,265	1,234,990
Norte	Brucella	15,038	283,539	1	109	4	34	50	717	1,900	23,344	13,083	280,335
Lisboa	Brucella	1,653	175,648	0	0	1	11	22	309	1	1	1,629	175,327
Alentejo	Brucella	4,677	684,785	2	476	2	761	13	1,275	8	3,321	4,652	678,952
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Brucella	4,265	212,125	0	0	0	0	2	76	1,362	111,673	2,901	100,376

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

Region	Zoonotic agent	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 under investigations of suspect cases	Number of isolations of Brucella abortus under investigations of suspect cases	Number of abortions due to Brucella infection under investigations of suspect cases	Number of animals tested in microbiological and/or molecular-biology testing under investigations of suspect cases
PORTUGAL	Brucella	0	0	0	0	0	10,458	0	254,479	5,454	75,718	10,458	0	377	12,825	0	5	0	0	0
Algarve (NUTS level 2)	Brucella	0	0	0	0	0	283	0	6,913	77	6,517	283	0	0	0	0	0	0	0	0
Centro (PT)	Brucella	0	0	0	0	0	8,187	0	182,342	4,896	60,696	8,187	0	295	11,275	0	0	0	0	0
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Brucella	0	0	0	0	0	1,988	0	65,224	481	8,505	1,988	0	82	1,550	0	5	0	0	0

Table Ovine or Caprine brucellosis - data on animals - Community co-financed eradication programmes

Region	Zoonotic agent	Total number of animals	Number of animals to be tested under the program	Number of animals tested	Number of animals tested individually	Number of positive animals	Number of positive animals slaughtered	Total number of animals slaughtered
PORTUGAL	Brucella	2,618,192	1,454,272	1,435,906	1,435,906	561	525	533
CONTINENTE	Brucella	2,618,192	1,454,272	1,435,906	1,435,906	561	525	533

Table Ovine or Caprine brucellosis - data on herds - Community co-financed eradication programmes

Region	Zoonotic agent	Number of new positive herds	Number of depopulated herds	Total number of herds	Number of herds under the program	Number of herds under the program tested/checked	Number of positive herds
PORTUGAL	Brucella	170	1	52,071	52,071	50,582	196
CONTINENTE	Brucella	170	1	52,071	52,071	50,582	196

Table Ovine or Caprine brucellosis - data on status of herds at the end of the period - Community co-financed eradication programmes

Region	Zoonotic agent	Total number of herds under the program, at the end of the period	Total number of animals under the program, at the end of the period	Number of herds with status not free or not officially free and last check positive, at the end of the period	Number of animals with status not free or not officially free and last check positive, at the end of the period	Number of herds with status not free or not officially free and last check negative, at the end of the period	Number of animals with status not free or not officially free and last check negative, at the end of the period	Number of herds with status free or officially free suspended, at the end of the period	Number of animals with status free or officially free suspended, at the end of the period	Number of herds with status free, at the end of the period	Number of animals with status free, at the end of the period	Number of herds with status officially free, at the end of the period	Number of animals with status officially free, at the end of the period
PORTUGAL	Brucella	52,071	2,618,192	15	2,820	25	3,906	1,367	31,347	4,921	279,658	45,743	2,300,461
CONTINENTE	Brucella	52,071	2,618,192	15	2,820	25	3,906	1,367	31,347	4,921	279,658	45,743	2,300,461

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

Region	Zoonotic agent	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 in microbiological and/or molecular-biology testing under investigations of suspect cases
PORTUGAL	Brucella	1	0	0	0	889	0	12,293	195	3,114	889	0	0
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Brucella	1	0	0	0	889	0	12,293	195	3,114	889	0	0

DISEASE STATUS TABLES

Table Bovine tuberculosis - data on animals - Community co-financed eradication programmes

Region	Zoonotic agent	Total number of animals	Number of animals to be tested under the program	Number of animals tested	Number of animals tested individually	Number of positive animals	Number of positive animals slaughtered	Total number of animals slaughtered
PORTUGAL	Mycobacterium tuberculosis complex (MTC)	1,463,245	1,210,544	1,166,609	1,166,609	721	768	844
Norte	Mycobacterium tuberculosis complex (MTC)	301,950	193,016	191,048	191,048	41	41	74
Centro (PT)	Mycobacterium tuberculosis complex (MTC)	153,201	125,392	124,834	124,834	158	180	201
Lisboa	Mycobacterium tuberculosis complex (MTC)	185,709	87,880	86,540	86,540	27	27	31
Alentejo	Mycobacterium tuberculosis complex (MTC)	693,234	679,221	672,330	672,330	446	471	478
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Mycobacterium tuberculosis complex (MTC)	129,151	125,035	91,857	91,857	49	49	60

Table Bovine tuberculosis - data on herds - Community co-financed eradication programmes

Region	Zoonotic agent	Number of new positive herds	Number of depopulated herds	Total number of herds	Number of herds under the program	Number of herds under the program tested/checked	Number of positive herds
PORTUGAL	Mycobacterium tuberculosis complex (MTC)	82	2	31,546	30,629	26,680	111
Norte	Mycobacterium tuberculosis complex (MTC)	6	1	16,337	15,821	14,113	6
Centro (PT)	Mycobacterium tuberculosis complex (MTC)	16	1	6,529	6,271	5,334	21
Lisboa	Mycobacterium tuberculosis complex (MTC)	3	0	1,839	1,719	1,436	5
Alentejo	Mycobacterium tuberculosis complex (MTC)	43	0	4,700	4,677	4,625	61
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Mycobacterium tuberculosis complex (MTC)	14	0	2,141	2,141	1,172	18

Table Bovine tuberculosis - data on status of herds at the end of the period - Community co-financed eradication programmes

Region	Zoonotic agent	Total number of herds under the program, at the end of the period	Total number of animals under the program, at the end of the period	Number of herds with status not free or not officially free and last check positive, at the end of the period	Number of animals with status not free or not officially free and last check positive, at the end of the period	Number of herds with status not free or not officially free and last check negative, at the end of the period	Number of animals with status not free or not officially free and last check negative, at the end of the period	Number of herds with status free or officially free suspended, at the end of the period	Number of animals with status free or officially free suspended, at the end of the period	Number of herds with status officially free, at the end of the period	Number of animals with status officially free, at the end of the period
PORTUGAL	Mycobacterium tuberculosis complex (MTC)	30,629	1,443,464	17	2,685	89	89	116	3,800	30,407	1,421,626
Norte	Mycobacterium tuberculosis complex (MTC)	15,821	299,221	0	0	8	8	49	791	15,764	298,241
Centro (PT)	Mycobacterium tuberculosis complex (MTC)	6,271	150,730	5	332	22	22	20	289	6,224	145,558
Lisboa	Mycobacterium tuberculosis complex (MTC)	1,719	179,577	0	0	6	6	23	280	1,690	179,120
Alentejo	Mycobacterium tuberculosis complex (MTC)	4,677	684,785	10	2,128	47	47	17	1,490	4,603	672,017
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Mycobacterium tuberculosis complex (MTC)	2,141	129,151	2	225	6	6	7	950	2,126	126,690

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

Region	Zoonotic agent	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 animals with suspicious lesions of tuberculosis examined and submitted to histopathological and/or bacteriological and/or molecular-biology examinations	Number of animals detected positive in bacteriological and/or molecular-biology examination	Total number of herds
PORTUGAL	Mycobacterium tuberculosis complex (MTC)	1,168	0	26,878		23,200	0	0	1,168
Algarve (NUTS level 2)	Mycobacterium tuberculosis complex (MTC)	283	0	6,913	48	1,348	0	0	283
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Mycobacterium tuberculosis complex (MTC)	885	0	19,965	48	21,852	2	0	885

PREVALENCE TABLES

Table Brucella:BRUCELLA in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	6	0	Brucella	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	3	0	Brucella	0
	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	1	0	Brucella	0
	Cheeses made from sheep's milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	8	0	Brucella	0
	Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	1	0	Brucella	0
	Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	13	0	Brucella	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	1	0	Brucella	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	Not Available	1	0	Brucella	0

Table Calicivirus:CALICIVIRUS in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Fruits - non-pre-cut - frozen - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	Reverse-transcription PCR (RT-PCR)	10	0	Norovirus	0

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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from bovine animals - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	13	0	Campylobacter	0
	Meat from bovine animals - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	5	0	Campylobacter	0
	Meat from bovine animals - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	5	0	Campylobacter	0
	Meat from bovine animals and pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA detection only	Detection method presence in x g	2	0	Campylobacter	0
	Meat from bovine animals and pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA enumeration only	ISO 10272-2:2017 Campylobacter	1	0	Campylobacter	0
	Meat from bovine animals and pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	1	0	Campylobacter	0
	Meat from bovine animals and pig - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	1	0	Campylobacter	0
	Meat from broilers (Gallus gallus) - carcase - chilled - Slaughterhouse - Portugal - food sample - neck skin - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	1	Gram	Information collected from the food business operators, based on Regulation 2019/627	Enumeration method	3601	868	Campylobacter, unspecified sp.	868
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA detection only	Detection method presence in x g	2	2	Campylobacter coli	2
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA	ISO 10272-2:2017 Campylobacter	9	1	Campylobacter coli	1
									Campylobacter jejuni	1
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	2	2	Campylobacter, unspecified sp.	2
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA detection only	Detection method presence in x g	2	1	Campylobacter coli	1
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA	ISO 10272-2:2017 Campylobacter	2	0	Campylobacter	0
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	1	0	Campylobacter	0
	Meat from pig - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA detection only	Detection method presence in x g	3	0	Campylobacter	0
	Meat from pig - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA enumeration only	ISO 10272-2:2017 Campylobacter	15	0	Campylobacter	0
	Meat from pig - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	10	Gram	DGAV-DSSA detection only	ISO 10272-1:2017 Campylobacter	3	0	Campylobacter	0
	Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA enumeration only	ISO 10272-2:2017 Campylobacter	6	0	Campylobacter	0
	Meat from turkey - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA enumeration only	ISO 10272-2:2017 Campylobacter	3	0	Campylobacter	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from turkey - meat preparation - intended to be eaten cooked - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	1	Gram	DGAV-DSSA enumeration only	ISO 10272- 2:2017 Campylobacter	1	0	Campylobacter	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Infant formula - ready-to-eat - Hospital or medical care facility - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/feed)	10	Millilitre	N/A	ISO 22964:2017 Cronobacter	20	0	Cronobacter	0

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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Crustaceans - unspecified - raw - Unspecified - Not Available - food sample - Unspecified - Private sampling - Not specified	single (food/fee d)	25	Gram	N_A	ISO 16654:2001 or NMKL 164:2005 or DIN 10167	7	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Fruits and vegetables - pre-cut - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	6	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Juice - fruit juice - unpasteurised - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Millilitre	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	1	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from bovine animals - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	23	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from bovine animals - fresh - frozen - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	10	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from bovine animals - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	8	1	STEC other than O157 O26 O103 O111 O145	1
	Meat from bovine animals - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	7	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from bovine animals and pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	4	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from bovine animals and pig - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	1	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	6	0	Shiga toxin-producing Escherichia coli (STEC)	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	22	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Ready-to-eat salads - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	7	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Seeds, dried - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	N_A	ISO/TS 13136:2012 (including the EU-RL adaptation for O104:H4)	5	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Seeds, sprouted - ready-to-eat - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	ASAE	Other methods based on PCR detection of stx genes	10	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Seeds, sprouted - ready-to-eat - Retail - Netherlands - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	ASAE	Other methods based on PCR detection of stx genes	5	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Seeds, sprouted - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	ASAE	Other methods based on PCR detection of stx genes	25	0	Shiga toxin-producing Escherichia coli (STEC)	0
	Seeds, sprouted - ready-to-eat - Retail - Portugal - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	25	Gram	ASAE	Other methods based on PCR detection of stx genes	5	0	Shiga toxin-producing Escherichia coli (STEC)	0

Table FLAVIVIRUS in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Vaccination status	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
PORTUGAL	Birds - wild - Natural habitat - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	Real-Time Reverse-transcription PCR	1	0	West Nile virus	0
	Solipeds, domestic - horses - Farm - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	IgM-capture ELISA (MAC-ELISA)	16	2	West Nile virus	2
	Solipeds, domestic - horses - Farm - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	Real-Time Reverse-transcription PCR	1	0	West Nile virus	0
	Solipeds, domestic - horses - Farm - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	Enzyme-linked immunosorbent assay (ELISA)	3	0	West Nile virus	0
CONTINENTE	Birds - wild - Natural habitat - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	Real-Time Reverse-transcription PCR	1	0	West Nile virus	0
	Solipeds, domestic - horses - Farm - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	IgM-capture ELISA (MAC-ELISA)	16	2	West Nile virus	2
	Solipeds, domestic - horses - Farm - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	Real-Time Reverse-transcription PCR	1	0	West Nile virus	0
	Solipeds, domestic - horses - Farm - Not Available - animal sample - blood - Monitoring - active - Official sampling - Suspect sampling	animal	No	N_A	Enzyme-linked immunosorbent assay (ELISA)	3	0	West Nile virus	0

Table HISTAMINE in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Border Control Posts - Ecuador - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	DGAV	9	8	<=100	Histamine	9	8
								>100 TO <=200	Histamine	9	0
								>200	Histamine	9	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Border Control Posts - Thailand - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	DGAV	9	1	<=100	Histamine	9	1
								>100 TO <=200	Histamine	9	0
								>200	Histamine	9	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Border Control Posts - Vietnam - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/feed)	25	Gram	DGAV	72	18	<=100	Histamine	72	15
								>100 TO <=200	Histamine	72	3
								>200	Histamine	72	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Border Control Posts - Vietnam - food sample - Surveillance - based on Regulation 2073 - Official sampling - Suspect sampling	batch (food/feed)	25	Gram	DGAV	18	1	<=100	Histamine	18	1
								>100 TO <=200	Histamine	18	0
								>200	Histamine	18	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - canned - Border Control Posts - Morocco - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	DGAV	9	9	<=100	Histamine	9	9
								>100 TO <=200	Histamine	9	0
								>200	Histamine	9	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - canned - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	63	39	<=100	Histamine	63	39
								>100 TO <=200	Histamine	63	0
								>200	Histamine	63	0
	Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme matured - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	72	0	<=100	Histamine	72	0
								>100 TO <=200	Histamine	72	0
								>200	Histamine	72	0

Table LISTERIA in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Bakery products - cakes - containing raw cream - Restaurant or Cafe or Pub or Bar or Hotel or Catering service - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Cereals and meals - flakes - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/feed)	25	Gram	ASAE	5	5	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/feed)	25	Gram	ASAE	5	5	detection	Listeria monocytogenes	5	5
					Only detection; ASAE	5	0	detection	Listeria monocytogenes	5	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
					DGAV-DSSA Enumeration Only	6	0	<=100	Listeria monocytogenes, unspecified	6	0
								>100	Listeria monocytogenes, unspecified	6	0
								<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	4	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Retail - Germany - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA Enumeration Only	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA Enumeration Only	2	0	<=100	Listeria monocytogenes, unspecified	2	0
								>100	Listeria monocytogenes, unspecified	2	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
					DGAV-DSSA Enumeration Only	6	0	<=100	Listeria monocytogenes, unspecified	6	0
								>100	Listeria monocytogenes, unspecified	6	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA Enumeration Only	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA Enumeration Only	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Cheeses made from goats' milk - hard - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Cheeses made from goats' milk - hard - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Cheeses made from goats' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	2	0	<=100	Listeria monocytogenes, unspecified	2	0
								>100	Listeria monocytogenes, unspecified	2	0
	Cheeses made from goats' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	2	0	detection	Listeria monocytogenes, unspecified	2	0
	Cheeses made from goats' milk - hard - made from raw or low heat-treated milk - Restaurant or Cafe or Pub or Bar or Hotel or Catering service - Not Available - food sample - Surveillance - Official sampling - Selective sampling	single (food/feed d)	25	Gram	Only detection; ASAE	1	0	detection	Listeria monocytogenes	1	0
	Cheeses made from sheep's milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	8	0	<=100	Listeria monocytogenes, unspecified	8	0
								>100	Listeria monocytogenes, unspecified	8	0
	Cheeses made from sheep's milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	8	0	detection	Listeria monocytogenes, unspecified	8	0
	Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	2	0	<=100	Listeria monocytogenes, unspecified	2	0
								>100	Listeria monocytogenes, unspecified	2	0
	Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	2	0	detection	Listeria monocytogenes, unspecified	2	0
	Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	batch (food/feed d)	25	Gram	Only detection	60	5	detection	Listeria monocytogenes	60	5
	Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	13	0	<=100	Listeria monocytogenes, unspecified	13	0
								>100	Listeria monocytogenes, unspecified	13	0
	Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	13	0	detection	Listeria monocytogenes, unspecified	13	0
	Cheeses made from sheep's milk - unspecified - made from raw or low heat-treated milk - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/feed d)	25	Gram	Only enumeration; ASAE	15	0	<=100	Listeria monocytogenes	15	0
								>100	Listeria monocytogenes	15	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Coconut - coconut products - Retail - Germany - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Coconut - coconut products - Retail - Indonesia - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Crustaceans - shrimps - cooked - chilled - Retail - Nicaragua - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Crustaceans - unspecified - cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA Detection Only	5	0	detection	Listeria monocytogenes, unspecified	5	0
	Dairy products (excluding cheeses) - butter - made from pasteurised milk - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	10	0	<=100	Listeria monocytogenes	10	0
								>100	Listeria monocytogenes	10	0
	Dairy products (excluding cheeses) - butter - made from pasteurised milk - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	10	0	<=100	Listeria monocytogenes	10	0
								>100	Listeria monocytogenes	10	0
	Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	batch (food/fee d)	25	Gram	Only detection	5	0	detection	Listeria monocytogenes	5	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Retail - France - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Fish - smoked - Retail - Spain - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	10	1	<=100	Listeria monocytogenes	10	0
								>100	Listeria monocytogenes	10	1
	Fishery products, unspecified - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA Detection Only	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Fruits - pre-cut - ready-to-eat - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	37	0	<=100	Listeria monocytogenes	37	0
								>100	Listeria monocytogenes	37	0
	Fruits - pre-cut - ready-to-eat - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	37	0	detection	Listeria monocytogenes	37	0
	Fruits - products - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	batch (food/fee d)	25	Gram	N_A	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Fruits - products - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	batch (food/fee d)	25	Gram	N_A	5	0	detection	Listeria monocytogenes	5	0
	Fruits and vegetables - pre-cut - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	2	0	<=100	Listeria monocytogenes, unspecified	2	0
								>100	Listeria monocytogenes, unspecified	2	0
	Fruits and vegetables - pre-cut - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	2	0	detection	Listeria monocytogenes, unspecified	2	0
					DGAV-DSSA Detection Only	4	0	detection	Listeria monocytogenes, unspecified	4	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Infant formula - ready-to-eat - Hospital or medical care facility - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Millilitre	N_A	20	0	<=100	Listeria monocytogenes	20	0
								>100	Listeria monocytogenes	20	0
	Infant formula - ready-to-eat - Hospital or medical care facility - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Millilitre	N_A	20	0	detection	Listeria monocytogenes	20	0
								>100	Listeria monocytogenes, unspecified	1	0
	Juice - fruit juice - unpasteurised - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Millilitre	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Juice - fruit juice - unpasteurised - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Millilitre	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Meat from duck - meat products - ready-to-eat - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only detection	5	0	detection	Listeria monocytogenes	5	0
	Meat from duck - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	1	0	<=100	Listeria monocytogenes, unspecified	1	0
								>100	Listeria monocytogenes, unspecified	1	0
	Meat from duck - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	1	0	detection	Listeria monocytogenes, unspecified	1	0
	Meat from pig - meat products - fermented sausages - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Meat from pig - meat products - fermented sausages - Restaurant or Cafe or Pub or Bar or Hotel or Catering service - Not Available - food sample - Surveillance - Official sampling - Selective sampling	single (food/fee d)	25	Gram	Only detection; ASAE	1	0	detection	Listeria monocytogenes	1	0
	Meat from pig - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	38	6	<=100	Listeria monocytogenes, unspecified	38	0
								>100	Listeria monocytogenes, unspecified	38	1
					DGAV-DSSA Enumeration Only	2	0	<=100	Listeria monocytogenes, unspecified	2	0
								>100	Listeria monocytogenes, unspecified	2	0
	Meat from pig - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	38	6	detection	Listeria monocytogenes, unspecified	38	6
	Meat from pig - meat products - ready-to-eat - Restaurant or Cafe or Pub or Bar or Hotel or Catering service - Not Available - food sample - Surveillance - Official sampling - Selective sampling	single (food/fee d)	25	Gram	Only detection; ASAE	1	0	detection	Listeria monocytogenes	1	0
	Meat from turkey - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	2	0	<=100	Listeria monocytogenes, unspecified	2	0
								>100	Listeria monocytogenes, unspecified	2	0
	Meat from turkey - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	2	0	detection	Listeria monocytogenes, unspecified	2	0
	Milk, cows' - pasteurised milk - Processing plant - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/fee d)	25	Millilitre	Only detection; ASAE	10	1	detection	Listeria monocytogenes	10	1
	Milk, cows' - raw milk for manufacture - intended for manufacture of pasteurised/UHT products - Processing plant - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/fee d)	25	Millilitre	Only detection; ASAE	5	0	detection	Listeria monocytogenes	5	0
	Molluscan shellfish - cooked - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only detection	10	0	detection	Listeria monocytogenes	10	0
	Other processed food products and prepared dishes - muesli - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	10	0	<=100	Listeria monocytogenes	10	0
								>100	Listeria monocytogenes	10	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	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 - sandwiches - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	28	0	<=100	Listeria monocytogenes	28	0
								>100	Listeria monocytogenes	28	0
	Other processed food products and prepared dishes - sandwiches - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	28	0	detection	Listeria monocytogenes	28	0
	Other processed food products and prepared dishes - Sandwiches - with fish - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Other processed food products and prepared dishes - sandwiches - with meat - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	5	0	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	604	1	<=100	Listeria monocytogenes	604	0
								>100	Listeria monocytogenes	604	0
	Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	604	1	detection	Listeria monocytogenes	604	1
	Other processed food products and prepared dishes - vegetable based dishes - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	34	1	<=100	Listeria monocytogenes	34	0
								>100	Listeria monocytogenes	34	0
	Other processed food products and prepared dishes - vegetable based dishes - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	34	1	detection	Listeria monocytogenes	34	1
	Ready-to-eat salads - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	82	0	<=100	Listeria monocytogenes	82	0
								>100	Listeria monocytogenes	82	0
	Ready-to-eat salads - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	82	0	detection	Listeria monocytogenes	82	0
	Seeds, sprouted - ready-to-eat - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	Only enumeration; ASAE	15	0	<=100	Listeria monocytogenes	15	0
								>100	Listeria monocytogenes	15	0
	Surimi - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	5	3	<=100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Surimi - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	5	3	detection	Listeria monocytogenes	5	3

Table Lyssavirus:LYSSAVIRUS in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
PORTUGAL	Dogs - Official kennel - Not Available - animal sample - Surveillance - Official sampling - Suspect sampling	N_A	Not Available	animal	1	0	Lyssavirus	0
CONTINENTE	Dogs - Official kennel - Not Available - animal sample - Surveillance - Official sampling - Suspect sampling	N_A	Not Available	animal	1	0	Lyssavirus	0

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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Gallus gallus (fowl) - breeding flocks for broiler production line - adult - Farm - Portugal - Not Available - Control and eradication programmes - Official and industry sampling - Census	herd/flock	483	Y	N_A	Not Available	483	3	Salmonella	3
									Salmonella Other serovars	1
									Salmonella Thompson	1
									Salmonella Weltevreden	1
	Gallus gallus (fowl) - breeding flocks for egg production line - adult - Farm - Portugal - Not Available - Control and eradication programmes - Official and industry sampling - Census	herd/flock	21	Y	N_A	Not Available	21	0	Salmonella	0
	Gallus gallus (fowl) - broilers - before slaughter - Farm - Portugal - Not Available - Control and eradication programmes - Industry sampling - Census	herd/flock	10622	N	N_A	Not Available	10622	29	Salmonella	29
									Salmonella 4,[5],12:i:-	3
									Salmonella Boecker	1
									Salmonella Duesseldorf	4
									Salmonella Enteritidis	9
									Salmonella I 4,12:b:-	1
									Salmonella Indiana	1
									Salmonella Kentucky	2
									Salmonella Madelia	1
									Salmonella Mbandaka	1
									Salmonella Newport	1
									Salmonella Other serovars	1
									Salmonella Tommegbe	4
	Gallus gallus (fowl) - broilers - before slaughter - Farm - Portugal - Not Available - Control and eradication programmes - Official and industry sampling - Census	herd/flock	10731	Y	N_A	Not Available	10731	33	Salmonella	33
									Salmonella 4,[5],12:i:-	4
									Salmonella 4,12:i:-	2
									Salmonella Boecker	1
									Salmonella Duesseldorf	5
									Salmonella Enteritidis	9
									Salmonella I 4,12:b:-	1
									Salmonella Indiana	1
									Salmonella Kentucky	2
									Salmonella Madelia	1
									Salmonella Mbandaka	1
									Salmonella Newport	1
									Salmonella Other serovars	1
									Salmonella Tommegbe	4
	Gallus gallus (fowl) - broilers - before slaughter - Farm - Portugal - Not Available - Control and eradication programmes - Official sampling - Census	herd/flock	109	N	N_A	Not Available	109	4	Salmonella	4
									Salmonella 4,[5],12:i:-	1
									Salmonella 4,12:i:-	2
									Salmonella Duesseldorf	1
	Gallus gallus (fowl) - laying hens - adult - Farm - Portugal - Not Available - Control and eradication programmes - Official and industry sampling - Census	herd/flock	420	Y	N_A	Not Available	420	11	Salmonella Bredeney	2
									Salmonella Enteritidis	1
									Salmonella Infantis	5
									Salmonella Mbandaka	1
									Salmonella Montevideo	1
									Salmonella Schwarzengrund	1
	Turkeys - fattening flocks - before slaughter - Farm - Portugal - Not Available - Control and eradication programmes - Industry sampling - Census	herd/flock	1453	N	N_A	Not Available	1453	2	Salmonella	2
									Salmonella Indiana	1
									Salmonella Typhimurium	1
	Turkeys - fattening flocks - before slaughter - Farm - Portugal - Not Available - Control and eradication programmes - Official and industry sampling - Census	herd/flock	1453	Y	N_A	Not Available	1453	2	Salmonella	2
									Salmonella Indiana	1
									Salmonella Typhimurium	1
	Turkeys - fattening flocks - before slaughter - Farm - Portugal - Not Available - Control and eradication programmes - Official sampling - Census	herd/flock	13	N	N_A	Not Available	13	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Bakery products - pastry - made with raw eggs - Retail - Portugal - food sample - Surveillance - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	8	0	Salmonella	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	4	0	Salmonella	0
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	3	0	Salmonella	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	1	0	Salmonella	0
	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses made from goats' milk - hard - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses made from goats' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Cheeses made from sheep's milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	8	0	Salmonella	0
	Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	13	0	Salmonella	0
	Cheeses made from sheep's milk - unspecified - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	ISO 6579-1:2017 Salmonella	10	0	Salmonella	0
	Cheeses made from sheep's milk - unspecified - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	10	0	Salmonella	0
	Cheeses made from sheep's milk - unspecified - made from raw or low heat-treated milk - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	15	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cheeses, made from mixed milk from cows, sheep and/or goats - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Cheeses, made from mixed milk from cows, sheep and/or goats - unspecified - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	ISO 6579- 1:2017 Salmonella	5	0	Salmonella	0
	Coconut - coconut products - Retail - Germany - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Coconut - coconut products - Retail - Indonesia - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	15	0	Salmonella	0
	Crustaceans - shrimps - cooked - chilled - Retail - Nicaragua - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Crustaceans - shrimps - cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Crustaceans - unspecified - cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	5	0	Salmonella	0
	Dairy products (excluding cheeses) - butter - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Dairy products (excluding cheeses) - butter - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	2	0	Salmonella	0
	Dairy products (excluding cheeses) - butter - made from raw or low heat- treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	1	0	Salmonella	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Retail - France - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Egg products - liquid - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Egg products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	3	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Eggs - table eggs - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Eggs - table eggs - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	5	0	Salmonella	0
	Fishery products, unspecified - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	1	0	Salmonella	0
	Fruits - pre-cut - ready-to-eat - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579- 1:2017 Salmonella	37	0	Salmonella	0
	Fruits - pre-cut - ready-to-eat - Retail - Côte d'Ivoire - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Fruits - pre-cut - ready-to-eat - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	25	0	Salmonella	0
	Fruits - pre-cut - ready-to-eat - Retail - Spain - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Fruits and vegetables - pre-cut - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Fruits and vegetables - pre-cut - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	4	0	Salmonella	0
	Infant formula - ready-to-eat - Hospital or medical care facility - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Millilitre	N_A	ISO 6579- 1:2017 Salmonella	20	0	Salmonella	0
	Juice - fruit juice - unpasteurised - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Millilitre	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Live bivalve molluscs - mussels - depurated - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	3	0	Salmonella	0
	Live bivalve molluscs - oysters - depurated - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	2	0	Salmonella	0
	Live bivalve molluscs - Restaurant or Cafe or Pub or Bar or Hotel or Catering service - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Live bivalve molluscs - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Live bivalve molluscs - Retail - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Live bivalve molluscs - unspecified - depurated - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	4	1	Salmonella spp., unspecified	1
	Meat from bovine animals - carcass - Slaughterhouse - Portugal - food sample - carcass swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	3574	23	Salmonella spp., unspecified	23

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from bovine animals - carcass - Slaughterhouse - Spain - food sample - carcass swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	29	0	Salmonella	0
	Meat from bovine animals - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	13	1	Salmonella Rissen	1
	Meat from bovine animals - meat preparation - intended to be eaten cooked - chilled - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	ASAE	ISO 6579- 1:2017 Salmonella	5	0	Salmonella	0
	Meat from bovine animals - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Meat from bovine animals - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	6	0	Salmonella	0
	Meat from bovine animals - minced meat - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	30	5	Salmonella spp., unspecified	5
	Meat from bovine animals - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Meat from bovine animals - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	6	0	Salmonella	0
	Meat from bovine animals and pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Meat from bovine animals and pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	3	0	Salmonella	0
	Meat from bovine animals and pig - minced meat - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	1	0	Salmonella	0
	Meat from broilers (Gallus gallus) - carcass - chilled - Slaughterhouse - Portugal - food sample - neck skin - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	Information collected from the food business operators, based on Regulation 2019/627	Not Available	2806	0	Salmonella	0
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	9	0	Salmonella	0
	Meat from broilers (Gallus gallus) - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	4	0	Salmonella	0
	Meat from broilers (Gallus gallus) - fresh - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579- 1:2017 Salmonella	5	3	Salmonella Heidelberg	3
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579- 1:2017 Salmonella	3	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from broilers (Gallus gallus) - meat products - non-ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Meat from broilers (Gallus gallus) - meat products - non-ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	1	0	Salmonella	0
	Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	15	0	Salmonella	0
	Meat from broilers (Gallus gallus) - offal - unspecified - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	260	31	Salmonella Agona	1
									Salmonella Heidelberg	16
									Salmonella Minnesota	14
	Meat from duck - meat products - non-ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Meat from duck - meat products - ready-to-eat - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	5	0	Salmonella	0
	Meat from duck - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Meat from goat - carcase - Slaughterhouse - Portugal - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	478	2	Salmonella spp., unspecified	2
	Meat from goat - carcase - Slaughterhouse - Spain - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	5	0	Salmonella	0
	Meat from horse - carcase - Slaughterhouse - Portugal - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	37	0	Salmonella	0
	Meat from other animal species or not specified - meat products - non-ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Meat from pig - carcase - Slaughterhouse - Belgium - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/628	Not Available	5	0	Salmonella	0
	Meat from pig - carcase - Slaughterhouse - Portugal - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	7650	94	Salmonella spp., unspecified	94
	Meat from pig - carcase - Slaughterhouse - Spain - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	1138	3	Salmonella spp., unspecified	3
	Meat from pig - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	14	0	Salmonella	0
	Meat from pig - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	7	2	Salmonella Rissen	1
									Salmonella Typhimurium	1
	Meat from pig - meat preparation - intended to be eaten cooked - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	6	0	Salmonella	0
	Meat from pig - meat products - fermented sausages - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from pig - meat products - fermented sausages - Retail - European Union - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Meat from pig - meat products - fermented sausages - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Meat from pig - meat products - non-ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Meat from pig - meat products - non-ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	10	1	Salmonella Rissen	1
	Meat from pig - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	39	0	Salmonella	0
	Meat from pig - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	ISO 6579-1:2017 Salmonella	2	0	Salmonella	0
	Meat from pig - minced meat - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	15	0	Salmonella	0
	Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Meat from poultry, unspecified - meat preparation - intended to be eaten cooked - chilled - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Meat from sheep - carcase - Slaughterhouse - Portugal - food sample - carcase swabs - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	400	Square centimetre	Information collected from the food business operators, based on Regulation 2019/627	Not Available	2844	19	Salmonella spp., unspecified	19
	Meat from turkey - carcase - chilled - Slaughterhouse - Portugal - food sample - neck skin - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	Information collected from the food business operators, based on Regulation 2019/627	Not Available	839	0	Salmonella	0
	Meat from turkey - fresh - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Meat from turkey - meat preparation - intended to be eaten cooked - chilled - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Meat from turkey - meat preparation - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	1	Salmonella spp., unspecified	1
	Meat from turkey - meat products - ready-to-eat - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Meat from turkey - minced meat - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	15	0	Salmonella	0
	Meat, mixed meat - meat preparation - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	25	2	Salmonella spp., unspecified	2

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat, mixed meat - meat preparation - intended to be eaten cooked - chilled - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Selective sampling	batch (food/fee d)	10	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Meat, mixed meat - meat preparation - intended to be eaten cooked - chilled - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	10	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	5	0	Salmonella	0
	Molluscan shellfish - cooked - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	10	0	Salmonella	0
	Molluscan shellfish - raw - frozen - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	5	2	Salmonella	2
	Other processed food products and prepared dishes - sandwiches - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	28	0	Salmonella	0
	Other processed food products and prepared dishes - Sandwiches - with fish - Retail - Portugal - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	ISO 6579-1:2017 Salmonella	5	0	Salmonella	0
	Other processed food products and prepared dishes - sandwiches - with meat - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	ISO 6579-1:2017 Salmonella	5	0	Salmonella	0
	Other processed food products and prepared dishes - unspecified - ready-to-eat foods - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	604	0	Salmonella	0
	Other processed food products and prepared dishes - vegetable based dishes - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	34	0	Salmonella	0
	Ready-to-eat salads - Catering - Portugal - food sample - Surveillance - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	82	0	Salmonella	0
	Seeds, dried - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	20	0	Salmonella	0
	Seeds, sprouted - ready-to-eat - Retail - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	ASAE	Real-Time PCR (qualitative or quantitative)	15	0	Salmonella	0
	Spices and herbs - dried - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	10	0	Salmonella	0
	Spices and herbs - fresh - Border Control Posts - Not Available - food sample - Surveillance - based on Regulation 2073 - Official sampling - Objective sampling	batch (food/fee d)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	10	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Compound feedingstuffs for cattle - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	37	0	Salmonella	0
	Compound feedingstuffs for goats - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	7	0	Salmonella	0
	Compound feedingstuffs for horses - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	4	0	Salmonella	0
	Compound feedingstuffs for pigs - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	42	0	Salmonella	0
	Compound feedingstuffs for poultry (non specified) - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	8	0	Salmonella	0
	Compound feedingstuffs for poultry, laying hens - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	14	0	Salmonella	0
	Compound feedingstuffs for rabbits - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	10	0	Salmonella	0
	Compound feedingstuffs for sheep - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	26	0	Salmonella	0
	Compound feedingstuffs for turkeys - final product - Feed mill - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	6	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - Brazil - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	3	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - Israel - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - Paraguay - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - Romania - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - Serbia - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - Ukraine - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	5	0	Salmonella	0
	Feed material of cereal grain origin - maize derived - Border Control Posts - United States - feed sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV	Not Available	2	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Feed material of land animal origin - blood meal - Processing plant - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	1	0	Salmonella	0
	Feed material of land animal origin - feather meal - Processing plant - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Feed material of land animal origin - meat and bone meal - Processing plant - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	3	0	Salmonella	0
	Feed material of land animal origin - poultry offal meal - Processing plant - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Feed material of marine animal origin - fish meal - Processing plant - Portugal - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	N_A	Real-Time PCR (qualitative or quantitative)	2	0	Salmonella	0
	Feed material of oil seed or fruit origin - palm kernel derived - Border Control Posts - Côte d'Ivoire - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of oil seed or fruit origin - palm kernel derived - Border Control Posts - Indonesia - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of oil seed or fruit origin - rape seed derived - Border Control Posts - Canada - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	2	0	Salmonella	0
	Feed material of oil seed or fruit origin - rape seed derived - Border Control Posts - Russia - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of oil seed or fruit origin - soya (bean) derived - Border Control Posts - Brazil - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	2	0	Salmonella	0
	Feed material of oil seed or fruit origin - soya (bean) derived - Border Control Posts - Canada - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	1	0	Salmonella	0
	Feed material of oil seed or fruit origin - soya (bean) derived - Border Control Posts - United States - feed sample - Surveillance - Official sampling - Objective sampling	single (food/feed d)	25	Gram	DGAV	Not Available	1	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	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	5	0	Staphylococcal enterotoxins	0
	Cheeses made from cows' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	6	0	Staphylococcal enterotoxins	0
	Cheeses made from cows' milk - hard - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	2	0	Staphylococcal enterotoxins	0
	Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	3	0	Staphylococcal enterotoxins	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	6	0	Staphylococcal enterotoxins	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	1	0	Staphylococcal enterotoxins	0
	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	1	0	Staphylococcal enterotoxins	0
	Cheeses made from goats' milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	1	0	Staphylococcal enterotoxins	0
	Cheeses made from goats' milk - hard - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	1	0	Staphylococcal enterotoxins	0
	Cheeses made from goats' milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	2	0	Staphylococcal enterotoxins	0
	Cheeses made from sheep's milk - fresh - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	8	0	Staphylococcal enterotoxins	0
	Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	2	1	Staphylococcal enterotoxins	1
	Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	1	0	Staphylococcal enterotoxins	0
	Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	11	0	Staphylococcal enterotoxins	0
	Dairy products (excluding cheeses) - butter - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	2	0	Staphylococcal enterotoxins	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	1	0	Staphylococcal enterotoxins	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Immunofluorescence assay tests (IFA)	2	0	Staphylococcal enterotoxins	0
	Dairy products, unspecified - Processing plant - Portugal - food sample - Surveillance - Official sampling - Objective sampling	single (food/fee d)	25	Gram	DGAV-DSSA	Enzyme-linked immunosorbent assay (ELISA)	1	0	Staphylococcal enterotoxins	0
	Fish - canned - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/fee d)	25	Gram	N_A	Enzyme-linked immunosorbent assay (ELISA)	2	0	Staphylococcal enterotoxins	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Fish - raw - chilled - Processing plant - Portugal - food sample - Surveillance - based on Regulation 2073 - HACCP and own check - Objective sampling	single (food/feed d)	25	Gram	N_A	Enzyme-linked immunosorbent assay (ELISA)	4	0	Staphylococcal enterotoxins	0

Table Trichinella:TRICHINELLA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Pigs - breeding animals - raised under controlled housing conditions - sows and boars - Slaughterhouse - Spain - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	3	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Belgium - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	1816	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Germany - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	8	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Spain - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	75165	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Belgium - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	5900	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - France - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	774	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Netherlands - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	185	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Spain - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	737677	0	Trichinella	0
PORTUGAL	Wild boars - wild - Hunting - Spain - animal sample - organ/tissue - Unspecified - Private sampling - Other	N_A	Magnetic stirrer method for pooled sample digestion	animal	4	0	Trichinella	0
	Pigs - breeding animals - not raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	3343	0	Trichinella	0
	Pigs - breeding animals - raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	33435	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Farm - Portugal - animal sample - organ/tissue - Unspecified - Private sampling - Other	N_A	Magnetic stirrer method for pooled sample digestion	animal	10	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	44800	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	3316038	0	Trichinella	0
	Solipeds, domestic - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	574	0	Trichinella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
PORTUGAL	Wild boars - wild - Game handling establishment - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	77	0	Trichinella	0
	Wild boars - wild - Hunting - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	162	1	Trichinella britovi	1
	Wild boars - wild - Hunting - Portugal - animal sample - organ/tissue - Unspecified - Private sampling - Other	N_A	Magnetic stirrer method for pooled sample digestion	animal	316	0	Trichinella	0
CONTINENTE	Pigs - breeding animals - not raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	3021	0	Trichinella	0
	Pigs - breeding animals - raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	32487	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Farm - Portugal - animal sample - organ/tissue - Unspecified - Private sampling - Other	INIAV+UTAD	Magnetic stirrer method for pooled sample digestion	animal	10	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	33141	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	32708 83	0	Trichinella	0
	Solipeds, domestic - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	574	0	Trichinella	0
	Wild boars - wild - Game handling establishment - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	77	0	Trichinella	0
	Wild boars - wild - Hunting - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	INIAV-PVCSM+Confirmação	Magnetic stirrer method for pooled sample digestion	animal	161	0	Trichinella	0
	Wild boars - wild - Hunting - Portugal - animal sample - organ/tissue - Unspecified - Private sampling - Other	UTAD+GHE	Magnetic stirrer method for pooled sample digestion	animal	316	0	Trichinella	0
REGIÃO AUTÓNOMA DOS AÇORES (NUTS level 1)	Pigs - breeding animals - not raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	317	0	Trichinella	0
	Pigs - breeding animals - raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	944	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	11648	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	44574	0	Trichinella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling Details	Method	Sampling unit	Total units tested	Total units positive	Zoonoses	N of units positive
REGIÃO AUTÓNOMA DA MADEIRA (NUTS level 1)	Pigs - breeding animals - not raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	5	0	Trichinella	0
	Pigs - breeding animals - raised under controlled housing conditions - sows and boars - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	4	0	Trichinella	0
	Pigs - fattening pigs - not raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	11	0	Trichinella	0
	Pigs - fattening pigs - raised under controlled housing conditions - Slaughterhouse - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	N_A	Magnetic stirrer method for pooled sample digestion	animal	581	0	Trichinella	0
Terras de Trás-os-Montes	Wild boars - wild - Hunting - Portugal - animal sample - organ/tissue - Surveillance - Official sampling - Census	INIAV-Confirmação positivo	Magnetic stirrer method for pooled sample digestion	animal	1	1	Trichinella britovi	1

FOODBORNE OUTBREAKS TABLES

Foodborne Outbreaks: summarized data

when numbers referring to cases, hospitalized people and deaths are reported as unknown, they will be not included in the sum calculation

Causative agent	Food vehicle	Outbreak strenght							
		Strong				Weak			
		N outbreaks	N human cases	N hospitalized	N deaths	N outbreaks	N human cases	N hospitalized	N deaths
Campylobacter jejuni	Unknown					1	9	0	0
Clostridium perfringens	Mixed food	1	20	0	0				
Unknown	Unknown					2	28	4	0

Strong Foodborne Outbreaks: detailed data

Causative agent	H	AG	VT	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	unk	Not Available	Not Available	Not Available	PT-2020_01	General	Mixed food	Roasted leg ham with with spaghetti and green beans	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent	Canteen or workplace catering	Canteen or workplace catering	Portugal	Storage time/temperature abuse	N_A	1	20	0	0

Weak Foodborne Outbreaks: detailed data

Causative agent	H	AG	VT	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
Campylobacter jejuni	unk	Not Available	Not Available	Not Available	PT-2020_02	General	Unknown	N_A	Descriptive epidemiological evidence	School or kindergarten	School or kindergarten	Unknown	Not Available	N_A	1	9	0	0
Unknown	unk	Not Available	Not Available	Not Available	PT-2020_03	General	Unknown	N_A	Descriptive epidemiological evidence	Residential institution (nursing home or prison or boarding school)	Residential institution (nursing home or prison or boarding school)	Unknown	Not Available	N_A	1	7	3	0
					PT-2020_04	General	Unknown	N_A	Descriptive epidemiological evidence	School or kindergarten	Unknown	Unknown	Not Available	N_A	1	21	1	0

ANTIMICROBIAL RESISTANCE TABLES FOR CAMPYLOBACTER

Table Antimicrobial susceptibility testing of *Campylobacter jejuni* in *Gallus gallus* (fowl) - broilers

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: Portugal							
Sampling details:							
MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	110	110	110	110	110	110
	N of resistant isolates	103	7	0	99	7	98
	<=0.125	3		14			
	<=0.25					5	
	0.25	2		41			
	<=0.5						11
0.5	2		37		25		
<=1		100					
1			15		53	1	
2		1	3	1	16		
4	4	2		3	4		
8	32			4		1	
16	42			3		3	
>16	25				7		
32				8		9	
64		3		22		19	
>64				69		66	
128		3					
>128		1					

Table Antimicrobial susceptibility testing of Campylobacter jejuni in Turkeys - fattening flocks

Sampling Stage: Slaughterhouse

Sampler: Official sampling

Analytical Method:

Country of Origin: Portugal

Sampling details:

Sampling Type: animal sample - caecum

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: AMR MON

MIC	AM substance	Ciprofloxacin	Erythromycin	Gentamicin	Nalidixic acid	Streptomycin	Tetracycline
	ECOFF	0.5	4	2	16	4	1
	Lowest limit	0.12	1	0.12	1	0.25	0.5
	Highest limit	16	128	16	64	16	64
	N of tested isolates	37	37	37	37	37	37
	N of resistant isolates	31	6	0	26	4	32
	<=0.125	5		1			
	<=0.25					1	
	0.25	1		6			
	<=0.5						5
	0.5			24		1	
	<=1		30		2		
	1			4		16	
	2		1	2		12	
	4	2			4	3	
	8	11			4		2
	16	8			1		
	>16	10				4	
	32				1		2
	64				6		10
	>64				19		18
	128		2				
	>128		4				

ANTIMICROBIAL RESISTANCE TABLES FOR SALMONELLA

Table Antimicrobial susceptibility testing of Salmonella 1,9,12:I,v:- in Meat from pig

Sampling Stage: Retail
 Sampling Type: food sample - meat
 Sampling Context: Monitoring

Sampler: Industry sampling
 Sampling Strategy: Objective sampling
 Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
0.03						1								
0.064									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=1	1													
<=2												1		
<=4										1				
4							1							
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella 4,5,12:i:- in Gallus gallus (fowl) - broilers - before slaughter

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	3	0	0	0	0	0	0	0	0	0	3	3	0	1
MIC														
<=0.03									3					
0.03						3								
<=0.25			3										2	2
<=0.5				3				3						
0.5													1	
2							3							
<=4										2				
<=8					3									
8		3								1				
>32														1
>64	3											3		
>1024											3			

Table Antimicrobial susceptibility testing of Salmonella 4,5,12:i:- in Meat from broilers (Gallus gallus)

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	1	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											
<=0.5				1				1						
0.5													1	1
<=1							1							
<=4										1				
4		1												
<=8					1									
>64	1											1		
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella 4,5,12:i:- in Meat from turkey

Sampling Stage: Retail

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

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
N of resistant isolates	1	0	0	0	0	1	0	0	0	1	1	1	0	0
MIC														
<=0.03									1					
<=0.25			1											1
<=0.5				1				1						
0.5						1							1	
2							1							
<=8					1									
8		1												
32										1				
>64	1											1		
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella 4,5,12:i:- in Meat from duck

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	1	0	0	1	1	1	1	0	1	1	1	1	1
MIC														
<=0.03									2					
0.03						1								
<=0.25			1											1
<=0.5				1				1						
0.5			1										1	
<=1	1													
1				1										
<=2												1		
2							1						1	
4						1	1							
<=8					1									
8		1								1				
32		1									1			
>32								1						1
>64	1											1		
128										1				
>128					1									
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella 4,5,12:i:- in Turkeys - fattening flocks - before slaughter

Sampling Stage: Farm

Sampling Type: animal sample - organ/tissue

Sampling Context: Clinical investigations

Sampler: Industry sampling

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	0	0	1	0	0	0	1	1	0	0
MIC														
0.03						1								
0.064									1					
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=4										1				
4		1												
<=8					1									
16							1							
>64	1											1		
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Agona in Meat from turkey

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									2					
0.03						2								
<=0.25			2											1
<=0.5				2				1						
0.5													2	1
<=1	1													
1								1						
<=2												1		
2	1						2							
<=4										2				
4												1		
<=8					1									
8		2												
16					1						1			
128											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.03						1								
0.064									1					
<=0.25			1										1	
<=0.5				1										
0.5														1
1								1						
<=2												1		
2	1						1							
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Braenderup in All animals - zoo animals

Sampling Stage: Zoo

Sampling Type: animal sample - cloacal swab

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	
<=0.5				1				1						
0.5														1
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
64											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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	4	4	4	4	4	4	4	4	4	4	4	4	4	4
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015						2								
<=0.03									1					
0.03						2								
0.064									3					
<=0.25			4										1	3
<=0.5				4				4						
0.5													3	1
<=1	2													
<=2												4		
2	2						3							
<=4										3				
4							1							
<=8					4						1			
8		4								1				
16											1			
64											2			

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

MIC	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	
	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														
	<=0.5	2														
<=1	2															
1	1															
<=2	2															
2	2															
<=4	2															
4	2															
<=8	2															
32	2															

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

Sampling Stage: Farm

Sampling Type: animal sample - foetus/stillbirth

Sampling Context: Clinical investigations

Sampler: Industry sampling

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

MIC	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
	N of resistant isolates	0	0	0	0	0	0	2	0	0	0	0	0	0	0
<=0.015															
<=0.03															
<=0.25															
<=0.5															
<=1															
<=2															
<=4															
4															
<=8															
32															

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									2					
0.03						1								
<=0.25			2										1	2
<=0.5				2				2						
0.5													1	
<=1	1													
<=2												2		
2	1						2							
<=4										2				
<=8					2						1			
8		2												
16											1			

Table Antimicrobial susceptibility testing of Salmonella enterica, subspecies salamae in Gallus gallus (fowl) - broilers - before slaughter

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

MIC	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
	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													
<=0.5		1													
<=1		1													
<=2		1													
<=4		1													
<=8		1													
8		1													
32		1													

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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	5	5	5	5	5	5	5	5	5	5	5	5	5	5
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									5					
0.03						5								
<=0.25			5										5	5
<=0.5				5				4						
<=1	3													
1								1						
<=2												5		
2	2						5							
<=4										5				
4		3												
<=8					5									
8		2												
16											4			
32											1			

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
0.03						1								
0.064									1					
<=0.25			2										2	2
<=0.5				2				2						
<=1	2													
<=2												2		
2							1							
<=4										2				
4		1					1							
<=8					2									
8		1												
16											1			
32											1			

Table Antimicrobial susceptibility testing of Salmonella Enteritidis in Meat from duck

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
2	1						1							
4												1		
<=8					1									
8		1								1				
64											1			

Table Antimicrobial susceptibility testing of Salmonella Enteritidis in Meat from broilers (Gallus gallus) - carcase - chilled

Sampling Stage: Slaughterhouse

Sampling Type: food sample - neck skin

Sampling Context: Monitoring

Sampler: HACCP and own check

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	
<=0.5				1				1						
0.5														1
<=1	1													
<=2												1		
<=4										1				
4		1					1							
<=8					1									
32											1			

Table Antimicrobial susceptibility testing of Salmonella Give in Ducks - unspecified

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	1	0	1
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	
<=0.5				1				1						
<=1							1							
<=4										1				
4		1												
<=8					1									
>32														1
64												1		
>64	1													
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Hadar in Turkeys - fattening flocks - before slaughter

Sampling Stage: Farm

Sampling Type: animal sample - organ/tissue

Sampling Context: Clinical investigations

Sampler: Industry sampling

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	1	0	0	0	1	0	0	0	0
MIC														
<=0.03	1													
<=0.25	1													
0.5	1													
1	1													
2	1													
4	1													
16	1													
32	1													
>128	1													

Table Antimicrobial susceptibility testing of Salmonella II 42:b:e,n,x,z15 in Gallus gallus (fowl) - breeding flocks for broiler production line

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	0	0	0	0	0	1	0	0	0	0	0	0	0	0
MIC														
0.064									1					
0.12						1								
<=0.25			1											1
<=0.5				1				1						
0.5													1	
<=2												1		
2	1						1							
<=8					1									
8										1				
16		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella IIIb 61:k:1,5,(7) in Gallus gallus (fowl) - laying hens

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs and dust

Sampling Context: Control and eradication programmes

Sampler: Official and industry sampling

Sampling Strategy: Census

Programme Code: AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
16											1			

Table Antimicrobial susceptibility testing of Salmonella Indiana in Ducks - unspecified

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	1	0	1
MIC														
<=0.03									1					
0.03						2								
0.12									1					
<=0.25			2										1	1
<=0.5				2				2						
0.5													1	
<=1	1													
<=2												1		
2							2							
<=4										2				
<=8					2									
8		1												
16		1												
32											1			
>32														1
>64	1											1		
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Infantis in Gallus gallus (fowl) - breeding flocks for broiler production line

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs and dust

Sampling Context: Control and eradication programmes

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											
<=0.5				1				1						
0.5													1	1
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON pnl2

Analytical Method:

Country of Origin: Portugal

Sampling Details:

AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin
Cefotaxime synergy test	Not Available	Not Available	Positive/Pres ent	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/Pres ent	Not Available	Not Available	Not Available	Not Available
ECOFF	0.125	0.5	0.5	8	2	2	0.06	1	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
N of resistant isolates	1	1	0	0	1	0	0	0	0	0
MIC										
<=0.015							1			
0.064									1	
0.12			1							
0.5						1				
4	1				1	1				
8										1
>64			1							

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

Sampling Stage: Retail

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	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	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	N of resistant isolates	1	0	1	1	2	5	0	2	0	5	5	5	0	1
<=0.015							1								
<=0.03										6					
<=0.25				5										3	5
0.25							2								
<=0.5					4				3						
0.5							2							2	
<=1	2							2							
1					1		1		1					1	
<=2			1										1		
2	2							4							
<=4											1				
4	1	3			1										
>4				1											
<=8						3									
8			1						2						
16			1			1									
>32															1
64												1	1		
>64	1												4		
128						2									
>128											5				
>1024												5			

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

Sampling Stage: Farm

Sampling Type: environmental sample - boot swabs and dust

Sampling Context: Control and eradication programmes

Sampler: Official and industry sampling

Sampling Strategy: Census

Programme Code: AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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	3	3	3	3	3	3	3	3	3	3	3	3	3	3
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									3					
0.03						3								
<=0.25			3										3	3
<=0.5				3				3						
<=1	3						1							
<=2												3		
2							2							
<=4										3				
<=8					3									
8		3												
16											2			
32											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=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												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Kentucky in Turkeys - fattening flocks - before slaughter

Sampling Stage: Farm

Sampling Type: animal sample - organ/tissue

Sampling Context: Clinical investigations

Sampler: Industry sampling

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	0	1	0	1	0	1	1	1	0	0
MIC														
<=0.03									1					
<=0.25			1											1
<=0.5				1										
0.5													1	
2							1							
<=8					1									
>8						1								
16		1						1						
>64	1											1		
>128										1				
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Kottbus in Ducks - unspecified

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=0.015	1													
<=0.03	1													
<=0.25	1													
<=0.5	1													
<=1	1													
<=2	1													
<=4	1													
4	1													
<=8	1													
16	1													

Table Antimicrobial susceptibility testing of Salmonella Kottbus in Meat from duck

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25													1	1
<=0.5				1				1						
0.5			1											
<=1	1													
<=2												1		
2							1							
<=4										1				
4		1												
<=8					1						1			

Table Antimicrobial susceptibility testing of Salmonella Lexington in Ducks - unspecified

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

MIC	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	
	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	1	
<=0.5	1															
<=1	1															
<=2														1		
2								1								
<=4												1				
<=8						1										
8	1															

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=2												1		
<=4										1				
<=8					1									
8		1												
32											1			

Table Antimicrobial susceptibility testing of Salmonella Montevideo in Feed material of cereal grain origin

Sampling Stage: Feed mill

Sampling Type: feed sample

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.03						1								
0.064									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

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

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015	1													
<=0.03	1													
<=0.25	1													
<=0.5	1													
<=1	1													
<=2	1													
2	1													
<=4	1													
<=8	1													
8	1													
16	1													

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	1
<=0.5				1				1						
<=1	1						1							
<=4										1				
4		1										1		
<=8					1									
32											1			

Table Antimicrobial susceptibility testing of Salmonella Regent in Ducks - unspecified

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	0	0	0	0	0	1	0	0	0	1	0	0	0	0
MIC														
<=0.03	1													
<=0.25	1													
0.25	1													
<=0.5	1													
0.5	1													
<=1	1													
<=2	1													
2	1													
<=8	1													
16	1													
>128	1													

Table Antimicrobial susceptibility testing of Salmonella Rissen in Meat from bovine animals

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	1	0	0	0	0	0	1	0	0	1	1	0	1
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											
<=0.5				1										
0.5													1	
<=1							1							
<=4										1				
4								1						
<=8					1									
>32														1
64		1												
>64	1											1		
1024											1			

Table Antimicrobial susceptibility testing of Salmonella Rissen in Meat from pig

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Official sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	1	0	0	0	0	0	0	0	0	1	1	0	1
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1											
<=0.5				1										
0.5													1	
<=1							1							
1								1						
<=4										1				
<=8					1									
>32														1
64		1												
>64	1											1		
512											1			

Table Antimicrobial susceptibility testing of Salmonella Rissen in Meat from turkey

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	0	0	0	0	0	0	1	1	0	1
MIC														
<=0.015	1													
0.064	1													
<=0.25	1													
<=0.5	1													
1	1													
2	1													
<=4	1													
<=8	1													
16	1													
>32	1													
>64	1													
>1024	1													

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
16											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									2					
0.03						2								
<=0.25			2										2	
<=0.5				2				2						
0.5														2
<=1	2													
<=2												2		
2							2							
<=4										2				
4		2												
<=8					2									
32											1			
64											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
0.03						1								
0.064									1					
<=0.25			2										2	1
<=0.5				2				2						
0.5														1
<=1	1						1							
<=2												2		
2	1						1							
<=4										2				
<=8					2						1			
8		1												
16		1									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: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	1	0	0	0	0	0	1	0	0	1
MIC														
<=0.03									1					
0.03						1								
<=0.25			1										1	
<=0.5				1										
<=1							1							
1								1						
<=4										1				
4												1		
8		1												
>32														1
>64	1													
128					1									
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Pigeons

Sampling Stage: Natural habitat

Sampling Type: animal sample - organ/tissue

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						2								
0.064									1					
<=0.25			2										1	2
<=0.5				2				1						
0.5													1	
<=1	2													
1								1						
<=2												2		
2							2							
<=4										2				
4		1												
<=8					2						2			
8		1												

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Meat from other poultry species - carcase - frozen

Sampling Stage: Retail

Sampling Type: food sample - meat

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	1	0	0	0	1	0	0	0	0
MIC														
<=0.03	1													
<=0.25	11													
<=0.5	11													
0.5	1													
<=1	1													
<=2	1													
2	1													
<=8	1													
8	1													
16	1													
>128	1													

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Quails

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	0	0	0	0	1	1	0	1	0	1	1	0	0	1
MIC														
<=0.03	1													
<=0.5	1													
0.5	1													
<=1	1													
1	1													
2	1													
4	1													
16	1													
>32	1													
128	1													
>1024	1													

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Ducks - unspecified

Sampling Stage: Farm

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Objective sampling

Sampling Context: Control and eradication programmes

Programme Code: OTHER AMR MON

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
N of resistant isolates	0	0	0	0	0	0	2	0	0	0	0	0	0	0
MIC														
<=0.03														
0.03														
0.064														
<=0.25														
<=0.5														
0.5														
<=1														
<=2														
2														
4														
<=8														
8														
32														

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Ducks - unspecified

Sampling Stage: Unspecified

Sampling Type: animal sample - organ/tissue

Sampling Context: Clinical investigations

Sampler: Industry sampling

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	0	0	0	0	0	0	1	0	0	0	0	0	0	0
MIC														
<=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								1				
32											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Partridges - farmed

Sampling Stage: Farm

Sampling Type: animal sample - organ/tissue

Sampling Context: Monitoring

Sampler: Industry sampling

Sampling Strategy: Objective sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	1	1	0	1	0	1	1	1	0	0
MIC														
<=0.03									1					
<=0.25			1											1
0.25						1								
<=0.5				1										
0.5													1	
<=1							1							
8		1												
32								1						
64												1		
>64	1													
>128					1					1				
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Partridges - farmed

Sampling Stage: Farm

Sampling Type: animal sample - organ/tissue

Sampling Context: Clinical investigations

Sampler: Industry sampling

Sampling Strategy: Suspect sampling

Programme Code: OTHER AMR MON

Analytical Method:

Country of Origin: Portugal

Sampling Details:

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
N of resistant isolates	1	0	0	0	1	1	0	1	0	1	1	1	0	0
MIC														
<=0.03									1					
<=0.25			1											1
0.25						1								
<=0.5				1										
0.5													1	
2							1							
8		1												
16								1						
64												1		
>64	1													
>128					1					1				
>1024											1			

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

Sampling Stage: Retail

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

MIC	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
	N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<=0.015							1								
<=0.03										2					
0.03							1								
<=0.25				2										1	1
<=0.5					2				1						
0.5														1	1
<=1		1													
1									1						
<=2													1		
2		1						2							
<=4											2				
4													1		
<=8						2									
8			2												
32												1			
64												1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Meat from turkey

Sampling Stage: Retail

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
0.064						1			1					
<=0.25			1											
<=0.5				1				1						
0.5													1	1
2	1						1							
4												1		
<=8					1									
8		1								1				
16											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Meat from duck

Sampling Stage: Retail

Sampler: Industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER AMR MON

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	5	5	5	5	5	5	5	5	5	5	5	5	5	5
N of resistant isolates	0	0	0	0	1	1	2	1	0	1	1	1	0	0
MIC														
<=0.03									4					
0.03						4								
0.064									1					
<=0.25			5										4	5
0.25						1								
<=0.5				5				4						
0.5													1	
<=1	2													
<=2												3		
2	3						3							
<=4										1				
4		2					2					1		
<=8					4									
8		3						1		3				
16											1			
32											2			
64											1	1		
128					1									
>128										1				
>1024											1			

Table Antimicrobial susceptibility testing of Salmonella Typhimurium in Turkeys - fattening flocks - before slaughter

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	1	0	0	0	0	0	1	0	0	0	1	1	0	1
MIC														
<=0.03									1					
0.03						2								
0.064									1					
<=0.25			2										1	1
<=0.5				2				2						
0.5													1	
<=1	1													
<=2												1		
2							1							
<=4										2				
4		1												
<=8					2									
8		1					1							
32											1			
>32														1
>64	1											1		
>1024											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.015						1								
<=0.03									1					
<=0.25			1										1	1
<=0.5				1				1						
<=1	1													
<=2												1		
2							1							
<=4										1				
<=8					1									
8		1												
32											1			

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

Sampling Stage: Farm

Sampler: Official and industry sampling

Analytical Method:

Country of Origin: Portugal

Sampling Details:

Sampling Type: environmental sample - boot swabs and dust

Sampling Strategy: Census

Sampling Context: Control and eradication programmes

Programme Code: AMR MON

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
N of resistant isolates	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIC														
<=0.03									1					
0.03						1								
<=0.25			1											
<=0.5				1				1						
0.5													1	1
<=1	1													
<=2												1		
2							1							
<=4										1				
4		1												
<=8					1									
128											1			

ANTIMICROBIAL RESISTANCE TABLES FOR INDICATOR ESCHERICHIA COLI

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - fresh

Sampling Stage: Retail		Sampling Type: food sample - meat		Sampling Context: Monitoring								
Sampler: Official sampling		Sampling Strategy: Objective sampling		Programme Code: ESBL MON pn12								
Analytical Method:												
Country of Origin: Portugal												
Sampling Details:												
Ceftazidime synergy test	Cefotaxime synergy test	MIC	AM substance									
			Cefepime									
			Cefotaxim									
			Cefotaxime + Clavulanic acid									
			Cefoxitin									
			Ceftazidim									
			Ceftazidime + Clavulanic acid									
			Ertapenem									
			Imipenem									
			Meropenem									
			Temocillin									
		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	31	31	31	31	31	31	31	31	31	31
		N of resistant isolates	26	31	5	7	29	5	3	0	0	0
Not Available	Not Available	MIC	<=0.015									
			<=0.03									
			0.03									
			0.064									
			<=0.125									
			0.12									
			0.25									
			0.5									
			1									
			2									
Not Available	Not Available	MIC	2									
			4									
			8									
			16									
			32									
			>32									
			64									
			>64									
			<=0.064									
			0.12									
Positive/Pre sent	Not Available	MIC	1									
			16									
			<=0.125									
			0.25									
			<=0.125									
			2									
			4									
			16									
			<=0.125									
			0.25									
Negative/Ab sent	Not Available	MIC	<=0.125									
			0.25									
			<=0.125									
			2									
			4									
			16									
			<=0.125									
			0.25									
			<=0.125									
			2									

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Meat from broilers (Gallus gallus) - 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: Portugal															
Sampling Details:															
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	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	N of resistant isolates	31	1	31	29	16	26	4	1	0	23	22	20	0	15
	MIC														
	<=0.015														
	<=0.03														
	0.03														
<=0.25															
0.25															
<=0.5															
0.5															
<=1															
1															
<=2															
2															
<=4															
4															
>4															
<=8															
8															
>8															
16															
32															
>32															
64															
>64															
128															
>128															
>1024															

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

Sampling Stage: Slaughterhouse			Sampling Type: animal sample - caecum						Sampling Context: Monitoring						
Sampler: Official sampling			Sampling Strategy: Objective sampling						Programme Code: AMR MON pn12						
Analytical Method:															
Country of Origin: Portugal															
Sampling Details:															

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

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: Portugal															
Sampling Details:															
	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	156	156	156	156	156	156	156	156	156	156	156	156	156	156
	N of resistant isolates	100	9	5	5	34	116	0	15	0	108	72	79	0	53
MIC	<=0.015						36								
	<=0.03									155					
	0.03						4								
	0.064									1					
	0.12						1								
	<=0.25			151										134	55
	0.25						23								
	<=0.5				151				92						
	0.5						9							21	44
	<=1	2						145							
	1						11		41					1	3
	<=2		7										72		
	2	25			1		9	11	8						1
	<=4										41				
	4	24	45				6						5		
	>4			5											
	<=8					108						63			
	8	5	59				27				2				
	>8				4		30								
	16		36			14			6		5	17			
	32		6			6			2			3	1		1
	>32								7						52
	64	1	3			15					2	1	32		
	>64	99											46		
	128					7					12				
	>128					6					94				
	1024											1			
	>1024											71			

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

Sampling Stage: Slaughterhouse			Sampling Type: animal sample - caecum					Sampling Context: Monitoring							
Sampler: Official sampling			Sampling Strategy: Objective sampling					Programme Code: ESBL MON pn12							
Analytical Method:															
Country of Origin: Portugal															
Sampling Details:															
			AM substance												
			CefepimeCefotaximCefotaxime + Clavulanic acidCefoxitinCeftazidimCeftazidime + Clavulanic acidErtapenemImipenemMeropenemTemocillin												
			ECOFF0.1250.250.2580.50.50.060.50.12532												
			Lowest limit0.0640.250.0640.50.250.120.0150.120.030.5												
			Highest limit326464641281282161664												
			N of tested isolates137137137137137137137137137137												
			N of resistant isolates13713721813223000												
Ceftazidime synergy testCefotaxime synergy testMIC			<=0.015111												
			<=0.03129												
			0.0316												
			0.06478												
			<=0.12556												
			0.123												
			0.2567												
			0.514												
			113												
			218												
			449												
			866												
			1620												
			322												
			>32												
			642												
			>64												
			<=0.064101												
			0.1233												
			0.251												
			Negative/Ab sent42												
	Positive/Pre sentNot Available			<=0.12569											
		0.2555													
		0.52													
		<=0.1255													
		0.254													
Negative/Ab sentNot Available			162												

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Gallus gallus (fowl) - broilers

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: Portugal															
Sampling Details:															
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	137	137	137	137	137	137	137	137	137	137	137	137	137	137
	N of resistant isolates	137	19	137	132	82	119	1	10	0	102	109	96	0	47
	MIC														
	<=0.015	17													
	<=0.03	136													
	0.03	1													
0.064	1														
<=0.25	125														
0.25	36														
<=0.5	5														
0.5	66														
<=1	8														
1	135														
<=2	50														
2	39														
<=4	22														
4	2														
>4	100														
<=8	14														
8	6														
>8	38														
16	7														
32	8														
>32	5														
64	1														
>64	41														
128	50														
>128	10														
1024	91														
>1024	2														
	107														

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

Sampling Stage: Retail			Sampling Type: food sample - meat					Sampling Context: Monitoring								
Sampler: Official sampling			Sampling Strategy: Objective sampling					Programme Code: OTHER ESBL MON pnl2								
Analytical Method:																
Country of Origin: Portugal																
Sampling Details:																
			AM substance	Cefepime	Cefotaxim	Cefotaxime + Clavulanic acid	Cefoxitin	Ceftazidim	Ceftazidime + Clavulanic acid	Ertapenem	Imipenem	Meropenem	Temocillin			
Ceftazidime synergy test	Cefotaxime synergy test	MIC	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	3	3	3	3	3	3	3	3	3	3			
			N of resistant isolates	2	3	1	1	3	1	0	0	0	0			
			<=0.015							2						
			<=0.03									3				
			0.03							1						
			<=0.125									1				
			0.12	1												
0.5													2			
Not Available	Not Available	Not Available	1							2						
			2	1	1											
			4							1			2			
			8	1			1	1								
			64			2	1									
			Positive/Pre sent	<=0.064									2			
			Negative/Ab sent	1										1		
			Positive/Pre sent	Not Available												
			Negative/Ab sent	Not Available												
						Positive/Pre sent	<=0.125									2
			Negative/Ab sent	Not Available												
			Positive/Pre sent	<=0.064												
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			Positive/Pre sent	<=0.125												
			Negative/Ab sent	Not Available												
			Positive/Pre sent	<=0.064												
			Negative/Ab sent													

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

Sampling Stage: Retail

Sampler: Official sampling

Analytical Method:

Country of Origin: Portugal

Sampling Type: food sample - meat

Sampling Strategy: Objective sampling

Sampling Context: Monitoring

Programme Code: OTHER ESBL MON

Sampling Details:

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
N of resistant isolates	3	0	3	3	2	3	1	0	0	3	3	3	0	1
MIC														
<=0.03														
<=0.25														
<=0.5														
0.5														
<=1														
1														
2														
4														
>4														
<=8														
8														
>8														
>32														
64														
>64														
128														
>128														
>1024														

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Turkeys - fattening flocks

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: Portugal								
Sampling Details:								

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Turkey - fattening flocks

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: Portugal															
Sampling Details:															
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	142	142	142	142	142	142	142	142	142	142	142	142	142	142
	N of resistant isolates	99	10	5	5	45	103	34	5	0	92	73	102	1	53
MIC															
	<=0.015	31													
	<=0.03	140													
	0.03	5													
	0.064	3													
	0.12	2													
	<=0.25	3													
	0.25	95													
	<=0.5	13													
	0.5	85													
	<=1	11													
	1	99													
	<=2	43													
	2	34													
	<=4	1													
	4	1													
	>4	38													
	<=8	6													
	8	90													
	>8	44													
	16	11													
	32	22													
	>32	3													
	64	1													
	>64	3													
	128	1													
	>128	5													
	>1024	85													

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Turkeys - fattening flocks

Sampling Context: Monitoring

Programme Code: ESBL MON pnl2

		AM substance																											
				Cefepime		Cefotaxim		Ceftazidime + Clavulanic acid		Cefoxitin		Ceftazidim		Ceftazidime + Clavulanic acid		Ertapenem		Imipenem		Meropenem		Temocillin							
		ECOFF		0.125		0.25		0.25		8		0.5		0.5		0.06		0.5		0.125		32							
		Lowest limit		0.064		0.06		0.25		0.064		0.06		0.5		0.12		0.125		0.015		0.12		0.125		0.03		0.5	
		Highest limit		32		32		64		64		64		128		128		128		2		16		16		16		64	
Ceftazidime synergy test	Cefotaxime synergy test	MIC	N of tested isolates	53	31	31	53	31	53	31	53	31	53	31	53	31	53	31	53	31	53	31	53	31	53	31	53		
			N of resistant isolates	51	29	31	53	4	4	5	10	31	52	4	4	4	0	0	0	0	0	0	0	0	0	0	0		
Not Available	Not Available	<=0.015																											
		<=0.03																											
		0.03																											
		0.064																											
		<=0.125																											
		0.12	2	2																									
		0.25	3	2																									
		0.5	4	3																									
		1	5	1																									
		2	4	2	3	4																							
		4	9	4	2	4																							
		8	3	2	2	5																							
		16	6	3	1	1																							
		32	9	2	1																								
		>32	8	10																									
		64			2	4																							
		>64			20	35																							
Positive/Pre sent	Positive/Pre sent	<=0.064																											
		0.12																											
		0.25																											
		1																											
	Negative/Ab sent	0.12																											
		2																											
		4																											
		4																											
Positive/Pre sent	Not Available	<=0.125																											
		0.25																											
		4																											
		4																											
Negative/Ab sent	Not Available	<=0.125																											
		0.25																											
		2																											
		4																											

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic, unspecified in Turkey - fattening flocks

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: Portugal

Sampling Details:

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	31	53	31	53	31	53	31	53	31	53	31	53	31	53
N of resistant isolates	31	53	7	12	31	53	31	52	22	41	26	45	7	19
MIC														
<=0.015						4	7							
<=0.03									30	52				
0.03						1	1							
0.064									1	1				
<=0.25													24	43
0.25													5	19
<=0.5					1	3	3		15	26				
0.5						3	5						7	6
<=1								23	32				9	9
1				7	13				11	20			4	1
<=2		2	2									3	2	1
2				3	4	3	3		1	2	2	6		
<=4											6	9		
4		7	14	2	4	2	3		1	3	7	1		
>4			26	45									1	
<=8					8	12					1	3		
8		13	23		9	14		7	6	4	12	1		
>8					10	19		12	28					
16		2	2			1				2	1	4	3	1
32		1	2			2	3			1	1	1		3
>32								1	1					16
64			3	6		1	9					1	14	19
>64	31	53	3	4								12	29	
128					12	20						1		
>128					7	9				21	39			
1024											2	5		
>1024											23	40		

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	Gallus gallus (fowl) - broilers	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Slaughterhouse	N_A	Monitoring	Official sampling	animal sample - caecum	slaughter animal batch	Portugal	N_A	246	0
	Meat from broilers (Gallus gallus)	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample - meat	single (food/feed)	Portugal	N_A	114	0
	Meat from turkey	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Retail	N_A	Monitoring	Official sampling	food sample - meat	single (food/feed)	Portugal	N_A	7	0
	Turkeys - fattening flocks	Escherichia coli, non-pathogenic, unspecified	Objective sampling	Slaughterhouse	N_A	Monitoring	Official sampling	animal sample - caecum	slaughter animal batch	Portugal	N_A	164	0

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



Latest Transmission set

Table Name	Last submitted dataset transmission date
Animal Population	20-Jul-2022
Disease Status	20-Jul-2022
Food Borne Outbreaks	25-Jul-2022
Prevalence	25-Jul-2022

Portugal, Text Forms 2020
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1. Institutions and Laboratories involved in zoonoses monitoring and reporting

Instituto Nacional de Investigação Agrária e Veterinária, I. P. (INIAV)

Laboratório Regional Veterinário (LRV)

Laboratório Regional de Veterinária e Segurança Alimentar (LRVSA)

Instituto Nacional de Saúde Doutor Ricardo Jorge, I. P. (INSA)

Instituto Português do Mar e da Atmosfera, I.P. (IPMA)

Autoridade de Segurança Alimentar e Económica (ASAE)

Direção Geral de Alimentação e Veterinária (DGAV)

Instituto de Financiamento da Agricultura e Pescas, I.P. (IFAP)

INIAV: laboratory supporting several official control and surveillance programs and plans, with analytical research on zoonotic agents in animal, food and feed samples. Also supports national AMR monitoring plan with analytical performance.

LRV: Autonomous Region of Azores' laboratory supporting several official control and surveillance programs and plans, with analytical research on zoonotic agents in animal, food and feed samples. Also supports national AMR monitoring plan with analytical performance obtaining the isolates that are tested for antimicrobial resistance at INIAV laboratory.

LRVSA: Autonomous Region of Madeira' laboratory supporting several official control and surveillance programs and plans, with analytical research on zoonotic agents in animal and food samples. Also supports national AMR monitoring plan with analytical performance obtaining the isolates that are tested for antimicrobial resistance at INIAV laboratory.

INSA: laboratory supporting national health system with investigation and analytical performance on FBO scope and analytical performance on food samples.

IPMA: laboratory supporting official control plans with analytical research on zoonotic agents in food (fishery products and LBM).

ASAE: laboratory performing official analytical control on food, mainly at retail stage.

DGAV: national competent authority with several official control and surveillance programs and plans applicable to animals, food and feed.

IFAP: Institute involved in animal and farms registration.

2. Animal population

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

Animal farms and bovine animals are legally obliged to be registered. In addition, the animal slaughter quantities are obliged to be reported.

Data are compiled in the IFAP's database and numbers on animals and farms are given based on the consultation of the database:

- cattle extracted from SNIRA DB, reference date: 2020.12.31;
- sheep and goat extracted from SNIRA DB annual stock inventory, reference date: 2020.12.31;
- pigs extracted from SNIRA DB quarterly stock inventory, reference date: 2020.12.01;
- birds from 2021 stock inventory estimates;
- horses extracted from RNE DB, reference date Dec 2020.

The quantities related with slaughtered animals are compiled in another database (SIPACE) by meat inspectors. Numbers on slaughtered animals are given based on the consultation of the database.

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

Bovine animals

- Calves for slaughter: Bovine animals less than 1 year old.
- Dairy cows and heifers: Female bovines more than 1 year old belonging to dairy breeds.
- Meat production animals: bovine animals, more than 1 year old, not belonging to dairy breeds.

Milk ewes and goats: females which are kept exclusively or principally to produce milk for human consumption and/or for processing into dairy products.

Meat production sheep and goats: Sheep and goats not kept exclusively or principally to produce milk for human consumption and/or for processing into dairy products.

Fattening pigs: include piglets.

3. National changes of the numbers of susceptible population and trends

4. Geographical distribution and size distribution of the herds, flocks and holdings

Not available

5. Additional information

3. General evaluation: Campylobacter spp in meat from broilers - Information collected from the food business operators, based on Regulation 2019/627

1. History of the disease and/or infection in the country^(a)

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

3. Any recent specific action in the Member State or suggested for the European Union^(b)

4. Additional information

The results were obtained by the EN ISO 10272-2 and two alternative analytical methods validated against the specific reference method provided for in Annex I in accordance with the protocol set out in standard EN ISO 16140-2 and certified by an independent certification body: CampyFood Agar Certificate n. ° 2009LR28 (Microval) and Rapid'Campylobacter Certificate n. ° BRD 07/25-01/14 (Afnor).

4. General evaluation: Listeria monocytogenes in food
1. History of the disease and/or infection in the country^(a)
2. Evaluation of status, trends and relevance as a source for humans
3. Any recent specific action in the Member State or suggested for the European Union^(b)
4. Additional information - possible impact of the COVID-19 pandemic on 2020 zoonoses and foodborne outbreaks data
<p>DGAV Had collected 374 samples in 2019 and 109 samples in 2020 for Listeria monocytogenes testing. There was some impact of the COVID-19 pandemic on the reporting of Listeria monocytogenes testing in Portugal in 2020. For Listeria monocytogenes testing in Portugal (DGAV) there is a medium comparability level between 2020 data and 2019 data.</p> <p>ASAE As consequence of COVID-19 pandemic in 2020, the number of samples tested was significantly lower than in 2019. The most significant reason was the reduction of human resources available for sample collection and surveillance activities due to the rationalization of activities because of the pandemic. The data reported in 2020 in relation to 2019 have low comparability due to the difference between the low numbers of tested samples in 2020 when compared to 2019.</p>
4. Additional information - analytical approach in case the number of units tested is different for detection and enumeration
<p>In general (DGAV) the units are tested for detection and enumeration, in some cases, in according with the type of the product or the local where the product is sampling the units can be tested only by detection or by enumeration.</p> <p>ASAE, as Official Sampler, is responsible for the control of the "Sampling Stage" at "Retail". The RTE food categories in the Retail are only tested for enumeration in accordance to Regulation 2073. Samples are sporadically tested for detection and are regarded in the special inspection context. Therefore, these samples in the Prevalence Tables are considered "Sampling Stage" identified by "Selective Sampling". Hence, the number of samples tested for detection is always fewer than the ones tested for enumeration.</p>

5. General evaluation: *B. abortus* in animal - Cattle (bovine animals)

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

In the Autonomous Region of Açores, there are 6 islands (Santa Maria, Faial, Graciosa, Pico, Flores and Corvo) that are Officially Free of Bovine Brucellosis, accordingly to Commission Implementing Decisions 2002/588/EU of 11th July and 2009/600/EU of 5th August. At mainland, the Algarve region was recognised as Officially Free of Bovine Brucellosis accordingly to Commission Implementing Decision 2012/204/EU of 19th April and the 6 districts of the Centro region were recognised as Officially Free of Bovine Brucellosis accordingly to Commission Implementing Decision (EU) 2020/552 of 20th April.

For more information, in relation to bovine brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_bovine-brucellosis_prt.pdf

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

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

4. Additional information

6. Description of Monitoring/Surveillance/Control programmes system: *B. abortus* in animal - Cattle (bovine animals)

1. Monitoring/Surveillance/Control programmes system

Sampling strategy: The herds are classified and sampled accordingly to Council Directive 64/432/EEC and Decreto-Lei No 244/2000 (Sep. 27th).

Frequency of the sampling: The herds are sampled accordingly to Council Directive 64/432/EEC and Decreto-Lei No 244/2000 (Sep. 27th).

Type of specimen taken: Blood, milk, organs, vaginal mucus, semen, aborted foetus and placenta.

Diagnostic/analytical methods used:

- Serology (live animals): Rose Bengal Test (RBT); Complement Fixation Test (CFT)
- Milk (live animals): ELISA test
- Organs (dead animals): bacteriology (isolation of the agent with differentiation of vaccine and field strains).

For more information, in relation to bovine brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_bovine-brucellosis_prt.pdf

2. Measures in place

An Eradication Programme for cattle is carried out and supervised by DGAV.

Vaccination is forbidden, but if an exceptional sanitary situation occurs, vaccination can be allowed with specific protocols between the Veterinary Authority and the owner(s) of the cattle.

Other preventive measures in place: Pre-movement tests are mandatory accordingly to Council Directive 64/432/EEC.

Measures in case of the positive findings or single cases:

- Suspected Herd:
 - Herd under official surveillance;
 - Epidemiological survey;
 - Animal movements are forbidden from and to the herd;
 - Isolation of suspected animals in the herd;
 - Sample collection for laboratory diagnosis.
- Positive Herd:
 - Herd under official restrictions;
 - Compulsory slaughter of all positive animals, under official supervision with sample collection for laboratory diagnosis;
 - Animal movements are forbidden from and to the herd;
 - Serological control of all remaining animals.
- Infected Herd:
 - All measures mentioned for positive herds;
 - Disinfection of all premises, equipment and materials;
 - Thermic treatment of the milk.

For more information, in relation to bovine brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_bovine-brucellosis_prt.pdf

3. Notification system in place to the national competent authority

Yes

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

5. Additional information

7. General evaluation: *Mycobacterium tuberculosis* complex (MTC) in animal - Cattle (bovine animals)

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

Status as officially free of bovine tuberculosis: at mainland, the Algarve region was recognised as Officially Free of Bovine Tuberculosis accordingly to Commission Implementing Decision 2012/204/EU of 19th April; in the Autonomous Region of Açores, eight of nine islands were recognised as Officially Free of Bovine Tuberculosis accordingly to Commission Implementing Decision 2020/552/EU of 20th April. For more information, in relation to bovine tuberculosis, refer to the programme approved by the EU: https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_bovine-tuberculosis_prt.pdf

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

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

4. Additional information

8. Description of Monitoring/Surveillance/Control programmes system: *Mycobacterium tuberculosis* complex (MTC) in animal - Cattle (bovine animals)

1. Monitoring/Surveillance/Control programmes system^(a)

Sampling strategy: The herds are classified and sampled accordingly to Council Directive 64/432/EEC and National Decreto-Lei No 272/2000, November 8th and National Decreto-Lei No 79/2011, June 20th.

Frequency of the sampling: The herds are sampled accordingly to Council Directive 64/432/EEC and National Decreto-Lei No 272/2000, November 8th and National Decreto-Lei No 79/2011, June 20th.

Type of specimen taken: Blood and organs.

Diagnostic/analytical methods used:

- Animal: Intra-dermal comparative test;
- Blood: Gama-interferon;
- Organs: histopathology and bacteriology.

For more information, in relation to bovine tuberculosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_bovine-tuberculosis_prt.pdf

2. Measures in place^(b)

An Eradication Programme for Bovine Tuberculosis is carried out and supervised by DGAV.

Vaccination is forbidden.

Other preventive measures in place: Pre-movement tests are mandatory accordingly to Council Directive 64/432/EEC.

Measures in case of the positive findings or single cases:

- Herd under official restriction;
- Isolation of suspected or infected animals in the herd;
- Positive animals compulsory slaughtered, under official supervision, with sample collection for laboratory diagnosis;
- Animal movements are forbidden from and to the herd;
- Disinfection of all premises, equipment and materials;
- Testing of all remaining animals;
- Thermic treatment of the milk;
- Epidemiological survey.

For more information, in relation to bovine tuberculosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_bovine-tuberculosis_prt.pdf

3. Notification system in place to the national competent authority^(c)

Yes

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

5. Additional information

9. General evaluation: *Lyssavirus* (rabies)

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

Portugal is free from Rabies since 1961.

In August 1984, the national authorities detected a case of rabies in a 2 months old puppy that came from Maputo (Mozambique) and entered in Portugal on the 10th August 1984. The animal was put in quarantine and euthanized. The disease was confirmed by immunofluorescence on the 31st August. The veterinary authorities maintained the implemented sanitary and prophylactic measures and, since then, no further cases were detected and Portugal maintained its free status.

Portugal submitted to OIE, on 17th December 2018, a self-declaration of freedom from rabies, which is posted on the official OIE website.

https://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/Self-declarations/2019_01_Portugal_Rabies.pdf

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

3. Any recent specific action in the Member State or suggested for the European Union^(b)

4. Additional information

10. Description of Monitoring/Surveillance/Control programmes system: *Lyssavirus (rabies)*

1. Monitoring/Surveillance/Control programmes system

Rage is a national notifiable disease since 1953.

Surveillance is based on the investigation of any clinical suspicion and aggression episodes: any dog or cat that bites a human or another animal is considered suspected of rabies and, therefore, is kept under veterinary surveillance in order to discard any case of rabies.

Laboratorial confirmation: positive result at the direct immunofluorescence test.

2. Measures in place

The control programme is defined in the national law (Decreto-Lei No 314/2003, of December 17th) and consists in Vaccination and Surveillance Measures for epidemiological survey with definition of specific rules for owners, for commercial purposes, for exhibits and for the entrance of animals in the country.

The measures are defined in the national and EU legislation.

National legislation (Decreto-Lei No 314/2003, of December the 17th and Portaria No 264/2013, of August the 16th) establishes the obligation of vaccination against rabies in all dogs older than 3 month. Vaccination may be performed either by Municipality Veterinarians in the official campaign or by small animal practitioners in their private clinics. Surveillance is based on the investigation of any clinical suspicion or aggression episodes: any dog or cat that bites a human or another animal is considered suspected of rabies and, therefore, is kept under veterinary surveillance in order to discard any case of rabies.

In Portugal rabies vaccination of dogs is compulsory since 1925. Vaccination in cats and other susceptible animals is voluntary.

3. Notification system in place to the national competent authority

Yes

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

5. Additional information

11. General evaluation: *B. melitensis* in animal - Sheep

1. History of the disease and/or infection in the country^(a)

Status as officially free of ovine brucellosis: The Autonomous Region of Açores is officially free of sheep and goat brucellosis, accordingly to Commission Decision 2003/44/CE of the 17th January 2003. For more information, in relation to sheep and goat brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_ov-cap-brucellosis_prt.pdf

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

3. Any recent specific action in the Member State or suggested for the European Union^(b)

4. Additional information

12. Description of Monitoring/Surveillance/Control programmes system: *B. melitensis* in animal - Sheep

1. Monitoring/Surveillance/Control programmes system

Sampling strategy: The herds are classified and sampled accordingly to Council Directive 91/68/EEC of 28 January 1991 on animal health conditions governing intra-Community trade in sheep and goat animals and Decreto-Lei No 244/2000 (Sep. 27th).

Frequency of the sampling: The herds are sampled accordingly to Council Directive 91/68/EEC of 28 January 1991 on animal health conditions governing intra-Community trade in sheep and goat animals and Decreto-Lei No 244/2000 (Sep. 27th).

Type of specimen taken: Blood, milk, organs, vaginal mucus, semen, aborted foetus and placenta.

Diagnostic/analytical methods used:

- Serology (live animals): Rose Bengal Test (RBT); Complement Fixation Test (CFT)
- Organs and milk (dead animals): bacteriology (isolation of the agent with differentiation of vaccine and field strains).

For more information, in relation to sheep and goat brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_ov-cap-brucellosis_prt.pdf

2. Measures in place

Vaccination of young animals with REV1 is performed in some of the mainland regions: Norte, Centro and Lisboa e Vale do Tejo.

Other preventive measures in place: Pre-movement tests are mandatory for animals intended for the replacement in depopulated herds.

An Eradication Programme for sheep and goat is carried out and supervised by DGAV.

Measures in case of the positive findings or single cases:

- Suspected Herd:

- Herd under official surveillance;
- Epidemiological survey;
- Animal movements are forbidden from and to the herd;
- Isolation of suspected animals in the herd;
- Sample collection for laboratory diagnosis.

- Positive Herd:

- Herd under official restrictions;
- Epidemiological survey;
- Compulsory slaughter of all positive animals, under official supervision with sample collection for laboratory diagnosis;
- Animal movements are forbidden from and to the herd;
- Serological control of all remaining animals.

- Infected Herd:

- All measures mentioned for positive herds;
- Disinfection of all premises, equipment and materials;
- Thermic treatment of the milk.

For more information, in relation to sheep and goat brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_ov-cap-brucellosis_prt.pdf

3. Notification system in place to the national competent authority

Yes

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

5. Additional information

13. General evaluation: <i>B. melitensis</i> in animal - Goats	
1. History of the disease and/or infection in the country	
<p>Status as officially free of caprine brucellosis: The Autonomous Region of Açores is officially free of sheep and goat brucellosis, accordingly to Commission Decision 2003/44/CE of the 17th January 2003.</p> <p>For more information, in relation to sheep and goat brucellosis, refer to the programme approved by the EU:</p> <p>https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_ov-cap-brucellosis_prt.pdf</p>	
2. Evaluation of status, trends and relevance as a source for humans	
3. Any recent specific action in the Member State or suggested for the European Union	
4. Additional information	

14. Description of Monitoring/Surveillance/Control programmes system: *B. melitensis* in animal - Goats

1. Monitoring/Surveillance/Control programmes system

Sampling strategy: The herds are classified and sampled accordingly to Council Directive 91/68/EEC of 28 January 1991 on animal health conditions governing intra-Community trade in sheep and goat animals and Decreto-Lei No 244/2000 (Sep. 27th).

Frequency of the sampling: The herds are sampled accordingly to Council Directive 91/68/EEC of 28 January 1991 on animal health conditions governing intra-Community trade in sheep and goat animals and Decreto-Lei No 244/2000 (Sep. 27th).

Type of specimen taken: Blood, milk, organs, vaginal mucus, semen, aborted foetus and placenta.

Diagnostic/analytical methods used:

- Serology (live animals): Rose Bengal Test (RBT); Complement Fixation Test (CFT)
- Organs and milk (dead animals): bacteriology (isolation of the agent with differentiation of vaccine and field strains).

For more information, in relation to sheep and goat brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_ov-cap-brucellosis_prt.pdf

2. Measures in place

Vaccination of young animals with REV1 is performed in some of the mainland regions: Norte, Centro and Lisboa e Vale do Tejo.

Other preventive measures in place: Pre-movement tests are mandatory for animals intended for the replacement in depopulated herds.

An Eradication Programme for sheep and goat is carried out and supervised by DGAV.

Measures in case of the positive findings or single cases:

- Suspected Herd:

- Herd under official surveillance;
- Epidemiological survey;
- Animal movements are forbidden from and to the herd;
- Isolation of suspected animals in the herd;
- Sample collection for laboratory diagnosis.

- Positive Herd:

- Herd under official restrictions;
- Epidemiological survey;
- Compulsory slaughter of all positive animals, under official supervision with sample collection for laboratory diagnosis;
- Animal movements are forbidden from and to the herd;
- Serological control of all remaining animals.

- Infected Herd:

- All measures mentioned for positive herds;
- Disinfection of all premises, equipment and materials;
- Thermic treatment of the milk.

For more information, in relation to sheep and goat brucellosis, refer to the programme approved by the EU:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2020_ov-cap-brucellosis_prt.pdf

3. Notification system in place to the national competent authority

Yes

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

5. Additional information

15. General evaluation: Salmonella in animal - Gallus gallus (fowl) – broilers
1. History of the disease and/or infection in the country
For this information, in relation to broilers – Gallus gallus (fowl), refer to the programme approved by the EC: https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_broiler_gal_prt.pdf
2. Evaluation of status, trends and relevance as a source for humans
3. Any recent specific action in the Member State or suggested for the European Union
4. Additional information

16. Description of Monitoring/Surveillance/Control programmes system: *Salmonella* in animal - *Gallus gallus* (fowl) - broilers

1. Monitoring/Surveillance/Control programmes system

Sampling strategy (broiler flocks):

Sampling is accomplished by the food business operator (FBO) and by the competent authority (CA). The sampling is done at the holding. Sampling on the initiative of the FBO shall take place within three weeks before the birds are moved to the slaughterhouse. Sampling by the competent authority includes each year at least one flock of broilers on 10% of the holdings with more than 5 000 birds. It is done on a risk basis approach and every time that the CA considers necessary.

Frequency of the sampling (broiler flocks): 3 weeks prior to slaughter, at farm. DGAV authorize sampling in the last six weeks prior to the date of slaughter in case the broilers are either kept more than 81 days or fall under organic broiler production according to Commission Regulation (EC) No 889/2008.

Type of specimen taken (broiler flocks): Faeces (boot swabs).

Methods of sampling (description of sampling techniques): At least two pairs of boot swabs shall be taken. For free range flocks of broilers, samples shall only be collected in the area inside the house. All boot swabs will be pooled into one sample. In flocks with less than 100 broilers, when the access to the houses is not possible, the boot swabs may be replaced by hand drag swabs and rubbed over surfaces contaminated with fresh faeces. It shall be ensured that all sections in a house are represented in the sampling. Each pair should cover about 50% of the area of the house. Boot swabs may be inverted to retain material. They shall be placed in a bag or pot and labelled.

Case definition: A flock of broilers is considered positive where the presence of *Salmonella* Enteritidis (other than vaccine strains) and/or *Salmonella* Typhimurium or *Salmonella* Typhimurium -Like is detected in the flock at any occasion in the holding.

Diagnostic/analytical methods used: Bacteriological method: ISO 6579:2002.

For more information, in relation to broilers – *Gallus gallus* (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_broiler_gal_pt.pdf

2. Measures in place

The strategy in place is to reinforce surveillance, reinforce biosecurity measures, slaughter the positive flocks and restocking only when environmental samples are negative for *Salmonella*, with birds from flocks or herds that have undergone controls (with negative results for *Salmonella*) accordingly with the legislation requirements. The strategy includes also a close cooperation with the associations of producers to implement different means to raise awareness of the producers. The CA has developed guidelines for the producer, as a tool in order to guide the implementation of the national programme.

Measures in case of the positive findings:

- *Salmonella* spp detection;
 - Notification of the food business operator;
 - Flock under official control (restriction);
 - Forcing to keep update records.
- Whenever the results are different from the relevant serotypes, than:
 - Additional biosecurity measures;
 - Free practice;
 - The official control measures are withdrawn.
- When the result is *S. Enteritidis* and/or *S. Typhimurium* (or TL) than the flock will continue under official restriction:
 - Flock surveillance (under official control).
 - In the holding, after the depopulation of an infected flock, FBO must perform the cleaning of the poultry house, including safe disposal of waste and beds. After disinfection, environmental samples are collected by FBO following the instructions of the CA. The restocking can only be made in case of negative results to *Salmonella*, and after authorization of DSAVR.
 - The restocking of animals must take place from flocks or herds that have undergone

<p>controls (with negative results) accordingly with the legislation requirements. For more information, in relation to broilers – Gallus gallus (fowl), refer to the programme approved by the EC: https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_broiler_gal_prt.pdf</p>
3. Notification system in place to the national competent authority
Yes
4. Results of investigations and national evaluation of the situation, the trends and sources of infection
5. Additional information

17. General evaluation: *Salmonella* in animal - *Gallus gallus* (fowl) - breeding flocks, unspecified

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

For this information, in relation to breeding flocks – *Gallus gallus* (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-9_salmonella_breeding_gal_prt.pdf

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

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

4. Additional information

18. Description of Monitoring/Surveillance/Control programmes system: *Salmonella* in animal - *Gallus gallus* (fowl) - breeding flocks, unspecified

1. Monitoring/Surveillance/Control programmes system

Sampling strategy:

The sampling frame shall cover all adult breeding flocks of *Gallus gallus* comprising at least 250 adult birds. Sampling is accomplished by the food business operator (FBO) and by the CA.

Sampling is done at the holding. At the initiative of the FBO, during the rearing period samples will be taken at one day old, 4 weeks old, 2 weeks before laying phase. During the laying period in every three weeks.

At day-old sampling shall consist of internal linings of delivery boxes and dead chicks.

At 4 weeks and at two weeks before the laying phase, sampling shall consist of pooled faeces made up of separate samples of fresh faeces each weighing no less than 1 g taken at random from a number of sites in the building in which the birds are kept.

During the laying phase sampling will consist of 5 boot swabs representative of all parts of the house. In cage breeding flocks, sampling consists of naturally mixed faeces from dropping belts, scrapers or deep pits. 2 samples of at least 150 g will be collected to be tested individually. At the initiative of the official services sampling is done 2 times during the laying phase.

Frequency of the sampling:

- Breeding flocks: Every flock is sampled.
- Rearing period: Day-old chicks, at the age of 4 weeks and 2 weeks before moving to the laying phase.
- Breeding flocks Production period: Every 3 weeks.

Type of specimen taken:

- Breeding flocks - Day-old chicks: Internal linings of delivery boxes and dead chicks.
- Breeding flocks - Rearing period: Faeces.
- Breeding flocks (Production period: Faeces / boot swabs.

Methods of sampling (description of sampling techniques):

- Breeding flocks: Day-old chicks: The sample consists of a minimum of one composite sample of visibly soiled hatcher basket liners. The food business operator must sample all dead birds at arrival.
- Breeding flocks - Rearing period: At 4 weeks old and 2 weeks before the laying phase the sampling will consist of faecal samples. Pooled faeces made up of separate samples of fresh faeces each weighing no less than 1 g taken at random from a number of sites in the building in which the birds are kept.
- Breeding flocks - Production period: During the laying phase 5 pairs of boot swabs walking around to be done in a way which will sample representatively all parts of the sector. In cage breeding flocks, sampling consists of naturally mixed faeces from dropping belts, scrapers or deep pits. 2 samples of at least 150 g will be collected to be tested individually.

Case definition:

- Breeding flocks: Day-old chicks, Rearing period and Production period - At least one positive sample to *S. Enteritidis*, *S. Typhimurium*, *S. Typhimurium*- Like, *S. Hadar*, *S. Virchow* and/or *S. Infantis*.

Diagnostic/analytical methods used:

- Breeding flocks: Bacteriological method: ISO 6579:2002.

For more information, in relation to breeding flocks – *Gallus gallus* (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-20_salmonella_breeding_gal_prt.pdf

2. Measures in place

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Vaccination is voluntary. Compulsive vaccination against *Salmonella* Enteritidis is done in the restocking, after the slaughter of a positive flock.

The strategy in place is to reinforce surveillance, reinforce biosecurity measures, slaughter the positive

flocks and restocking only when environmental samples are negative for Salmonella, with birds from flocks or herds that have undergone controls accordingly with the legislation requirements, with negative results. All the restocking birds must be vaccinated against Salmonella. There is also a focus on biosecurity measures in the holdings. The strategy includes also a close cooperation with the associations of producers to implement different means to raise awareness of the producers. The Official Services have developed guidelines for the producer, as a tool in order to guide the implementation of the national programme.

Measures in case of the positive findings or single cases:

- In the case of positive results for Salmonella Enteritidis and/or Salmonella Typhimurium additional biosecurity measures are implemented, sanitary restriction of the flock and sanitary surveillance of the holding are imposed.
- Destination of birds: The slaughter of the flock will be carried out in an approved slaughterhouse and after the authorisation of Regional Veterinarian Services. Day-old-chicks must be killed and destroyed.
- Destination of eggs: Hatching eggs will be eliminated as animal by-products. Non-incubated eggs from positive flocks must be, at option of the FBO:
 - eliminate as by-products or
 - forward to egg product units to be heat treated.
- After the slaughter of the positive flock the holding and the environment must be cleaned and disinfected.
- The food business operator must collect environmental samples.
- The restocking of animals must take place from flocks or herds that have undergone controls (with negative results) accordingly with the legislation requirements. All the restocking birds must be vaccinated against Salmonella Enteritidis.

For more information, in relation to breeding flocks – Gallus gallus (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-20_salmonella_breeding_gal_prt.pdf

3. Notification system in place to the national competent authority

Yes

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

5. Additional information

19. General evaluation: *Salmonella* in animal - *Gallus gallus* (fowl) – Laying hens flocks

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

For this information, in relation to laying hens flocks – *Gallus gallus* (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_laying_gg_prt.pdf

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

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

4. Additional information

20. Description of Monitoring/Surveillance/Control programmes system: *Salmonella* in animal - *Gallus gallus* (fowl) - Laying hens flocks

1. Monitoring/Surveillance/Control programmes system

Sampling strategy:

The programme covers all flocks of adult laying hens of *Gallus gallus* but does not apply to flocks for private domestic use or leading to the direct supply, by the producer, of small quantities of table eggs to the final consumer.

Sampling is accomplished by the food business operator (FBO) and by the CA.

Sampling is done at the holding.

At the initiative of the FBO, during the rearing period samples will be taken at one day old and 2 weeks before the laying phase. During the laying period in every 15 weeks.

At the initiative of the CA at least one flock per holding will be sampled.

Frequency of the sampling:

- Laying hens: Every flock is sampled.
- Rearing period: Day-old chicks and 2 weeks before moving to the laying phase.
- Production period: Every 15 weeks.

Type of specimen taken:

- Day-old chicks: Internal linings of delivery boxes and dead chicks.
- Rearing period: Faeces.
- Production period: Faeces / boot swabs.

Methods of sampling (description of sampling techniques):

- Laying hens: Day-old chicks: The sample consists of a minimum of one composite sample of visibly soiled hatcher basket liners. The food business operator must sample all dead birds at arrival.
- Rearing period: At 2 weeks before the laying phase the sampling will consist of faecal samples. Pooled faeces made up of separate samples of fresh faeces each weighing no less than 1 g taken at random from a number of sites in the building in which the birds are kept.
- Production period: During the laying phase boot swabs will be taken walking around to be done in a way which will sample representatively all parts of the sector. In cage breeding flocks, sampling consists of naturally mixed faeces from dropping belts, scrapers or deep pits. 2 samples of at least 150 g will be collected to be tested individually.

Case definition:

- Breeding flocks: Day-old chicks, Rearing period and Production period - At least one positive sample to *S. Enteritidis*, *S. Typhimurium*, *S. Typhimurium*- Like, *S. Hadar*, *S. Virchow* and/or *S. Infantis*.

Diagnostic/analytical methods used:

- Breeding flocks: Bacteriological method: ISO 6579:2002.

For more information, in relation to breeding flocks – *Gallus gallus* (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-20_salmonella_breeding_gal_prt.pdf

2. Measures in place

Laying hens flocks:

Vaccination is voluntary. Compulsive vaccination against *Salmonella* is done in the restocking, after the slaughter of a positive flock.

The strategy in place is to reinforce surveillance, reinforce biosecurity measures, slaughter the positive flocks and restocking only when environmental samples are negative for *Salmonella*, with birds from flocks or herds that have undergone controls accordingly with the legislation requirements, with negative results. All the restocking birds must be vaccinated against *Salmonella*. There is also a focus on biosecurity measures in the holdings. The strategy includes also a close cooperation with the associations of producers to implement different means to raise awareness of the producers. The Official Services have developed guidelines for the producer, as a tool in order to guide the implementation of the

national programme.

Measures in case of the positive findings or single cases:

- In the case of positive results for *Salmonella* Enteritidis and/or *Salmonella* Typhimurium additional biosecurity measures are implemented, sanitary restriction of the flock and sanitary surveillance of the holding are imposed.
- Destination of birds: The slaughter of the flock will be carried out in an approved slaughterhouse and after the authorisation of Regional Veterinarian Services. Day-old-chicks must be killed and destroyed.
- Destination of eggs: The eggs from positive flocks must be, at option of the FBO:
 - eliminate as by-products or
 - forward to egg product units to be heat treated.
- After the slaughter of the positive flock the holding and the environment must be cleaned and disinfected.
- The food business operator must collect environmental samples.
- The restocking of animals must take place from flocks or herds that have undergone controls (with negative results) accordingly with the legislation requirements. All the restocking birds must be vaccinated against *Salmonella* Enteritidis.

For more information, in relation to breeding flocks – *Gallus gallus* (fowl), refer to the programme approved by the EC:

https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_breeding_gal_prt.pdf

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

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

5. Additional information

21. General evaluation: *Salmonella* in Turkeys - breeding flocks and meat production flocks

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

For this information, in relation to fattening turkeys, refer to the programme approved by the EC:
https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_fattening_turkeys_prt.pdf

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

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

4. Additional information

22. Description of Monitoring/Surveillance/Control programmes system: *Salmonella* in Turkeys - breeding flocks and meat production flocks

1. Monitoring/Surveillance/Control programmes system

There are no breeding flocks of turkeys in Portugal.

Sampling strategy:

Meat production flocks: Sampling is accomplished by the food business operator (FBO) and by the competent authority (CA). The sampling is done at the holding. Sampling on the initiative of the FBO takes place within three weeks before the birds are moved to the slaughterhouse. Sampling by the competent authority includes once a year, one flock on 10% of the holdings with at least 500 fattening turkeys.

Frequency of the sampling in meat production flocks: 3 weeks prior to slaughter/ 6 weeks prior to slaughter.

Type of specimen taken in meat production flocks: Faeces.

Methods of sampling (description of sampling techniques):

At least two pairs of boot swabs shall be taken. For free range flocks, samples will only be collected in the area inside the house. All boot swabs must be pooled into one sample. In flocks with less than 100 turkeys, where it is not possible to use boot swabs as access to the houses is not possible, they may be replaced by hand drag swabs.

It shall be ensured that all sections in a house are represented in the sampling. Each pair should cover about 50 % of the area of the house.

Boot swabs may be inverted to retain material. They shall be placed in a bag or pot and labelled.

Case definition:

- Rearing period: A flock of turkeys is considered positive where the presence of *Salmonella* Enteritidis and/or *Salmonella* Typhimurium including *Salmonella* Typhimurium -Like (other than vaccine strains) is detected in the flock at any occasion in the holding.

Diagnostic/analytical methods used

- Rearing period: Bacteriological method: ISO 6579:2002.

For more information, in relation to fattening turkeys, refer to the programme approved by the EC: https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_fattening_turkeys_prt.pdf

2. Measures in place

The strategy in place is to reinforce surveillance, reinforce biosecurity measures, slaughter the positive flocks and restocking only when environmental samples are negative for *Salmonella*, with birds from flocks or herds that have undergone controls (with negative results) accordingly with the legislation requirements. The strategy includes also a close cooperation with the associations of producers to implement different means to raise awareness of the producers. The CA has developed guidelines for the producer, as a tool in order to guide the implementation of the national programme.

For more information, in relation to fattening turkeys, refer to the programme approved by the EC: https://ec.europa.eu/food/sites/food/files/safety/docs/cff_animal_vet-progs_2018-2020_salmonella_fattening_turkeys_prt.pdf

3. Notification system in place to the national competent authority

Yes

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

23. General evaluation: <i>Trichinella</i> in animal - Pigs - animal sample	
1. History of the disease and/or infection in the country	
Disease notifiable since 1953 by national law (Decreto-Lei No 39209, de 14 de maio). Cases of trichinelosis in pigs are not reported since 1960.	
2. Evaluation of status, trends and relevance as a source for humans	
Cases of trichinelosis in humans are not reported since 1987. In 2017 there was 1 case of trichinelosis in 1 patient that had arrived from France. In 2019 there was 1 case of trichinelosis in 1 patient that had arrived from Nepal. Both cases do not seem to be related to pig meat consumption in Portugal.	
3. Any recent specific action in the Member State or suggested for the European Union	
4. Additional information - possible impact of the COVID-19 pandemic on 2020 zoonoses and foodborne outbreaks data	
There was no impact of the COVID-19 pandemic on the reporting of <i>Trichinella</i> testing in Portugal in 2020. For <i>Trichinella</i> testing in Portugal there is a high comparability level between 2020 data and 2019 data.	

**24. Description of Monitoring/Surveillance/Control programmes system:
Trichinella in animal - Pigs - animal sample**

1. Monitoring/Surveillance/Control programmes system

Sampling strategy and frequency of the sampling: All slaughtered animals are sampled.
 Type of specimen taken: diaphragm pillars.
 Methods of sampling (description of sampling techniques): As determined in Commission Implementing Regulation (EU) 2015/1375 of 10 August 2015.
 Case definition: It is positive when there is detection of one larvae of *Trichinella*.
 Diagnostic/analytical methods used: Mechanical digestion of pooled samples with magnetic stirrer (Regulation (EU) 2015/1375).

2. Measures in place

3. Notification system in place to the national competent authority

Yes.

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

Cases of trichinelosis in pigs are not reported since 1960.

5. Additional information

Solipeds are also sampled: tongue, diaphragm pillars and masseter.
 Special training in *Trichinella* detection on slaughterhouses and game activities is given to the meat inspection team.

25. Description of Monitoring/Surveillance/Control programmes system: Trichinella in Wild Boars	
1. Monitoring/Surveillance/Control programmes system	
National Plan for Sanitary Surveillance of Large Wild Game – Surveillance plan in Large Wild Game that includes testing for several diseases: <i>Trichinella</i> , African Swine Fever, Swine Fever, Aujeszky disease, Cysticercosis and skin affections.	
2. Measures in place	
<i>Trichinella</i> official testing on Wild Boars from selected hunting events. The testing is performed by the NRL (INIAV) for <i>Trichinella</i> .	
3. Notification system in place to the national competent authority	
Yes. The NRL for <i>Trichinella</i> notifies the Competent Authority (DGAV) of positive cases as soon as it has the results of the testing so that the CA can initiate the adequate measures to deal with the issue.	
4. Results of investigations and national evaluation of the situation, the trends and sources of infection	
In 2020, after testing 24 wild boars for private consumption of hunters for <i>Trichinella</i> at a hunting event in the region of Trás-os-Montes, close to the Spanish border, 1 wild boar was positive for <i>Trichinella britovi</i> . The entity that organized the hunting event managed to identify the destination of the carcasses of the animals and it was possible to collect and destroy all parts of the infected animal. The obligation for testing for <i>Trichinella</i> in wild boars hunted within the “ <i>Trichinella</i> risk zone” still remains in accordance with the terms set out in Notice 2/2018.	
5. Additional information	

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

DGAV – General Directorate for Food and Veterinary
Instituto Nacional de Investigação Agrária e Veterinária, I. P. (INIAV)
Laboratório Regional Veterinário (LRV)
Private laboratories

DGAV: National Competent Authority
INIAV: laboratory supporting several official control and surveillance programs and plans, with analytical research on zoonotic agents in animal, food and feed samples. Also supports national AMR monitoring plan with analytical performance.
LRV: Autonomous Region of Azores' laboratory supporting several official control and surveillance programs and plans, with analytical research on zoonotic agents in animal, food and feed samples. Also supports national AMR monitoring plan with analytical performance obtaining the isolates that are tested for antimicrobial resistance at INIAV laboratory.
Private laboratories: accredited laboratories collaborating on the isolation of *Salmonella* spp, in the scope of the official control plan for *Salmonella*, and laboratories supporting food business operators own checks (isolates are sent to the official laboratories INIAV and LRV).

27. General Antimicrobial Resistance Evaluation	
1. Situation and epidemiological evolution (trends and sources) regarding AMR to critically important antimicrobials^(a) (CIAs) over time until recent situation	
Regarding the major concern on this matter it has been decided to undergo a National advisory team with the contribution of national experts do analyse and act upon the epidemiological evolution.	
2. Public health relevance of the findings on food-borne AMR in animals and foodstuffs	
Considering the major public health concern the work on 1 is ongoing.	
3. Recent actions taken to control AMR in food producing animals and food	
Data base systems are proposed for a complete traceability on the prescription, manufacturing and use of medicated feedstuffs, with annual communication on their production at feed mill level	
4. Any specific action decided in the Member State or suggestions to the European Union for actions to be taken against food-borne AMR threat	
Continuing and reinforce the revision and support to MS regarding the National integrated Plan with Environment, Health and Animal Health Departments in the fight against AMR in a One Health perspective. The harmonization and specific legal requirements for intra EU trade of medicated feedingstuffs, including proper traceability and management	
5. Additional information	
The national legislation related to the New Regulation of Veterinary Medicinal Products is being drafted and it will include more strict rules on Antimicrobial Use, e-prescription tool is being developed in order to interact with other databases including the ones developed under the Animal Health Law enabling the evaluation of indicators based on AMU patterns. R&D on feed additives that can contribute to the reduction on the use of VMP.	

28. General Description of Antimicrobial Resistance Monitoring: Isolates of *Escherichia coli*, non-pathogenic and *Campylobacter jejuni* in broilers

1. General description of sampling design and strategy

The isolates recovered from samples collected under Decision 2013/652/EU are preserved at -80°C in cryovials for antimicrobial susceptibility testing.

2. Stratification procedure per animal population and food category

The national competent authority (DGAV) outlines the number and the distribution of isolates per slaughterhouse to be tested for antimicrobial susceptibility (commensal, ESβL/PMAβ and carbapenemase *Escherichia coli*-producers and *Campylobacter jejuni*).

The sampling plan was designed to obtain 170 isolates of indicator commensal *E. coli* and 210 isolates of ESBL-or AmpC-or carbapenemase-producing *E. coli*, from 300 representative caecal samples from broilers to test for antimicrobial susceptibility.

For the sample design it was used a prospective sampling strategy to cover the all year.

The first step was to identify the slaughterhouses where the broilers are slaughtered and determine the number of samples to be collected in each one in function of the data on their capacity of slaughtering in 2019.

It was only used one isolate per epidemiological unit (herd), as it is determined by the legislation.

The sampling in broilers was performed considering a total of 8 slaughterhouses representing 74% of the all slaughtering.

The sampling plan was stratified per slaughterhouses by allocating the number of samples to be collected per slaughterhouse proportionally to the annual throughput of broilers in each slaughterhouse in the previous year.

The number of isolates planned to be taken in each abattoir per year, was proportional allocated to each one, accordingly with the respective throughput.

After selecting the 8 abattoirs, we have considered the sum of their capacity and then calculate the allocation proportion (a.p.) of each one. The result of this calculation was the following:

Abattoir A, a.p. 0,2314, 79 samples; Abattoir B, a.p. 0,2183, 74 samples; Abattoir C, a.p. 0,1241, 42 samples; Abattoir D, a.p. 0,0963, 33 samples; Abattoir E, a.p. 0,0926, 31 samples; Abattoir F, a.p. 0,0863, 29 samples; Abattoir G, a.p. 0,0786, 27 samples; Abattoir H, a.p. 0,0725, 25 samples.

The total of collected samples was 283 unfortunately below the proposed amount (340). The sampling has started in September due several constrains, many of logistical nature which made it very difficult to overcome as it was an even more difficult year to comply.. There was an adjustment considering one of the selected abattoirs as it had to be replaced as an attempt to comply with the needed sampling. Also one of the selected slaughterhouses did not comply but there was an outbreak of COVID 19 and it was closed for a period of time.

The number of samples planned to collect in each slaughterhouse was divided by weeks in the different slaughterhouses, to facilitate the work of the laboratory and there was a limited amount of samples possible.

All samples were collected in the first three days of the week (Monday to Wednesday) because of the reception days in the laboratory.

Accordingly, in all slaughterhouses we tested all new herds presented for slaughter in each selected day.

Failure to apply randomness criteria relates to the following factors:

- Small variability of the herds in each abattoir;
- Logistics of sampling in slaughterhouses and availability of transportation to the laboratories;
- Capacity and availability of laboratories to receive samples every day.

Escherichia coli

Overall, 262 isolates of indicator commensal *E. coli* from broilers, and 140 isolates of ESβL/PMAβ-producing *E. coli* from broilers, from 283 caecal samples from broilers were tested for antimicrobial susceptibility.

Campylobacter spp.

Overall, 114 isolates of *Campylobacter jejuni* from broilers and 283 caecal samples from broilers were tested for antimicrobial susceptibility.

3. Randomisation procedure per animal population and food category
Please, see answer to point 2.
4. Analytical method used for detection and confirmation
<p><i>Escherichia coli</i> For the isolation and identification of commensal <i>Escherichia coli</i>, presumptive Extended-spectrum/Plasmid-mediated AmpC β-lactamases (ESBL/PMAβ) <i>Escherichia coli</i>-producers in caecum and meat samples, the standard procedures recommended by the EURL-AR (DTU/National Food Institute) are followed.</p> <p><i>Campylobacter</i> spp For the isolation of <i>Campylobacter coli</i>/<i>Campylobacter jejuni</i>, the procedures recommended by the EURL for <i>Campylobacter</i> (Uppsala) are followed. For molecular classification of <i>Campylobacter</i> isolates, a multiplex PCR recommended by EURL-AR (DTU/National Food Institute) is followed.</p>
5. Laboratory methodology used for detection of antimicrobial resistance
<p>Microdilution technique using microplates EUVSEC and EUVSEC2 (<i>E. coli</i> and <i>Salmonella</i> spp) and EUCAMP2 (<i>Campylobacter</i> spp.).</p> <p>Epidemiological cut-offs from EUCAST are used for criteria interpretation.</p>
6. Results of investigation
Isolates resistant to 3rd generation cephalosporins (cefotaxime, ceftazidime), colistin and fluoroquinolones (ciprofloxacin), are searched for molecular detection of acquired resistance-encoding genes.
7. Additional information
No carbapenemase producing <i>E. coli</i> were searched in 2020, in meat and caecum samples.

29. General Description of Antimicrobial Resistance Monitoring: Isolates of *Escherichia coli*, non-pathogenic and *Campylobacter jejuni* in turkeys

1. General description of sampling design and strategy

The isolates recovered from samples collected under Decision 2013/652/EU are preserved at -80°C in cryovials for antimicrobial susceptibility testing.

2. Stratification procedure per animal population and food category

The national competent authority (DGAV) outlines the number and the distribution of isolates per slaughterhouse to be tested for antimicrobial susceptibility (commensal, ESβL/PMAβ and carbapenemase *Escherichia coli*-producers and *Campylobacter jejuni*).

The sampling plan was designed to obtain 170 isolates of Indicator commensal *E. coli* and 210 isolates of ESBL-or AmpC-or carbapenemase-producing *E. coli*, from 850 representative caecal samples from turkeys to test for antimicrobial susceptibility.

For the sample design it was used a prospective sampling strategy to cover the whole year.

The first step was to identify the slaughterhouses where the turkeys are slaughtered and determine the number of samples to be collected in each one in function of the data on their capacity of slaughtering in 2019.

It was considered one isolate per epidemiological unit (herd), as it is determined by the legislation.

The sampling in turkeys was executed in 7 slaughterhouses which represent approximately 100% of the whole slaughtering in the country.

The sampling plan was stratified per slaughterhouse by allocating the number of samples to be collected per slaughterhouse proportionally to the annual throughput of turkeys in each slaughterhouse in the previous year.

The number of isolates planned to be taken in each abattoir per year, was proportional allocated to each one, accordingly with the respective throughput.

After identifying the abattoirs, we have considered the sum of their capacity and then calculate the allocation proportion (a.p.) of each one. The result of this calculation was as follows:

Abattoir A, a.p. 0,4537, 386 samples; Abattoir B, a.p. 0,2000, 170 samples; Abattoir C, a.p. 0,1249, 106 samples; Abattoir D, a.p. 0,1044, 89 samples; Abattoir E, a.p. 0,0563, 48 samples; Abattoir F, a.p. 0,0342, 29 samples; Abattoir G, a.p. 0,0264, 22 samples.

The number of samples planned to collect in each slaughterhouse was divided by weeks in the different slaughterhouses, to facilitate the work of the laboratory and there was a limited amount of samples possible per day. Unfortunately due to a late start the distribution was shifted to the available units available for slaughter.

All samples were collected in the first three days of the week (Monday to Wednesday) because of the reception days in the laboratory. The sampling has started only in September and due to logistical reasons it was not possible to achieve the 850 sample collection (it was possible to collect 236 samples), it was an ambitious plan programmed for a whole year but considering the late start it was not accomplished.

Accordingly, in all slaughterhouses we tested all new herds presented for slaughter in each selected day.

Failure to apply randomness criteria relates to the following factors:

- Small variability of the herds in each abattoir;
- Logistics of sampling in slaughterhouses and availability of transportation to the laboratories;
- Capacity and availability of laboratories to receive samples every day.

Escherichia coli

Overall, 189 isolates of indicator commensal *E. coli* from turkeys, and 88 isolates of ESβL/PMAβ-producing *E. coli* from turkeys, from 189 caecal samples from fattening turkeys were tested for antimicrobial susceptibility.

Campylobacter spp.

Overall, 38 isolates of *Campylobacter jejuni* from turkeys, respectively, from 189 caecal samples from fattening turkeys were tested for antimicrobial susceptibility.

3. Randomisation procedure per animal population and food category
Please, see answer to point 2.
4. Analytical method used for detection and confirmation
<p>Escherichia coli For the isolation and identification of commensal <i>Escherichia coli</i>, presumptive Extended-spectrum/Plasmid-mediated AmpC β-lactamases (ESBL/PMAβ) <i>Escherichia coli</i>-producers in caecum and meat samples, the standard procedures recommended by the EURL-AR (DTU/National Food Institute) are followed.</p> <p>Campylobacter spp. For the isolation of <i>Campylobacter coli</i>/<i>Campylobacter jejuni</i>, the procedures recommended by the EURL for <i>Campylobacter</i> (Uppsala) are followed. For molecular classification of <i>Campylobacter</i> isolates, a multiplex PCR recommended by EURL-AR (DTU/National Food Institute) is followed.</p>
5. Laboratory methodology used for detection of antimicrobial resistance
<p>Microdilution technique using microplates EUVSEC and EUVSEC2 (<i>E. coli</i> and <i>Salmonella</i> spp.) and EUCAMP2 (<i>Campylobacter</i>).</p> <p>Epidemiological cut-offs from EUCAST are used for criteria interpretation.</p>
6. Results of investigation
Isolates resistant to 3rd generation cephalosporins (cefotaxime, ceftazidime), colistin and fluoroquinolones (ciprofloxacin), are searched for molecular detection of acquired resistance-encoding genes.
7. Additional information

30. General Description of Antimicrobial Resistance Monitoring: Isolates of *Escherichia coli* ESBL/Ampc from meat samples at retail

1. General description of sampling design and strategy

The isolates recovered from samples collected under Decision 2013/652/EU are preserved at -80°C in criovials for antimicrobial susceptibility testing.

2. Stratification procedure per animal population and food category

The national competent authority (DGAV) outlines the number and the distribution of isolates per slaughterhouse to be tested for antimicrobial susceptibility (commensal, ESBL/PMAβ and carbapenemase *Escherichia coli*-producers).

For the isolation and identification of commensal *Escherichia coli*, presumptive Extended-spectrum/Plasmid-mediated AmpC β-lactamases (ESBL/PMAβ) *Escherichia coli*-producers in caecum and meat samples.

The sampling design for meat samples collection considered the NUTS III that included 80% of the National population. The stratification was done accordingly to obtain 210 isolates of ESBL-or AmpC-or carbapenemase-producing *E. coli*, from 300 representative meat samples from broilers to test for antimicrobial susceptibility.

For the sample design it was used a prospective sampling strategy to cover the whole year.

The first step was to identify the more populated NUTS III.

The sampling plan was stratified per NUTS III allocating the number of samples to be collected per municipality proportionally to population in that Municipality.

From The NUTS III representing about 81,5% of the National population there were chosen 13 regions from which those municipalities were chosen.

After selecting the 13 regions (NUTSIII), we have considered the sum of their population and then calculate the allocation proportion (a.p.) of each one. The result of this calculation was the follow:

NUTS III A, a.p. 0,3292, 99 samples; NUTS III B, a.p. 0,2053, 62 samples; NUTS III C, a.p. 0,0537, 16 samples; NUTS III D, a.p. 0,0526, 16 samples; NUTS III E, a.p. 0,00505, 15 samples; NUTS III F, a.p. 0,0496, 15 samples; NUTS III G, a.p. 0,0479, 14 samples; NUTS III H, a.p. 0,0432, 13 samples; NUTS III I 0,0423, 13 samples; NUTS III J 0,0344, 10 samples, NUTS III J 0,0312, 9 samples; NUTS III L 0,0312, 9 samples; NUTS III M 0,0289, 9 samples.

The sampling procedure has started in September and due to logistical reasons it was not possible to achieve the 300 samples collection (it was possible to collect 149 samples).

The number of samples planned to collect in each slaughterhouse were divided by weeks in the different retail shops (butchers and supermarkets), to facilitate the work of the laboratory and there was a limited daily amount of samples possible.

All samples were collected in the first three days of the week (Monday to Wednesday) because of the reception days in the laboratory.

Accordingly, in all slaughterhouses we tested all new herds presented for slaughter in each selected day.

Failure to apply randomness criteria relates to the following factors:

- Small variability of the herds in each abattoir;
- Logistics of sampling in slaughterhouses and availability of transportation to the laboratories;
- Capacity and availability of laboratories to receive samples every day.

Escherichia coli

A total number of 140 meat samples from broilers and only 7 from turkey meat, were collected from the retail and 32 (broiler's meat) and 3 (turkey's meat) ESBL/PMAβ-producing *E. coli* isolates were isolated and tested for antimicrobial susceptibility.

3. Randomisation procedure per animal population and food category

Please, see answer to point 2.

4. Analytical method used for detection and confirmation

Escherichia coli

For the isolation and identification of commensal *Escherichia coli*, presumptive Extended-spectrum/Plasmid-mediated AmpC β-lactamases (ESBL/PMAβ) *Escherichia coli*-producers in caecum and meat samples, the standard procedures recommended by the EURL-AR (DTU/National Food Institute) are followed.

<p>Campylobacter spp.</p> <p>For the isolation of Campylobacter coli/Campylobacter jejuni, the procedures recommended by the EURL for Campylobacter (Uppsala) are followed. For molecular classification of Campylobacter isolates, a multiplex PCR recommended by EURL-AR (DTU/National Food Institute) is followed.</p>
<p>5. Laboratory methodology used for detection of antimicrobial resistance</p>
<p>Microdilution technique using microplates EUVSEC and EUVSEC2 (E. coli and Salmonella spp) and EUCAMP2 (Campylobacter).</p> <p>Epidemiological cut-offs from EUCAST are used for criteria interpretation.</p>
<p>6. Results of investigation</p>
<p>Isolates resistant to 3rd generation cephalosporins (cefotaxime, ceftazidime), colistin and fluoroquinolones (ciprofloxacin), are searched for molecular detection of acquired resistance-encoding genes.</p>
<p>7. Additional information</p>
<p>There is, as said above, a special task force addressing AMR</p>

31. General Description of Antimicrobial Resistance Monitoring: Isolates of Salmonella spp. in <i>Gallus gallus</i> (fowl) - broilers (slaughterhouse), turkeys - fattening flocks (slaughterhouse), <i>Gallus gallus</i> (fowl) – broilers and laying hens (farm), turkeys - fattening flocks (farm)
1. General description of sampling design and strategy
The isolates were collected under Decision 2013/652/EU with the objective of testing for antimicrobial susceptibility.
2. Stratification procedure per animal population and food category
The isolates of Salmonella spp. from Gallus gallus (fowl) - broilers (slaughterhouse) and turkeys - fattening flocks (slaughterhouse) used for the monitoring of AMR under Decision 2013/652/EU, were obtained from the samples of the food business operators, collected in order to verify compliance with process hygiene criteria set out in point 2.1.5 of Chapter 2 of Annex I of Regulation (EC) No 2073/2005. The isolates of Salmonella spp. from Gallus gallus (fowl) – broilers and laying hens (farm), turkeys - fattening flocks (farm) used for the monitoring of AMR under Decision 2013/652/EU, were obtained from the samples collected under the national Salmonella control programmes (Reg (EC) No 2160/2003) - broilers and laying hens. 185 Salmonella spp. isolates from different matrices and different serotypes were tested in 2018 for antimicrobial susceptibility.
3. Randomisation procedure per animal population and food category
Please, see answer to point 2.
4. Analytical method used for detection and confirmation
All protocols followed in the isolation, identification and antimicrobial susceptibility testing are those recommended by the EURL-AR. For the isolation of Salmonella spp. from faecal, environmental (boot swabs, dust) samples and carcase swabs, ISO 6579 is followed; serotyping is performed following Kauffmann-White scheme.
5. Laboratory methodology used for detection of antimicrobial resistance
Epidemiological cut-offs from EUCAST were used.
6. Results of investigation
Isolates resistant to 3rd generation cephalosporins (cefotaxime, ceftazidime), colistin and fluoroquinolones (ciprofloxacin), are searched for molecular detection of acquired resistance-encoding genes.
7. Additional information
All the isolates of Salmonella and Campylobacter resulting from the Food Zoonoses Monitoring Plan are tested for antimicrobial resistance.