

Microbiological examination of Lidl chicken meat













Haltungsform



# Microbiological examination of Lidl chicken meat

## What was analyzed?

A total of 142 chicken products of Lidl's store brands from self-service counters in five European countries were analyzed:

**Germany** (24 samples of Lidl's storebrand »Metzgerfrisch«, all labeled as husbandry form level 2: »Stallhaltung Plus«)

- 6 x »Frische Hähnchen-Flügel« (wings)
- 6 x »Frische Hähnchen-Oberkeulen« (drumsticks)
- 6 x »Frische Hähnchen-Schenkel« (thighs)
- 3 x »Frische Hähnchen Mini-Steaks« (steaks)
- 3 x »Frische Hähnchen-Minuten-Schnitzel« (escalopes)

Italy (24 samples of Lidl's storebrand »Pollo Italiano«)

- 6 x »Ali Di Pollo« (wings)
- 4 x »Sovracosce Di Pollo« (thighs)
- 6 x »Cosce Di Pollo« (legs)
- 6 x »Petto Di Pollo« (breast)
- 2 x »Fusi Di Pollo« (drumsticks)

**United Kingdom** (40 samples of Lldl's store brand »Birchwood«, all »Red Tractor Certified Standards«)

- 10 x »Chicken Wings«
- 4 x »Chicken Breast Fillets«
- 4 x »Chicken Legs«
- 8 x Chicken Thighs«
- 4 x »Large Whole Chicken«
- 10 x »Chicken Drumsticks«

Poland (30 samples of Lidl-brand »Rzeźnik«, all »Klasa A«)

- 7 x »Skrzydla z kurcz« (wings)
- 7 x »Produdzie z kurczaka« (drumsticks)
- 7 x »Uda z kurcz« (thighs)
- 4 x »Filety z p. kurczaka« (breast)
- 5 x »Kurczak Tuszka« (whole bird)

**Spain** (24 samples, Lidl products, no brand name)

• 6 x »Alitas de pollo partidas sin punta« (wings)



- 6 x »Jamoncitos de pollo« (drumsticks)
- 6 x »Cuarto trasero de pollo« (thighs)
- 3 x »Canal de pollo« (whole bird)
- 3 x »Pechuga de pollo« (breast)

## Where are the samples from?

The products come from 22 randomly selected Lidl stores in different regions of the countries:

- Germany: Berlin, Oldenburg, Duisburg, Koblenz
- Italy: Roma, Firenze, 2 x Milano
- United Kingdom: Manchester, 2 x Birmingham, 2 x London
- Poland: Gdańsk, 2 x Warszawa, 2 x Kraków
- Spain: 2 x Madrid, Valencia, Barcelona

## When and how were the samples taken?

The samples were purchased directly at Lidl stores between December 2023 and March 2024 and taken immediately to the laboratory in a refrigerated lorry. The cold chain was strictly maintained and the laboratory checked and documented the temperature of the meat on arrival.

## Who analyzed the samples?

A renowned and independent laboratory in Germany carried out the microbiological testing. Contact for journalists can be established on request.

## Who commissioned the testing?

The Albert Schweitzer Foundation commissioned this study together with Animal Welfare Observatory (Spain), Essere Animali (Italy), Open Cages (UK), Otwarte Klatki and the Fundacja Alberta Schweitzera (both Poland).

## Why was the investigation carried out?

Since 2022, the Albert Schweitzer Stiftung Foundation has received several recordings from chicken sheds of Lidl suppliers in several European countries, including Germany, Spain, Italy and the UK. It became apparent that the chickens are heavily overbred, suffer from health problems and are treated in a way that is contrary to animal welfare. This led to an interest in finding out to what extent these conditions, which can be categorized as grave from an animal welfare perspective, also have a potential effect on consumers.



## Which germs were tested for?

The laboratory was commissioned to analyze the meat for single- and multi-resistant germs (ESBL/MRSA), salmonella, *Campylobacter*, listeria, *Escherichia coli* and enterococci.

#### What are the results?

This table summarizes the results. The detailed results can be found in this table.

Countr	Sample s	Antibiotic resistant	→ In de	tail	Fecal germs	→ In de	tail	Salmo- nella	Listeria	Campylo- bacter	No germs detected
		germs	ESBL	MRSA		E. coli	Entero- cocci				
GER	24	8 (33%)	8 (33%)	0	19 (79%)	12 (50%)	16 (67%)	0	6 (25%)	12 (50%)	1 (4%)
IT	24	11 (46%)	11 (46%)	0	20 (83%)	18 (75%)	12 (50%)	11 (46%)	13 (54%)	0	0
UK	40	23 (58%)	5 (13%)	18 (45%)	22 (55%)	19 (48%)	7 (18%)	0	12 (30%)	0	1 (3%)
PL	30	12 (40%)	9 (30%	9 (30%)	24 (80%)	12 (40%)	24 (80%)	2 (7%)	7 (23%)	8 (27%)	0
ES	24	17 (71%)	17 (71%)	6 (25%)	20 (83%)	20 (83%)	9 (38%)	0	9 (38%)	20 (83%)	0
ln total	142	71 (50%)	50 (35%)	42 (30%)	105 (74%)	81 (57%)	68 (48%)	13 (9%)	47 (33%)	40 (28%)	2 (1%)
Ø		50%	39%	20%	76%	59%	51%	11%	41%	32%	1%

#### **Antibiotic-resistant germs detected**

**ESBL** (extended-spectrum beta-lactamase) is an enzyme that some bacteria produce due to a mutation and which makes them resistant to common penicillins, cephalosporin antibiotics and some reserve antibiotics. The ESBL genes can be passed on between bacteria, even of different species. Infections with ESBL carriers can usually only be treated with reserve antibiotics. Especially people whose immune system is weakened can contract the disease.

Escherichia coli, Klebsiella pneumoniae and Serratia fonticola were identified as ESBL carriers in the study. They can cause, for example, urinary tract infections, pneumonia or blood poisoning, which can also be fatal.<sup>2</sup>

MRSA (methicillin-resistant Staphylococcus aureus) is a problem germ that is currently of decreasing importance in human medicine. However, it still caused around 100,000 deaths

<sup>&</sup>lt;sup>1</sup> https://flexikon.doccheck.com/de/Extended-Spectrum-Betalaktamase

<sup>&</sup>lt;sup>2</sup> https://www.bfr.bund.de/de/escherichia\_coli-54352.html, https://flexikon.doccheck.com/de/Klebsiella\_pneumoniae https://flexikon.doccheck.com/de/Serratia



worldwide in 2019.<sup>3</sup> These germs found on the skin and the mucous membrane are transmitted from person to person and from animals to humans.<sup>4</sup> They can spread in the bloodstream via wounds, catheters and other foreign bodies and cause infections in almost all organs.<sup>5</sup> In regions with intensive livestock farming, a higher proportion of LA-MRSA originating from livestock farming has been detected in humans than elsewhere (LA = Lifestock-associated).<sup>6</sup>

### Fecal germs (enterococci and E. coli) detected

Enterococci (*Enterococcus faecalis* and *Enterococcus faecium*) and *Escherichia coli* are found in large numbers in the intestines of humans and animals. They are indicators of contact between meat and the intestinal contents of animals. Enterococci can cause chronic urinary tract infections, for example. *E. coli* can cause diarrhea or urinary tract infections, but with the potential for blood poisoning or other organ disease. If these germs are then multi-resistant (e.g. ESBL formers), standard antibiotics do no longer help.

#### Salmonella detected

Salmonella is a typical food-borne infection. Salmonella can continue to multiply if the food is poorly refrigerated. In immunocompromized people, salmonella can cause severe diarrhea or even bacterial blood poisoning and infect other organs. The German Federal Institute for Risk Assessment writes: »The form of animal husbandry, slaughter and marketing have an influence on the occurrence of salmonella.«<sup>9</sup>

#### Listeria detected

According to the German consumer advice center, this resistant germ can also multiply at refrigerator temperature. An infection with listeria is rather rare, but is associated with comparatively serious health problems. In people with weakened immune defense, systemic infections and even meningitis and encephalitis can occur. Listeriosis is a notifiable disease and, according to 2020 figures, it was categorized as having the third highest mortality rate. Pregnant women, the elderly, sick people, newborns and people with weakened immune systems are at risk. Infections in pregnant women can result in miscarriages or premature births. Newborn babies are often born with severe damage.

## Campylobacter detected

An intestinal infection with *Campylobacter* is the most common bacterial notifiable disease in Germany.<sup>12</sup> Poultry meat, especially chicken meat, is the most important source of infection for

<sup>&</sup>lt;sup>3</sup> https://www.laborpraxis.vogel.de/wie-viele-menschen-sterben-durch-resistente-keime-a-1090056

<sup>&</sup>lt;sup>4</sup> https://www.mdpi.com/2079-6382/4/4/521

<sup>5</sup> https://flexikon.doccheck.com/de/MRSA
6 https://www.rki.de/SharedDocs/FAO/Kra

<sup>&</sup>lt;sup>6</sup> https://www.rki.de/SharedDocs/FAO/Krankenhausinfektionen-und-Antibiotikaresistenz/FAO\_Liste.html#FAOId8556916

https://flexikon.doccheck.com/de/Enterokokken

https://www.bfr.bund.de/de/escherichia\_coli-54352.html

https://www.bfr.bund.de/de/bedeutung der salmonellen als krankheitserreger-537.html

<sup>10</sup> https://www.verbraucherzentrale.de/wissen/lebensmittel/lebensmittelproduktion/listerien-und-listeriose-so-schuetzen-sie-sich-vor-den-bakterien-27782

<sup>11</sup> https://www.bfr.bund.de/de/listerien-54356.html

<sup>12</sup> https://www.rki.de/DE/Content/Infekt/EpidBull/Merkblaetter/Ratgeber\_Campylobacter.html



*Campylobacter* enteritis. The pathogen is transferred to the meat via the intestinal contents of the animals during the slaughtering process. Just a few bacteria are enough to cause an infection. In severe cases, it can lead to severe diarrhea with fever and general symptoms of illness, including secondary illnesses such as joint inflammation and generalized paralysis (Guillain-Barrée syndrome).<sup>13</sup>

*Campylobacter* infection is a typical zoonosis, i.e. infections are almost always due to transmission from animals to humans.<sup>14</sup> According to the RKI (Robert Koch Institute), 40,000 people contract *Campylobacter* infections in Germany alone.<sup>15</sup> According to Environmental Action Germany, *Campylobacter* pathogens are increasingly resistant to antibiotics.<sup>16</sup>

### Hardly any microbiologically unremarkable samples

Only two of the 142 samples tested were inconspicuous in that the laboratory reported the test results as »below the detection limit«.

#### Conclusion

The microbiological examination of Lidl chicken meat in the laboratory reveals a Europe-wide, significant contamination of the majority of products with potentially dangerous pathogens.

Half of all samples are contaminated with resistant and multi-resistant pathogens. These are ESBL-producing and MRSA germs. These antibiotic resistances were detected in 71 out of 142 samples. This means that potentially very dangerous germs were detected in every second chicken sample from Lidl.

In terms of contamination with resistant bacteria, the Spanish Lidl products stand out with 71 per cent ESBL contamination and 25 per cent MRSA contamination, as well as the British Lidl products with 58 per cent ESBL and/or MRSA contamination.

8 out of 24 Italian meat samples (33 per cent) and 9 out of 30 Polish samples (30 per cent) with "3MRGN" were found to be resistant or non-susceptible to three of the four existing antibiotic groups. These pathogens are considered to be insensitive to most antibiotics: they may react very poorly or not at all to many antibiotics (intermediate sensitivity or are resistant to antibiotics).

In meat samples from Germany, Poland and Spain, Campylobacter was detected 40 times - i.e. 28 per cent. In Germany, every second Lidl meat sample was affected.

<sup>13</sup> 

https://www.verbraucherzentrale.nrw/wissen/lebensmittel/auswaehlen-zubereiten-aufbewahren/darminfektionen-durch-campylobacter-vorsicht-bei-fleisch-oder-rohmilch-84650

<sup>14</sup> https://www.tandfonline.com/doi/full/10.1080/87559129.2021.1942487

<sup>15</sup> https://www.duh.de/fileadmin/user\_upload/download/Projektinformation/Naturschutz/Massentierhaltung/240110\_DUH\_Faktenpapier\_Antibiotika.pdf

<sup>&</sup>lt;sup>16</sup> https://www.duh.de/fileadmin/user\_upload/download/Projektinformation/Naturschutz/Massentierhaltung/240110\_DUH\_Faktenpapier\_Antibiotika.pdf



Listeria was detected in a total of 47 meat samples. This means that 33 per cent of Lidl chicken meat was found to contain bacteria that can cause listeriosis in humans. A particularly high number of findings were detected in Italy, where 13 of the 24 products (54 per cent) were affected - more than every second product.

Salmonella was also detected 13 times (a good 9 per cent). The affected meat came from Italy and Poland. Italy stands out in particular, where 11 of the 24 Lidl meat samples were contaminated with the disease-causing Salmonella. In other words, almost every second Italian meat sample (46 per cent) is contaminated.

The intestinal bacterium Escherichia coli was detected in 57 per cent of Lidl meat samples (81 products) and Enterococci were found in 48 per cent (68 products). In the latter case, 7 of the Polish products showed conspicuously high values.

Only 2 of the 142 samples were unremarkable for all tested parameters, which means that the laboratory reported the test results as "below the detection limit".

These products nevertheless end up in regular sales. For consumers, but also for employees of slaughterhouses and meat-processing companies, the germs pose a potentially high risk as soon as hygiene rules are not observed one hundred per cent – which is often the case in everyday life.<sup>17</sup> In addition, dangerous pathogens have also been proven to be released into the environment from the sheds.<sup>18</sup> Pathogens and antibiotic resistance from factory farming are a problem that must not be underestimated.

### Experts' Quotes

"Antibiotic-resistant germs on meat can pose a risk to us. After all, we don't see them when preparing the meat. We don't have the transmission routes in the kitchen under control. These transmission routes – chopping boards, knives, our hands, splash water in particular – can lead to antibiotic-resistant germs being transferred from meat onto other food, which we then ingest and colonise."

Reinhild Benning, Senior Advisor for Agricultural Policy, Deutsche Umwelthilfe - quoted from "Achtung, Essen! Keime" (Beware of the food! Germs), German tv program ZDF, 2020/03/10

"We must not forget that antibiotics have been abusively used in agriculture for decades. Completely healthy animals are given antibiotics that they don't actually need. And this is done for the sole purpose of being able to profitably keep overbred animals in overcrowded sheds."

Dr. Rupert Ebner, veterinarian and former vice president of the Bavarian State Veterinary Association.

<sup>&</sup>lt;sup>17</sup> https://www.gefluegelnews.de/article/salmonellen-und-co-noch-aufklarungsbedarf-bei-kuchenhygiene

<sup>18</sup> https://albert-schweitzer-stiftung.de/themen/gesund/antibiotikaresistente-keime-massentierhaltung



"With average kitchen hygiene, i.e. the usual carelessness applied in the household when separating raw meat from food eaten raw, the risk of transferring germs onto unheated food is high. Individual cases of illness then depend on the amount of germs, the person's immune system and other factors."

Dr. Imke Lührs, specialist in internal medicine and former expert in the Bundestag, member of the board of »Ärzte gegen Massentierhaltung« (Doctors against factory farming)

"I would not advise my patients to buy these Lidl chicken products. The test shows that the meat is contaminated with numerous potential pathogens. Even if these do not usually make you ill immediately, there is still a risk that the germs could be transferred to humans if the meat is not prepared properly. In the event of unfortunate circumstances (pre-existing diseases, administration of antibiotics for other reasons, an injury or operation...) they can become a serious health threat." Dr. Imke Lührs, specialist in internal medicine and former expert in the Bundestag, member of the board of »Ärzte gegen Massentierhaltung« (Doctors against factory farming)

#### Further information

Albert Schweitzer Stiftung für unsere Mitwelt: Antibiotikaresistente Keime aus dem Stall »(Antibiotic-resistant germs from the barn«)

## Annex

## Germany

(Sample reception: 12th December 2023)

				Antibi	iotic-resistant ខ្	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL-Entero- bacteria (culture detection in 25 g)	ESBL (E. coli & Klebsiella sp.) (culture detection in 25 g)	Germ identification (VITEK 2)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
1	Berlin	Hähnchen- schenkel (thighs)		-	-	-	-	15	1200	-	-	detectable
2	Berlin	Hähnchen- schenkel (thighs)	detectable	detectable	Escherichia coli	-	-	10	21000	-	-	detectable
3	Berlin	Hähnchen- schenkel (thighs)	-	-	-	-	-	<10	900	-	-	detectable
4	Berlin	Hähnchen- oberkeule (drumsticks)	-	-	-	-	-	15	200	-	-	detectable
5	Berlin	Hähnchen- oberkeule (drumsticks)	-	-	-	-	-	20	7400	-	-	-
6	Berlin	Hähnchen- oberkeule (drumsticks)	-	-	-	-	-	<10	2900	-	-	-
7	Berlin	Hähnchen Mini-Steaks	detectable	detectable	Escherichia coli	-	-	10	<100	-	-	-



				Antibi	otic-resistant į	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL-Entero- bacteria (culture detection in 25 g)	ESBL (E. coli & Klebsiella sp.) (culture detection in 25 g)	Germ identification (VITEK 2)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
		(steaks)										
8	Berlin	Hähnchen- Minuten- schnitzel (escalopes)	-		-	-	-	10	<100	-	-	-
9	Oldenburg	Hähnchen- Flügel (wings)	-	-	-	-	-	45	3200	-	-	-
10	Oldenburg	Hähnchen- oberkeule (drumsticks)	-	-	-	-	-	10	800	-	detectable	-
11	Oldenburg	Hähnchen- oberkeule (drumsticks)	-	-	-	-	-	<10	2600	-	detectable	-
12	Oldenburg	Hähnchen- schenkel (thighs)	-	-	-	-	-	42	1500	-	-	-
13	Oldenburg	Hähnchen- schenkel (thighs)	-	-	-	-	-	<10	2200	-	detectable	-
14	Oldenburg	Hähnchen Mini-Steaks (steaks)	-	-	-	-	-	<10	<100	-	-	-
15	Oldenburg	Hähnchen- Minuten- schnitzel (escalopes)	-	-	-	-	-	<10	<100	-	-	detectable
16	Koblenz	Hähnchen- Flügel (wings)	-	-	-	-	-	<10	400	-	detectable	-
17	Duisburg	Hähnchen- oberkeule	detectable	detectable	Escherichia coli	-	-	25	<100	-	detectable	detectable



				Antib	iotic-resistant រូ	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL-Entero- bacteria (culture detection in 25 g)	ESBL (E. coli & Klebsiella sp.) (culture detection in 25 g)	Germ identification (VITEK 2)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
		(drumsticks)										
18	Duisburg	Hähnchen- Flügel (wings)	detectable	detectable	Escherichia coli	-	-	20	5100	-	detectable	detectable
19	Duisburg	Hähnchen- schenkel (thighs)	detectable	detectable	Escherichia coli	-	-	20	2900	-	-	detectable
20	Duisburg	Hähnchen- Flügel (wings)	detectable	detectable	Escherichia coli	-	-	<10	2400	-	-	detectable
21	Duisburg	Hähnchen- Flügel (wings)	detectable	detectable	Escherichia coli	-	-	<10	<100	-	-	detectable
22	Duisburg	Hähnchen- Flügel (wings)	detectable	detectable	Escherichia coli	-	-	<10	7300	-	-	-
23	Duisburg	Hähnchen- Minuten- schnitzel (escalopes)	-	-	-	-	-	<10	<100	-	-	detectable
24	Duisburg	Hähnchen Mini-Steaks (steaks)	-	-	-	-	-	<10	<100	-	-	detectable



Italy

(Sample reception: 25th January 2024)

				Antib	iotic-resistant ខ្	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
1	Firenze	Cosce di pollo (legs)	positive	positive (3MRGN)	Escherichia coli	-	-	260	32000	-	detectable	-
2	Firenze	Petto di Pollo (breast)	-	-		-	-	10	26000	-	-	-
3	Firenze	Cosce di pollo (legs)	-	-	-	-	-	90	<100	detectable	detectable	-
4	Firenze	Sovracosce di pollo (thigh)	-	-	-	positive	-	20	<100	detectable	-	-
5	Firenze	Fusi di pollo (thigh)	-	-	-	positive	-	< 10	27000	-	detectable	-
6	Firenze	Fusi di pollo (thigh)	-	-	-	positive	-	< 10	<100	-	detectable	-
7	Milano	Sovracosce di pollo (thigh)	-	-	-	positive	-	35	<100	detectable	detectable	-
8	Milano	Ali di pollo non separate (wings)	-	-	-	positive	-	50	<100	-	detectable	-
9	Milano	Ali di pollo non separate (wings)	-	-	-	positive	-	11	<100	detectable	detectable	-
1		Petto di pollo (breast)	-	-	-	positive	-	< 10	<100	-	-	-
1	Milano	Petto di	-	-	-	-	-	< 10	12000	-	-	-



				Antib	iotic-resistant ខ្	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
1		pollo (breast)										
1 2	Roma	Sovracosce di pollo (thigh)	-	-	-	-	-	40	13000	detectable	detectable	-
1 3	Milano	Cosce di pollo (legs)	positive	positive (3MRGN)	Escherichia coli	-	-	60	2400		detectable	-
1 4	Milano	Cosce di pollo (legs)	-	-	-	-	-	35	<100	detectable	-	-
1 5	Milano	Petto di pollo (breast)	positive	positive (3MRGN)	Escherichia coli	-	-	< 10	<100	detectable	-	-
1 6	Roma	Cosce di pollo (legs)	positive	positive	Escherichia coli	-	-	490	8800	-	detectable	-
1 7	Roma	Cosce di pollo (legs)	positive	positive (3MRGN)	Escherichia coli	-	-	260	10000	detectable	-	-
1 8	Roma	Ali di pollo non separate (wings)	positive	positive (3MRGN)	Escherichia coli	positive	-	370	<100	-	detectable	-
1 9	Roma	Petto di pollo (breast)	positive	positive (3MRGN)	Escherichia coli	-	-	80	5600	-	-	-
2	Milano	Ali di pollo non separate (wings)	positive	positive (3MRGN)	Escherichia coli	-	-	85	<100	detectable	detectable	-
2	Milano	Ali di pollo non separate (wings)	positive	positive	Escherichia coli	-	-	170	<100	detectable	detectable	-
2 2	Firenze	Petto di Pollo (breast)	positive	positive (3MRGN)	Escherichia coli	positive	-	< 10	6900	-	-	-
2 3	Milano	Sovracosce di pollo (thigh)	-	-	-	-	-	20	3200	-	-	-



Shopping P			Antibi	otic-resistant ខ្	germs		Fecal	germs		Other germs		
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
2 4	Roma	Ali di pollo non separate (wings)	positive	positive	Escherichia coli	-	-	720	4100	detectable	-	-



## United Kingdom

(Sample reception: 28th February 2024)

				Antib	iotic-resistant ខ្	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
1	Manchester	Chicken wings	positive	-	Serratia fonticola	positive	positive	10	<100	-	-	-
2	Manchester	Chicken thighs	-	-	-	positive	-	170	<100	-	-	-
3	Manchester	Chicken thighs	-	-	-	positive	-	310	700	-	detectable	-
4	London	Drumsticks	-	-	-	positive	-	10	<100	-	-	-
5	Manchester	Chicken legs	-	-	-	positive	-	140	100	-	-	-
6	Manchester	Chicken wings	positive	-	Serratia fonticola	positive	positive	35	<100	-	-	-
7	London	Chicken wings	-	-	-	positive	positive	< 10	300	-	-	-
8	London	Breast fillets	positive	-	Serratia fonticola	-	-	< 10	<100	-	detectable	-
9	London	Drumsticks	-	-	-	positive	positive	< 10	<100	-	detectable	-
10	London	Drumsticks	positive	-	Serratia fonticola	positive	-	15	<100	-	-	-
11	Manchester	Chicken legs	-	-	-	positive	positive	90	<100	-	-	-
12	Manchester	Chicken legs	-	-	-	positive	positive	17	<100	-	-	-
13	Manchester	Chicken thighs	-	-	-	-	-	100	900	-	detectable	-
14	Manchester	Chicken	-	-	-	-	-	< 10	<100	-	detectable	-



				Antib	iotic-resistant į	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)		MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
		thighs										
15	Manchester	Whole chicken	positive	positive (AmpC)	Serratia fonticola	-	-	< 10	<100	-	-	-
16	Birmingham	Drumsticks	-	-	-	positive	positive	< 10	<100	-	detectable	-
17	Birmingham	Chicken wings	-	-	-	positive	positive	< 10	<100	-	-	-
18	London	Breast fillets	-	-	-	positive	positive	< 10	<100	-	-	-
19	London	Chicken wings	-	-	-	positive	-	< 10	<100	-	-	-
20	London	Drumsticks	-	-	-	positive	positive	< 10	<100	-	detectable	-
21	Birmingham	Whole chicken	-	-	-	-	-	< 10	<100	-	-	-
22	Birmingham	Drumsticks	-	-	-	positive	positive	< 10	<100	-	detectable	-
23	Birmingham	Chicken wings	positive	-	Serratia fonticola	positive	positive	< 10	100	-	-	-
24	London	Chicken thighs	-	-	-	positive	-	25	<100	-	-	-
25	London	Whole chicken	positive	-	Serratia fonticola	positive	positive	< 10	100	-	-	-
26	Birmingham	Breast fillets	positive	-	Serratia fonticola	-	-	20	<100	-	-	-
27	Birmingham	Drumsticks	-	-	-	positive	positive	< 10	<100	-	detectable	-
28	London	Drumsticks	-	-	-	positive	-	< 10	<100	-		-
29	London	Chicken thighs	positive	positive (3MRGN)	Escherichia coli	-	-	55	<100	-	-	-



				Antibi	otic-resistant g	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
30	London	Drumsticks	positive	positive (AmpC)	Serratia fonticola	positive	-	25	1900	-	-	-
31	London	Chicken wings	-	-	-	positive	-	360	<100	-	-	-
32	London	Breast fillets	positive	-	Serratia fonticola	-	-	10	<100	-	-	-
33	London	Whole chicken	positive	-	Serratia fonticola	-	-	< 10	<100	-	-	-
34	Manchester	Chicken legs	positive	-	Serratia fonticola	positive	positive	< 10	<100	-	-	-
35	Birmingham	Chicken wings	-	-	-	positive	positive	< 10	<100	-	-	-
36	Birmingham	Chicken thighs	positive	positive (AmpC)	Serratia fonticola	-	-	25	<100	-	detectable	-
37	Manchester	Chicken wings	positive	-	Serratia fonticola	positive	positive	30	<100	-	-	-
38	Birmingham	Chicken thighs	positive	positive (3MRGN)	Escherichia coli	-	-	40	<100	-	detectable	-
39	Birmingham	Drumsticks	-	-	-	positive	-	< 10	<100	-	detectable	-
40	London	Chicken wings	-	-	-	positive	positive	< 10	<100	-	-	-



## Poland

(Sample reception: 6th March 2024)

				Antib	oiotic-resistant	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
1	Warszawa	Kurczak Tusczak (whole bird)	-	-	-	-	-	<10	60	-	-	-
2	Warszawa	Filety z piersi kurczaka (breast)	positive	positive (3MRGN)	Klebsiella pneumoniae	-	-	65	30	-	-	-
3	Warszawa	Uda z kurczaka (thigh)	positive	-	Serratia fonticola	-	-	80	30	detectable	-	-
4	Warszawa	Produdzia z kurczaka (thigh)	positive	-	Serratia fonticola	positive	-	<10	10	-	-	-
5	Warszawa	Skrzydla z kurczaka (wings)	positive	-	Serratia fonticola	positive	-	<10	190	-	-	-
6	Warszawa	Skrzydla z kurczaka (wings)	-	-	-	positive	-	25	180	-	-	-
7	Kraków	Kurczak Tusczak (whole bird)	positive	-	Serratia fonticola	-	-	<10	<10	-	-	-
8	Kraków	Uda z kurczaka (thigh)	-	-		-	-	<10	<10	-	-	positive (Campylo- bacter jejuni)



				Antib	iotic-resistant į	germs		Fecal	germs		Other germs	
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
9	Kraków	Produdzia z kurczaka (thigh)		-	-	positive	-	<10	<10	-	-	-
10	Kraków	Produdzia z kurczaka (thigh)		-	-	positive	-	<10	<10	-	-	-
11	Kraków	Skrzydla z kurczaka (wings)	positive	-	Serratia fonticola	-	-	40	40	-	-	-
12	Kraków	Filety z piersi kurczaka (breast)	-	-	-	positive	positive	<10	50	-	-	-
13	Kraków	Produdzia z kurczaka (thigh)	positive	-	Serratia fonticola	-	-	<10	30	-	-	positive (Campylo- bacter jejuni)
14	Kraków	Produdzia z kurczaka (thigh)	positive	-	Serratia fonticola	-	-	<10	60	-	-	positive (Campylo- bacter jejuni)
15	Kraków	Kurczak Tusczak (whole bird)	positive	-	Serratia fonticola	-	-	<10	<10	-	-	-
16	Kraków	Uda z kurczaka (thigh)	positive	-	Serratia fonticola	-	-	<10	45	-	-	-
17	Kraków	Skrzydla z kurczaka (wings)	positive	positive (3MRGN)	Serratia fonticola, Escherichia coli	-	-	<10	64	-	-	-



			Antibiotic-resistant germs					Fecal germs		Other germs		
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
18	Kraków	Filety z piersi kurczaka (breast)	positive	-	Serratia fonticola	positive	-	25	4600000	-	-	-
19	Gdańsk	Skrzydla z kurczaka (wings)		-	-	positive	positive	<10	60000000	detectable	-	-
20	Gdańsk	Produdzia z kurczaka (thigh)	positive	positive (3MRGN)	Klebsiella pneumoniae	positive	positive	<10	40	-	-	-
21	Gdańsk	Uda z kurczaka (thigh)	positive	positive (3MRGN)	Klebsiella pneumoniae	positive	positive	120	90	-	detectable	-
22	Gdańsk	Uda z kurczaka (thigh)	positive	positive (3MRGN)	Klebsiella pneumoniae, Escherichia coli	positive	positive	<10	120	-	detectable	-
23	Gdańsk	Filety z piersi kurczaka (breast)	positive	positive (3MRGN)	Escherichia coli	positive	positive	140	150	-	-	-
24	Gdańsk	Kurczak Tusczak (whole bird)	-	-	-	-	-	<10	40	-	-	-
25	Warszawa	Skrzydla z kurczaka (wings)	positive	-	Serratia fonticola	-	-	75	27000000	-	detectable	positive (Campylo- bacter jejuni)
26	Warszawa	Skrzydla z kurczaka (wings)		-	-	positive	positive	200	180000000	-	detectable	positive (Campylo- bacter jejuni)



				Antib	oiotic-resistant g	nt germs Fecal germs	germs	Other germs				
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
27	Warszawa	Produdzia z kurczaka (thigh)	positive	positive (3MRGN)	Serratia fonticola, Escherichia coli	positive	positive	10	250000	-	detectable	-
28	Warszawa	Uda z kurczaka (thigh)	positive	positive (3MRGN)	Serratia fonticola, Escherichia coli	positive	-	35	160000	-	detectable	positive (Campylo- bacter jejuni)
29	Warszawa	Uda z kurczaka (thigh)	positive	positive (3MRGN)	Escherichia coli	positive	positive	65	180000	-	detectable	positive (Campylo- bacter jejuni)
30	Warszawa	Kurczak Tusczak (whole bird)	-	-	-	positive	-	<10	<10	-	-	positive (Campylo- bacter jejuni)



Spain

#### (Sample reception 13th March 2024)

			Antibiotic-resistant germs					Fecal germs		Other germs		
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
1	Madrid	Pollo alas (wings)	positive	positive	Serratia fonticola, Escherichia coli	-		10	<10	-	detectable	positive (Campylo- bacter jejuni)
2	Madrid	Pollo alas (wings)	positive	positive (3MRGN)	Escherichia coli	-	-	45	<10	-	detectable	positive (Campylo- bacter jejuni)
3	Madrid	Pollo Jamoncitos (thigh)	positive	positive	Escherichia coli	-	-	100	<10	-	-	positive (Campylo- bacter jejuni)
4	Madrid	Pollo cuarto trasero (thigh)	positive	positive	Escherichia coli	-	-	7100	40	-	detectable	positive (Campylo- bacter jejuni)
5	Madrid	Pollo pechuga entera (breast)	-	-	-	-	-	45	<10	-	-	-
6	Barcelona	Pollo entero (whole bird)	positive	positive	Escherichia coli	-	-	15	<10	-	-	positive (Campylo- bacter jejuni)
7	Barcelona	Pollo Jamoncitos (thigh)	positive	positive	Escherichia coli	-	-	20	<10	-	-	positive (Campylo- bacter jejuni)
8	Barcelona	Pollo cuarto	positive	positive	Escherichia	positive	positive	120	250	-	detectable	positive



			Antibiotic-resistant germs					Fecal	germs	Other germs		
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
		trasero (thigh)			coli							(Campylo- bacter jejuni)
9	Madrid	Pollo cuarto trasero (thigh)	positive	positive	Escherichia coli	-	-	1000	<10	-	-	positive (Campylo- bacter jejuni)
10	Barcelona	Pollo pechuga entera (breast)	positive	positive	Escherichia coli	positive	positive	270	<10	-	-	positive (Campylo- bacter jejuni)
11	Barcelona	Pollo alas (wings)	positive	positive	Escherichia coli	positive	positive	130	70	-	-	positive (Campylo- bacter jejuni)
12	Madrid	Pollo entero (whole bird)	positive	positive	Escherichia coli	positive	positive	<10	<10	-	-	-
13	Barcelona	Pollo alas (wings)	positive	positive	Serratia fonticola, Escherichia coli	-	-	220	<10	-	detectable	-
14	Valencia	Pollo Jamoncitos (thigh)	positive	-	Serratia fonticola	positive	-	<10	<10	-	-	positive (Campylo- bacter jejuni)
15	Valencia	Pollo Jamoncitos (thigh)	positive	-	Serratia fonticola	-	-	<10	<10	-	-	positive (Campylo- bacter jejuni)
16	Valencia	Pollo alas (wings)	-	-	-	-	-	20	<10	-	-	positive (Campylo- bacter jejuni)



				Antib	iotic-resistant į	germs		Fecal	germs	Other germs		
	Shopping location	Product	ESBL Screening (culture detection in 25 g)	ESBL Confirmation (Proof via agar diffusion)	Germ identification (MALDI-TOF- MS)	MRSA (PCR in 25 g)	MRSA (culture detection in 25 g)	Escherichia coli (CFU/g)	Enterococci (CFU/g)	Salmonella spp. (in 25 g)	Listeria monocyto- genes (in 25 g)	Campylo- bacter (in 25 g)
17	Valencia	Pollo cuarto trasero (thigh)	-	-	-	-	-	90	10	-	detectable	positive (Campylo- bacter jejuni)
18	Madrid	Pollo cuarto trasero (thigh)	positive	positive	Escherichia coli	positive	positive	730	20	-	detectable	positive (Campylo- bacter jejuni)
19	Valencia	Pollo pechuga entera (breast)		-		-	-	<10	<10	-	-	positive (Campylo- bacter jejuni)
20	Madrid	Pollo entero (whole bird)	-	-	-	-	-	20	20	-	-	positive (Campylo- bacter jejuni)
21	Madrid	Pollo cuarto trasero (thigh)	positive	positive	Escherichia coli	positive	-	130	10	-	-	-
22	Madrid	Pollo Jamoncitos (thigh)	positive	positive	Serratia fonticola	-	-	10	<10	-	detectable	positive (Campylo- bacter jejuni)
23	Madrid	Pollo alas (wings)	positive	positive	Serratia fonticola	positive	positive	40	50	-	-	positive (Campylo- bacter jejuni)
24	Madrid	Pollo Jamoncitos (thigh)	positive	positive	Escherichia coli	positive	-	20	20	-	detectable	positive (Campylo- bacter jejuni)

