

# **Year 1 of a UK-wide survey of campylobacter contamination on fresh chickens at retail (February 2014 to February 2015)**

The 12-month survey, running from February 2014 to February 2015, looked at the prevalence and levels of campylobacter contamination on fresh whole chilled chickens and their packaging.

The survey tested more than 4,000 samples of whole chickens bought from UK retail outlets and smaller independent stores and butchers. The full set of results were published on 28 May 2015.

## **Cumulative results: first 12 months (published May 2015)**

Cumulative results for samples taken between February 2014 and February 2015 have now been published, including results presented by major retailer. The results for the full year show:

- 19% of chickens tested positive for campylobacter within the highest band of contamination\*
- 73% of chickens tested positive for the presence of campylobacter
- 0.1% (five samples) of packaging tested positive at the highest band of contamination
- 7% of packaging tested positive for the presence of campylobacter

\*More than 1,000 colony forming units per gram (>1,000 cfu/g). These units indicate the degree of contamination on each sample.

More than 4,000 samples of fresh whole chilled chickens and packaging have been tested. The chickens were bought from large UK retail outlets and smaller independent stores and butchers. The data shows variations between the retailers but none has met the target for reducing campylobacter (see table below). A full analysis of the survey results, including the publication of the raw data and the full year results for smaller supermarkets and shops, is being carried out by the FSA and will be published later in the summer.

Further details of the ongoing testing of chickens for campylobacter were also confirmed by the FSA. A new survey will start this summer and once again sample fresh whole chickens from all types of shops. Continued testing will help the FSA to measure the impact of the interventions now being introduced by the industry to tackle campylobacter.

The FSA has welcomed the publication of case studies by Marks & Spencer, Morrisons, the Co-op and Waitrose showing the results of their recently implemented campylobacter reduction plans. The data show significant decreases in the incidence of campylobacter on their raw whole chickens. The tests were carried out on more recent samples than those taken from the FSA survey samples, with some targeted to demonstrate the effect of particular interventions. All results below are taken from the official statistics report for the survey which can be found at the link below. This report gives a full explanation of the results and background to the methodology.

The FSA advises that the data for individual retailers have to be interpreted carefully. Confidence intervals are given for each retailer and the 'others' category. These show the likely range of the results allowing for the number of samples taken.

The 95% confidence intervals means that we would expect the true prevalence to fall within the lower and upper confidence limits 95% of the time. A key factor in the width of this interval is the sample size. Those retailers with a relatively low market share have a low sample size and correspondingly wide confidence intervals.

The results show, taking the confidence intervals into account, that Tesco is the only one of the main retailers which has a lower incidence of chicken contaminated with campylobacter at the highest level (>1000 cfu/g), compared to the industry average. Asda is the only main retailer which has a higher incidence of chicken that is contaminated by campylobacter at the highest level, compared to the industry average. However, the results suggest that over the period of the survey none of the retailers achieved the joint industry target for reducing campylobacter.

<b>Retailer</b>	<b>Number of samples</b>	<b>% skin samples positive for campylobacter (95% confidence interval)</b>	<b>% skin samples &gt;1,000 cfu/g campylobacter (95% confidence interval)</b>	<b>% pack samples positive for campylobacter (95% confidence interval)</b>
<b>Asda</b>	662	80.4 (77.3 - 83.4)	29.7 (26.3 - 33.2)	12.4 (10 - 15.0)
<b>Co-op</b>	378	78.1 (73.8 - 82.2)	19.1 (15.3 - 23.1)	4.9 (2.9 - 7.2)
<b>M&amp;S</b>	130	67.1 (58.9 - 75.1)	17.4(11.1 - 24.1)	2.9 (0.6 - 6.0)
<b>Morrison's</b>	349	75.8 (71.4 - 80.0)	75.8 (71.4 - 80.0)	11.2 (8.1 - 14.6)
<b>Sainsbury's</b>	557	69.7 (65.8 - 73.5)	69.7 (65.8 - 73.5)	4.9 (3.1 - 6.8)
<b>Tesco</b>	1,235	66.5 (63.9 - 69.0)	12.8 (10.9 - 14.6)	4.0 (3.0 -5.2)
<b>Waitrose</b>	111	73.8 (65.0 - 82.1)	18.4 (10.8 - 26.7)	9.7 (3.8 - 16.3)
<b>Others</b>	589	76.8 (73.03 - 80.1)	23.9 (20.5 - 27.4)	6.7 (4.8 - 8.8)

Retailer	Number of samples	% skin samples positive for campylobacter (95% confidence interval)	% skin samples >1,000 cfu/g campylobacter (95% confidence interval)	% packsamples positive for campylobacter (95% confidence interval)
<b>Total</b>	<b>4,011</b>	<b>72.8 (71.4 - 74.2)</b>	<b>19.4 (18.2 - 20.6)</b>	<b>6.7 (5.9 - 7.5)</b>

[1] The intention of the survey was to represent a full 12-month period (mid February 2014 – mid February 2015). However, owing to the practicalities of collecting the samples required, the survey had to be extended slightly into the first week of March 2015.

[2]The 'Others' category includes supermarkets where the market share was deemed small using the 2010 Kantar data: eg Lidl, Aldi, Iceland, plus convenience stores, independents, butchers etc.

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## Cumulative results: first nine months (published February 2015)

Cumulative results for samples taken between February and November 2014 have been published, including results presented by major retailer.

The results to date show:

- 19% of chickens tested positive for campylobacter within the highest band of contamination.\*
- 73% of chickens tested positive for the presence of campylobacter.
- 7% of packaging tested positive for the presence of campylobacter. Only three out of more than 3,000 samples of packaging tested positive at the highest band of contamination.

\*More than 1,000 colony forming units per gram (>1,000 cfu/g). These units indicate the degree of contamination on each sample.

More than 3,000 samples of fresh whole chilled chickens and packaging have now been tested. Data continue to show variations between the retailers but none is meeting the target for reducing campylobacter (see table below).

All results below are taken from the Official Statistics report for the survey, which can be found via the link below. This report gives a full explanation of the results and background to the methodology.

The FSA advises that the data for individual retailers have to be interpreted carefully. Confidence intervals are given for each retailer and the 'others' category. These show the likely range of the results allowing for the number of samples taken.

The 95% confidence intervals means that we would expect the true prevalence to fall within the lower and upper confidence limits 95% of the time. A key factor in the width of this interval is the sample size. Those retailers with a relatively low market share have a low sample size and correspondingly wide confidence intervals.

The results show, taking the confidence intervals into account, that Tesco is the only one of the main retailers which has a lower incidence of chicken contaminated with campylobacter at the highest level (>1,000 cfu/g), compared to the industry average. Asda is the only main retailer which has a higher incidence of chicken that is contaminated by campylobacter at the highest level, compared to the industry average. However, the results suggest that none of the retailers is achieving the joint industry target for reducing campylobacter.

<b>Retailer</b>	<b>Number of samples</b>	<b>% skin samples positive for campylobacter (95% confidence interval)</b>	<b>% skin samples &gt;1,000 cfu/g campylobacter (95% confidence overall)</b>	<b>% pack samples positive for campylobacter (95% confidence interval)</b>
<b>Asda</b>	491	78.9 (75.2 - 82.4)	31.1 (27.0 - 35.2)	13.0 (10.1 - 16.1)
<b>Co-op</b>	274	75.6 (70.2 - 80.6)	16.4 (12.3 - 20.9)	4.4 (2.1 - 7.0)
<b>M&amp;S</b>	103	72.2 (63.0 - 80.7)	20.7 (13.0 - 29.1)	3.8 (0.8 - 8.1)
<b>Morrison's</b>	271	76.2 (71.4 - 80.9)	22.9 (18.0 - 28.0)	13.3 (9.5 - 17.4)
<b>Sainsbury's</b>	451	69.6 (65.4 - 73.7)	14.3 (11.2 - 17.6)	4.0 (2.3 - 6.0)
<b>Tesco</b>	925	68.2 (65.3 - 71.1)	12.3 (10.2 - 14.4)	4.1 (2.9 - 5.4)
<b>Waitross</b>	96	71.7 (62.1 - 80.5)	15.6 (8.5 - 23.7)	6.2 (2.1 - 11.7)
<b>Others (1)</b>	450	76.9 (72.9 - 80.7)	23.2 (19.4 - 27.2)	6.8 (4.6 - 9.2)

Retailer	Number of samples	% skin samples positive for campylobacter (95%confidence interval)	% skin samples >1,000 cfu/g campylobacter (95%confidence overall)	% pack samples positive for campylobacter (95%confidence interval)
Total	3,061	72.9 (71.4 -74.5)	18.9 (17.5 -20.3)	6.8 (5.9 - 7.7)

[1] The 'Others' category includes supermarkets where the market share was deemed small using the 2010 Kantar data: eg Lidl, Aldi, Iceland, plus convenience stores, independents, butchers etc.

## Read the report

### England, Northern Ireland and Wales

PDF

[View Interim report for quarters 1, 2 and 3: microbiological survey of campylobacter contamination in fresh whole UK-produced chilled as PDF\(Open in a new window\)](#) (139.85 KB)

## Cumulative results: first two quarters (published November 2014)

The results below are for the first two quarters and represent 1,995 samples of fresh whole chilled chickens. The packaging was also tested for most of these samples. Data show variations between retailers but none are meeting the end-of-production target for reducing campylobacter (see table below).

These results show:

- 18% of chickens tested positive for campylobacter above the highest level of contamination\*
- 70% of chickens tested positive for the presence of campylobacter
- 6% of packaging tested positive for the presence of campylobacter with only one sample at the highest level of contamination (>1,000 cfu/g)

\* Above 1,000 colony forming units per gram (>1,000 cfu/g). These units indicate the degree of contamination on each sample.

The overall figures show an increase in contamination from the first quarter to the second quarter. This is most likely due to the second quarter's samples being taken during the summer months when an increase in campylobacter is often seen because of the warmer weather.

The FSA advises that the data for individual retailers have to be interpreted carefully. Confidence intervals are given for each retailer and the 'others' category. These show the likely range of the results allowing for the number of samples taken.

At this half-way stage in the survey the results show, taking the confidence intervals into account, that Tesco is the only one of the main retailers which has a lower incidence of chicken contaminated with campylobacter at the highest level (>1,000 cfu/g), compared to the industry average. Asda is the only main retailer which has a higher incidence of chicken that is contaminated by campylobacter at the highest level, compared to the industry average. However, the results suggest that none of the retailers is achieving the joint industry end-of-production target for reducing campylobacter.

<b>Retailer</b>	<b>Number of samples</b>	<b>% skin samples positive for campylobacter (95% confidence interval)</b>	<b>% skin samples &gt;1,000 cfu/g campylobacter (95% confidence interval)</b>	<b>% pack samples positive for campylobacter (95% confidence interval)</b>
<b>Asda</b>	312	78 (73 - 82)	28 (23 - 33)	12 (8 - 15)
<b>The Co-operative</b>	171	73 (66 - 80)	19 (14 - 25)	5 (2 - 9)
<b>M&amp;S</b>	68	67 (55 - 78)	22 (13 - 33)	4 (0 - 10)
<b>Morrison's</b>	179	69 (62 - 75)	21 (16 - 28)	9 (5 - 14)
<b>Sainsbury's</b>	300	69 (63 - 74)	14 (11 - 19)	3 (1 - 6)
<b>Tesco</b>	607	64 (61 - 68)	11 (9 - 14)	3 (2 - 4)
<b>Waitrose</b>	70	69 (58 - 80)	16 (8 - 25)	9 (3 - 18)
<b>Others*</b>	288	76 (71 - 80)	25 (20 - 30)	7 (4 - 10)
<b>Total</b>	<b>1,995</b>	<b>70 (68 - 72)</b>	<b>18 (17 - 20)</b>	<b>6 (5 - 7)</b>

\*The 'Others' category includes supermarkets where the market share was deemed small using the 2010 Kantar data, ie Lidl, Aldi, Iceland, plus convenience stores, independents, butchers etc.

95% confidence intervals means that we would expect the true prevalence to fall within the lower and upper confidence limits 95% of the time.

## **First quarter results (published August 2014)**

The results below are for the first quarter and represent 853 samples.

The results are in two parts: a figure for the contamination levels on each bird, taken from the neck flap, and expressed as cfu/g (colony forming units per gram), and contamination of the outside of the packaging. The first quarter results show 59% of birds tested positive for the presence of campylobacter with 16% of birds tested at this stage of the survey indicating the highest level of contamination of >1,000 cfu/g. To note, 10cfu/g is considered the limit of detection for campylobacter so only contamination found above that level can be confirmed as a positive. The <10 band includes negative results.

<b>&lt;10 CFU/g</b>	<b>10-99 CFU/g</b>	<b>100-1,000 CFU/g</b>	<b>&gt;1,000 CFU/g</b>	<b>Not tested&gt;</b>	<b>Total sampled</b>
352 (41%)	145 (17%)	219 (26%)	137 (16%)	1 (0.12%)	853 (100%)

Tests of the packaging showed 4% of samples testing positive for the presence of campylobacter with one sample at the highest level of contamination.

<b>&lt;10 CFU/swab</b>	<b>10-99 CFU/swab</b>	<b>100-1,000 CFU/swab</b>	<b>&gt;1,000 CFU/swab</b>	<b>Not tested</b>	<b>Total sampled</b>
814 (95%)	26 (3%)	11 (1%)	1 (0.12%)	1 (0.12%)	853 (100%)