



Changes to the FSA Retail Campylobacter survey, raw chicken in the news, Campylobacter outbreak in North Yorkshire and studies on the effect of natural antimicrobial plant extracts on chicken

The Food Standards Agency has announced that it will be no longer independently testing poultry collected from the major retailers, but instead will be relying on the retailers own testing to generate the data for the Campylobacter survey.

Following discussions with the industry, the top nine retailers have agreed to publish their own Campylobacter results on their individual consumer websites. The sampling and analysis carried out by the retailers will be in accordance with the robust protocols established by the FSA which will ensure that their published results are comparable. In addition, the FSA will have access to the raw data from each retailer in order to verify the samples and to determine industry averages, and the FSA have reserved the right to comment publically on the results.

Each retailer has committed in writing to follow the FSA protocol. As a result of this arrangement, the nine major retailers will not now be included in the annual survey.

The FSA state that in light of the significant progress made by the major retailers and producers in taking action to reduce Campylobacter levels in chicken, their strategy is now to focus their efforts on smaller poultry processing establishments where they feel further improvements could be made.

The FSA state that the increased focus on these suppliers will allow the improvements made by the larger chains to be extended across the whole supply chain. The focus for the fourth year of the retail survey will therefore be on smaller

retailers, independent traders and market stalls as these are more likely to be supplied by smaller processors.

On a related subject, earlier in August the FSA issued a warning to consumers that raw poultry is not safe to eat. Along with no doubt many others, I was incredulous that such a statement needed to be made, but apparently the FSA issued the communique in response to an article in the Daily Mirror Lifestyle section on the 9th September (endorsed by a celebrity chef), which claimed that free range chicken processed in a clean environment was safe to be eaten in its raw state.

The newspaper article stated that British consumers were requesting chicken served a little pink and dishes like chicken sashimi which originated in Japan are in demand. However, the Japanese Ministry of Health, Labour and Welfare recently issued a warning stating that consumption of raw chicken is dangerous and has ordered restaurants to cook chicken until the internal temperature reaches 75°C before serving it to customers.

In a separate incident this month, a total of 8 cases of food poisoning were reported to Public Health England (PHE) in the north-east, 6 of which were laboratory confirmed cases of Campylobacter.

The PHE revealed that chicken liver parfait was the cause of illness which had been served to guests at a hotel in Saltburn, North Yorkshire.

And in the final chicken related topic, an article published in the Journal of Food Protection has looked at the potential of plant-derived antimicrobial extracts to increase the shelf life and to delay the microbiological spoilage of marinated broiler chicken cuts in modified atmosphere packages during cold storage. The study evaluated the impact of aqueous ethanolic extracts of Finnish sea buckthorn berries,

lingonberries, commercial herbal extracts and oregano leaves on the shelf life of broiler meat.

The commercial antimicrobial blend extract and the oregano extract inhibited the growth of lactic acid bacteria (LAB) and *Brochothrix thermosphacta* in the marinated samples. The antimicrobial blend extract also reduced the growth of psychrotrophic aerobic bacteria, whereas the sea buckthorn and lingonberry extracts did not. Only minor antimicrobial activity against Enterobacteriaceae by all the extracts was observed.

The report concluded that further studies for exploiting the synergistic effects of plant extracts could contribute to the development of potential and more effective antimicrobial blends.

Salmonella Papaya outbreak - Update.

A quick update on the Salmonella outbreak in the US which has been linked to imported Mexican papayas as mentioned in last month's bulletin.

The popularity of the fresh papaya in some ethnic dishes is resulting in a disproportionate number of Hispanics being infected.

The Centre for Disease Control has split the victims into four outbreaks, based on four farms in Mexico that produced the contaminated fruit.

With at least 235 laboratory confirmed infections so far, the CDC has reported that the number of Hispanic victims in the individual outbreaks ranged from 50 percent to 91 percent. Two people have died, but their ethnicity has not been made public.

The CDC and Food and Drug Administration are tracking eight different serotypes of Salmonella, all found in maradol papayas from Mexico and matched by laboratory testing to stool samples from the victims.

Botulism outbreak linked to cheese vending machine

An outbreak of *Clostridium botulinum* intoxication has been linked in the US to a petrol station nacho cheese vending machine.

Ten people were laboratory confirmed victims of the outbreak. All required hospitalisation. One person, a 37-year-old father of two, died. Nine of the victims had to spend time in intensive care units. Seven of the ICU patients had

to be placed on ventilators because of respiratory paralysis. One patient has been left paralysed and although has regained the ability to talk, her mobility and motor skills remain impaired and it is feared that she may not walk again.

Upon visiting the petrol station health officials documented the following concerns;

A 5-pound bag of nacho cheese collected at the retail location was being used past the "best before" date;

Records were not being maintained by the petrol station employees indicating when bags of nacho cheese were originally added to the warming unit.

The plastic tool designed to open the bags of cheese, provided with the nacho cheese warming and dispensing unit, was not being used by employees.

Leftover nacho cheese sauce collected from the petrol station yielded both *Cl botulinum* type A bacteria and toxin.

Due to the extensive distribution of the same batch code of nacho cheese throughout the United States without additional botulism cases, and only a single bag of cheese having been linked to human illness, officials suspect the nacho cheese was likely to have been contaminated at the retail location.

How Listeria can survive exposure to sanitisers in food processing environments

In a study published in Applied and Environmental Microbiology, researchers have shown how certain Listeria strains can survive exposure to cleaning chemicals. An "islet" of two genes located in one area of the genome increases the bacteria's survival under alkaline and oxidative stress conditions. The researchers were able to identify the two genes as a functional unit termed a "stress survival islet". The authors state that understanding this genetic "lifesaver" can help develop new strategies for food safety.

The potential for cannabis plants to be contaminated with food pathogens

I came across an article this month highlighting the potential risks of cannabis growers and users from Salmonella, STEC, Aspergillus spp and mycotoxins. The article stated that the risks are well documented as there was a multistate outbreak of Salmonella in 1981 in the US, which was linked to handling contaminated cannabis plants.