



Recall of haggis and black pudding products due to insufficient *Cl botulinum* controls

Although I am a proud Yorkshireman, with a name like Andrew Muirhead it's fairly obvious that I do have Scottish ancestry, and I must admit to enjoying the odd haggis along with plenty of tatties and neaps.

It was therefore with obvious dismay that I read of the recent FSA recall of many different haggis products by Macsween of Edinburgh due to insufficient controls for *Clostridium botulinum*. Various brands such as Traditional haggis, Everyday haggis, 3 bird haggis, and (believe it or not) Vegetarian haggis were implicated.

Any product which is stored under a vacuum or modified atmosphere process, must have certain controls to prevent the growth of non-proteolytic *Clostridium botulinum*. These controls can be a heat process of 90°C or equivalent lethality at the slowest heating point in the food, a pH of 5 or less, a minimum salt content in the aqueous phase of 3.5%, a water activity of 0.97 or less throughout all components of the food, or a combination of heat and preservative factors which have been shown to inhibit the growth and toxin production of *Cl botulinum*.

If a product is vacuum or modified atmosphere packed and does not have any of the controls listed above, then a shelf life of less than 10 days must be applied. Full details of the 10 day rule can be found in the recently updated FSA document.

<https://www.food.gov.uk/sites/default/files/multimedia/pdfs/publication/vacpacguide.pdf>

Growth kinetics of *L monocytogenes* in cut produce.

An article in the August edition of Food Protection looks into the growth kinetics of *Listeria monocytogenes* in cut produce.

The study assessed the survival and growth of *Listeria monocytogenes* in cut produce items that are commonly offered for retail purchase, specifically broccoli, green and red bell peppers, yellow onions, canned green and black olives, fresh green olives, cantaloupe flesh and rind, avocado pulp, cucumbers, and button mushrooms. The survival of *L. monocytogenes* strains representing serotypes 1/2a, 1/2b, and 4b was determined on the cut produce items for each strain individually at 5, 10, and 25°C for up to 30 days.

The products that supported the most rapid growth of *L. monocytogenes* were (not surprisingly) cantaloupe flesh and avocado pulp. When stored at 25°C, the maximum growth rates for these products were between 0.1 and 0.2 log/hour depending on the strain. Green olives and broccoli did not support growth at any temperature.

The authors concluded that the results can be used to inform discussions surrounding whether specific time and temperature storage conditions should be recommended for these cut produce items.

Cantaloupe melons were identified as the source of a devastating outbreak in 2011 which involved 147 cases and 33 fatalities. The outbreak was traced to a cantaloupe processing facility in Arizona.

Although 25°C may seem like an unrealistic storage temperature, I was once involved in a project where we checked the temperature of melons displayed in retail stores and although the products were held in chiller cabinets, the

nature of the display and lighting contributed to temperatures as high as 18°C being recorded.

Vibrio parahaemolyticus and consumption of raw oysters

The risk associated with the consumption of raw or undercooked shellfish such as oysters is detailed in a recent publication from the CDC in America. <https://www.cdc.gov/features/vibrio-raw-oysters/index.html>

The article contains the alarming statistic that Vibrio infections cause about 80,000 illnesses and 100 deaths in the United States every year.

This follows information from the Florida Department of Health, which has seen an average of 33 Vibrio vulnificus cases per year since 2008, including 10 fatalities. To date in 2017, health officials have reported 10 cases, including one death. Vibrio vulnificus can cause an infection of the skin when open wounds are exposed to warm seawater; these infections may lead to skin breakdown and ulcers. A recent case study in Hong Kong described a case of necrotizing fasciitis due to Vibrio vulnificus affecting a 49 year old male.

EFSA article on Hep E and undercooked pork

Following on from the article in last month's micro bulletin which mentioned the FSA advice on the risks of Hepatitis E from raw and undercooked pork, the European Food Safety Authority has issued further guidance on this subject.

The article states that in the EU, more than 21,000 cases of hepatitis E infections have been reported in humans over the last 10 years, with an overall 10-fold increase in this period.

Rosina Girones, chair of EFSA's working group on hepatitis E, said: "Even if it is not as widespread as other foodborne diseases, hepatitis E is a growing concern in the EU. In the past, people thought the main source of infection was drinking contaminated water while travelling outside the EU. But now we know the main source of transmission of the disease in Europe is food."

Most people who contract hepatitis E display no or mild symptoms. However, in some cases especially for those with liver damage or patients with a weak immune system, it can lead to liver failure – which can be fatal.

More germs than a toilet seat!!!

Regular readers of my bulletins will know that I like a good headline, so I had to read an article which was entitled "chopping boards contain 200 times more dangerous bacteria than a toilet seat".

On a serious note however, the article in news.com.au highlights the problems associated with effective cleaning and sanitisation of chopping boards which because their scored, scratched and uneven surface provide plenty of areas where bacteria can lodge and escape from having the crucial sanitiser contact time.

Potential laboratory acquired outbreak of Salmonella

The journal Poultry Med reports that the CDC and public health officials in several states of America have identified a multistate outbreak of Salmonella typhimurium infections linked to various clinical, commercial, and teaching microbiology laboratories. Twenty-four people infected with the outbreak strain of Salmonella typhimurium were reported from 16 states, and six people were hospitalised. The strain of Salmonella typhimurium has previously been associated with infections linked to microbiology laboratory exposure in both 2011 and 2014.

Although we often use attenuated or non-toxin producing strains of our control organisms, this outbreak is a reminder that control strains can be pathogenic and affect laboratory staff so appropriate health and safety procedures should always be followed.

Cyclosporiasis infections on the rise in the UK

For the third year in a row, the United Kingdom is reporting an increase in the parasitic infection, cyclosporiasis. Since the beginning of the year, the UK has seen 58 cases, with at least more than half linked to overseas travel.

Like in previous years, a large proportion of cases are identified in travellers returning from Mexico. Cyclospora cayetanensis is a single celled coccidian parasite. Cyclosporiasis occurs in many countries, but it seems to be most common in tropical and subtropical regions.

The symptoms of cyclosporiasis are the typical food poisoning symptoms such as diarrhoea, stomach cramps, nausea, vomiting, stomach cramps and fatigue.