

Think like a listeria

- Sue Springett, commercial manager, Teknomek

The UK and EU share some of the most stringent food safety regulations in the world, as such the number of listeria outbreaks in Western Europe has been relatively low. However, listeria monocytogenes – thankfully the only harmful strain identified so far- is a constant threat.

There were 2,500 reported cases of listeria related food poisoning in the EU in 2016. This may be very low compared to salmonella for instance – but listeriosis represents a much greater risk. It is a particular danger to infants and pregnant women who can pass it on in utero. According to figures from the World Health Organisation, the (global) mortality rate for those contracting listeriosis is between 20-30 per cent.

Last year listeria become big news, there were a number of high profile product recalls across almost all of the major UK supermarkets and foods affected ranged from brie to frozen vegetables. Listeria's appearance in the national headlines - and we even saw dedicated features on daytime TV – cannot be put down to a media panic. Consumers need to know the risks but the onus is on the food sector to keep them safe.

That's where hygiene management comes in and we saw a notable spike in customer queries related to listeria prevention following the scares in 2018. Although this field borrows liberally from military jargon – SOPs, red alerts etc. - there's one famous piece of military theory that's often overlooked, 'know your enemy'. What worked for warring states in feudal China, should equally be applied to microbial opponents.

So what *do* we know about listeria monocytogenes? It is extremely tenacious and can survive refrigeration to breed in temperatures of between 1.5° and 45°C and humidity from 15 to 85 per cent. Food processing facilities offer a perfect habitat in terms of temperature, humidity and access to nourishment. It's also hard to contain given it is airborne and not constricted by size or gravity.

On top of this it's ubiquitous. You can never get rid of listeria; the only response is to contain it as far as possible.

A sensible first step is to identify risk points, use swab testing to find the spots where bacteria thrives. Analysis almost always identifies furniture and fittings as being the greatest culprits – and not the flat surfaces on the top, but lurking in hard to reach areas not so easily visible or reachable. Other areas of risk are those containing inert liquids - anything from boot washers, to drains, to flat ledges – and pay attention to production lines and other locations where there are regular spillages.

Ensure the furniture you use within hygiene controlled areas factors out risk as far as possible. Beware of harbourage points, such as hidden ledges and hard to reach trap points. Plastic can become an issue if it cracks, be vigilant and active maintenance is key. Always replace broken feet, cracked castors and wheels as soon as possible.

Regular (food safe) cleaning must be carried out, but don't forget to also sterilise cleaning tools, otherwise you simply risk spreading the microbes around the facility! The safest option is to invest in anti-microbial cleaning equipment.

The least predictable vector is people. Education on risk management is key and put controls in place to minimise cross-contamination by preventing staff from walking across different production zones.

Processing businesses in this country are stepping up and going over and beyond the GMP guidelines and HACCP principles. Retailers and BRC reward businesses that actively invest in risk management by reducing the audit frequency to 12 months. Consequently, many are looking to reduce risk by extending best practice beyond areas handling food to cover the whole operation. Ultimately though, success means thinking small – think like a listeria.