Avoid Foreign Body Contamination

The majority of consumer complaints made to food manufacturers, retailers and enforcement authorities are due to foreign body contamination.

WHAT IS A FOREIGN BODY?

A foreign body is any undesirable solid object found in food. This can include items that are obviously foreign, such as insects, stone, glass or plastics, and materials that are connected with the food, such as bits of stalk, shell, or feather.

WHY ARE THEY A PROBLEM?

When a foreign body complaint is made, the manufacturer or enforcement authority has to decide if the foreign body makes the food unsafe i.e., injurious to health or unfit for human consumption, or unduly affects the quality of the product in relation to consumer perception or fair trading. If it is found to be any of these things, the manufacturer is in breach of EU Regulation No. 178/2002 and will be subject to appropriate legal and product recall actions.

Most foreign bodies are difficult to detect, even when appropriate control measures such as visual inspection, X-ray or metal detection systems are used.

Consequently, foreign bodies in food remain a significant risk to the consumer, and the resultant prosecutions, bad publicity, compensation claims, fines and loss of reputation and business, can be expensive and damaging for the food manufacturer.

HOW UST BRUSHWARE CAN HELP MINIMISE THE RISK OF FOREIGN BODY CONTAMINATION

Plastics, as a food contaminant, are amongst the most common foreign bodies to be reported. Plastics are used for many purposes in a food factory, including packaging, machinery, instrumentation, and cleaning and food handling equipment. Unfortunately, the physical characteristics of plastic make it hard to detect and difficult to remove on-line. Even metal detectable plastics are difficult to detect in a food product. For further information on the detectability of metal detectable plastics please see: 'Myth-busting the Metal Detectability of Metal Detectable Plastics' White Paper.

One source of plastic contamination is from cleaning brushware, where the bristles can become loose or be pulled from the brush head, and subsequently end up in the food product. Vikan have investigated the bristle retention of drilled and stapled, and resin set, drilled and stapled brushware. For these brushware types we found that the bristle retention was dependent on a number of factors, i.e.

- the thickness of the bristle
- it's position within the bristle bundle
- and whether it was the first or subsequent bristle to be pulled from a bundle.

The results indicated that the force required to pull a bristle from a drilled and stapled brush, or a resin set, drilled and stapled brush is highly variable, as a result of the factors given above (individually or in combination).

Control of plastic bristles in food should be based on risk assessment but this is very difficult when the likelihood of the bristle coming out of the brush is highly variable. With the new UST brushware Vikan have developed a method of bristle retention that ensures a consistently high fixation strength for every bristle in the brush head, regardless of whether other bristles have already been dislodged, or the position in the bristle bundle. Bristle strength is, however, still related to bristle thickness. This, in turn, minimises bristle loss and reduces the risk of product contamination by bristles.

Additionally, the fully moulded construction of the new UST brushware eliminates any risk from resin or metal (staple) fragments, and its hygienic design means that there are no areas where other foreign bodies could be harboured and transferred. Finally, it is available in eight, fully coloured options so, if any part of the brush should break off, it should be more easily seen.

What to do if you find a foreign body in your food product.

- Record when, where, how and by whom it was found
- Where appropriate, record the product batch number and the sources of raw materials used in its production
- Avoid handling the foreign object and the food product it was found in
- Describe the foreign body as best as possible at this stage, i.e. size, shape, colour, material etc..
- Keep the food sample with the foreign body in a container or keep the food in its original container and bag this
- If the food is perishable, place it in a refrigerator or freezer
- Contact an accredited foreign body analysis laboratory and follow their advice on what to do next
- Regularly review foreign body data to see if any patterns emerge from complaints, use this to provide information as part of a Due Diligence defence, and fulfil the requirements of site Quality Management systems.

Click here for more information: White Paper Myth-busting the metal detectability of metal detectable plastics