

# To recall or not to recall – that is the question!

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No-one is ever likely to take the decision to recall lightly. One imagines that every recall is ordered on the calculation that the risks of keeping a product on the shelf outweigh the inconvenience, and financial penalty, associated with clearing the stores and informing customers to return their purchases.

That said, any review of recall notices over a period of time will occasionally throw up an incident where the need for a total recall seems questionable.

Perhaps the scale of the recall appears to be out of proportion to the scale of the problem, or it looks like an earlier intervention could have addressed the problem before the affected product got out to the shelves.

Of course, it is dangerous to judge these cases based on the very limited information issued in a recall notice, because good information is the one essential requirement that every manufacturer needs when making a decision about recall.

When a product vulnerability or actual crisis comes to light, the manufacturer needs to understand exactly what they are dealing with, so that appropriate action can be taken to address the problem. After all, the 'end game' of every crisis need not necessarily be a recall.

## The need for good data

With more than 20 years experience of responding to urgent requests for information at times of product crisis, the Emergency Response Service (ERS) operated by Reading Scientific Services Ltd is used to providing data that can, on occasion, make the difference between clients having to recall or not.

Sometimes, the data confirms that recall is the only option. At other times, it reveals that recall is not necessary at all.

By any measure, recall is an action of last resort, and in helping our clients deal with the aftermath of recalls, it is clear in some



cases that the events that led to a recall could have been avoided.

As the crisis unfolds there is not much time available to consider what went wrong. At this time, the key requirement is to understand the problems and deal with it so that consumers and the business are protected. However, once the dust has settled it is vital to ask and answer the questions about what went wrong with the people, systems or processes and what can be done to improve all these areas.

It would be better still, of course, if these assessments were made and improvements introduced before an incident was allowed to occur.

Every food producer should be considering its technical risk management, evaluating vulnerabilities across its entire operation, whether with people (training gaps), process (supplier specifications, routine analysis, process controls) or systems (QMS, EMS, ISO standards). This is a topic that merits a more thorough discussion elsewhere.

## Analysis and prevention

Just as the laboratory has a role to play in investigating a crisis incident, so it has a role to play in preventing the crisis in the first place. All analysis could be considered as making its contribution to recall prevention.

It is certainly the case that a good programme of screening and testing ingredients

for known risks can prevent contaminants from entering the supply chain. Most manufacturers do indeed carry out routine testing, either in-house or with a trusted laboratory, but there is always a balance to be struck to be sure that the right tests, and the right amount of testing is carried out.

As far as the right tests are concerned, it is unfortunate that there can never be a 'one hit' procedure that will detect all problems. Food ingredients are far too complicated for that to be possible. However, with a good understanding of the ingredient and the conditions in which it is grown or manufactured, there are specific checks that can be applied to the appropriate number of samples, to provide adequate assurance that supplier specifications are being met.

This routine 'due diligence' is fine for known issues, but the unknown is harder to cope with, of course! For example, by the time the world's food industry became aware that supplies of milk from China had been contaminated with melamine, distribution of the contaminated ingredient had already gone so far that millions of products had been affected. Much the same was true with the Sudan Red contamination that occurred several years earlier.

Events like these demonstrate that the wider industry has always to be aware that some unscrupulous supplier might adulterate an ingredient with some chemical or inferior product that no-one has yet thought

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to look for. When news of a problem emerges in one sector of the food industry, or indeed in comparable sectors such as pharmaceuticals or food supplements, it is always worth asking the question whether food might be similarly vulnerable.

The truly international and complex nature of current supply chains affords opportunities for contamination, adulteration, mistake, and mishap that might not exist with simpler models.

## Investigating incidents

Whenever a product crisis occurs it is important to investigate as quickly as possible. In this context, a crisis is understood to mean any incident where contamination of a food product is known, suspected or believed to be a risk.

Crisis may seem like too strong a word to describe a one-off incident of customer complaint, especially if this ultimately proves to be down to the consumer's own act of negligence, but of course, at the time the incident comes to light, no-one knows that it is just a one-off. It might be the first of many.

However, even as a one-off, a genuine complaint might highlight some weakness in the process that needs to be addressed, so a proper investigation is always valuable.

## Foreign bodies

Taking customer complaints as a first example, RSSL's ERS frequently examines and identifies the foreign bodies that consumers have reported back to manufacturers.

When the ERS started more than 20 years ago, glass fragments were arguably the biggest cause of complaint, perhaps not surprising given the extortion attempt that had been made against Heinz baby foods. Copy-cat tampering and certain individuals 'chancing their arm' prompted a surge in cases.

These days reports of glass fragments represent a lower percentage of the total, but there is no shortage of foreign bodies to elicit complaints from customers, covering the full spectrum of animal, vegetable and mineral.

What is clear from these investigations is that first appearances can often be deceptive. The ERS has investigated many reports of glass fragments that turn out to be plastic or even crystals of sugar or some other ingredient. Similarly, suspected rodent droppings have been shown to be less concerning pieces of burnt fat or small balls of dough.

Key to the identification of foreign bodies is the experience of the scientists and the range of high-tech microscopes available to the ERS.

Powerful scanning electron microscopes are used to examine the fine detail of foreign bodies, and can be fitted with detectors

that allow the distribution of different elements to be determined. This technology is especially powerful for determining whether a foreign body is of animal/plant/mineral origin, and in differentiating between different types of glass. In the latter case, this technology can help determine whether a glass fragment arose from items used in the factory or whether domestic items are implicated.

Clearly, the origin matters when deciding if a recall is likely to be necessary.

## Chemicals

Customers might also complain about products that smell or taste bad. These chemical complaints are often harder to address than foreign body incidents simply because the offending chemical cannot be seen and therefore cannot be easily extracted.

Rather, a battery of sophisticated analytical techniques must be brought to bear on the problem, with the expertise of the chemist dictating the methods most likely to achieve the desired result of identifying the contaminant.

Of course, not every chemical contamination results in a bad smell or taste, and even where it does, the contamination need not be harmful. Clearly, no manufacturer would wish for its products to be associated with unpleasant tastes or odours, so decisions on recall will be driven by the extent of the problem and the likelihood that consumers will be deterred from repeat purchases. After all, not all consumers are sensitive to the same flavours, and certain unpleasant tasting chemicals will only be perceived by a limited number of consumers.

On the other hand, some hazardous chemicals have no bad taste associated with them, at least not at the low concentrations at which they become illegal. These chemicals will be found only as part of the due diligence screening referred to above, or when a particular problem emerges perhaps as a result of some research project (apart from melamine, recent examples include acrylamide in baked goods, antimony in juices).

One issue that differentiates chemical contaminants and foreign bodies is that the former has the potential to affect many more products.

A foreign body might conceivably affect only one product in the batch, whereas a chemical contaminant can affect the entire batch. As the melamine example proved, when chemical contamination has been going on for an extended period, then many companies, hundreds of brands, and millions upon millions of products can be affected.

## Case studies

As a provider of laboratory services it is never the responsibility of the ERS to decide whether a recall is necessary. However, the ERS investigation does help clients to decide

this issue for themselves, as well as providing evidence that is useful should there be any dispute over legal liability.

RSSL has also used its experience in training simulations that have helped clients to test their recall management plans against the kind of real-life examples given below. These have necessarily been edited to protect client confidentiality but demonstrate some of the impacts that a rapid investigation can have.

- A soft drink producer received a customer complaint of a drug capsule in a bottle. Aware of some isolated staff unrest, the manufacturer had some grounds to fear a deliberate case of tamper, possibly affecting many more bottles. The ERS investigation revealed however that the drug was of a type used by the consumer, who later admitted often drinking direct from the bottle when taking his pills.

- A very specific and detailed extortion threat was received by a manufacturer, presumably to create the impression that the criminal had indeed poisoned products in the way described. The ERS tested the viability of the threat and showed that products could not be contaminated as described, without rendering them so badly damaged that no-one would buy them in the first place. The manufacturer decided not to recall.

- A consumer complaint of glass in a jar raised the possibility of a recall. The ERS examined the foreign body and showed it to be a crystallised ingredient. No recall was necessary.

- A public analyst tested an import and claimed it contained an illegal chemical. RSSL tested the same product using a more sophisticated technique and showed that the analyst had mis-identified a legal flavour component as an illegal contaminant. No recall was needed.

- Aware that it did not know the full production history of ingredients supplied from a new source, a manufacturer decided some testing was appropriate. RSSL found an illegal colour plus an unexpected allergen in the ingredient, some of which had already been processed. A recall was ordered instantly.

## Conclusion

It would be foolish to argue that all recalls are preventable. That said, food producers that have carried out technical risk assessments, considered crisis management and developed a recall action plan are better placed to avoid crisis incidents and to lessen the impact of any incident that does occur.

There will always be the potential for the unexpected, at which point immediate intervention to fully understand the nature of the problem is absolutely essential.

Rapid, reliable analysis will provide the vital evidence that will help manufacturers decide whether a recall is necessary or not. ■

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