P558 Environmental Monitoring

Background

The Global Standard for Packaging and Packaging Materials is a GFSI benchmarked standard and this adds to the value of certification for sites that have achieved certification. The GFSI benchmarking requirements have been updated and now include a requirement for standards to include a risk-based programme of environmental monitoring within the requirements of bench marked standards.

The new clause below shall be included within all audits commencing 1st August 2019

4.8.5
Where appropriate, based on risk, a microbiological environmental monitoring programme shall be in place to ensure that the cleaning operations are effective in preventing the risks of microbiological contamination of products. This shall consider the likelihood of microbiological organism survival on packaging materials and its use.

Where a programme is in place this shall include

- Sampling protocol
- Identification of sample locations
- Frequency of tests
- Target organisms (e.g. pathogens, spoilage organisms and/or indicator organisims
- Test methods
- Recording and evaluation of results.
- The programme and its associated procedures shall be documented.

Interpretation

Microbiological environmental monitoring programmes are used to identify sources of pathogenic or food spoilage organisms in packaging production areas to allow for action to be taken to eliminate the potential for packaging contamination. This is usually achieved through enhanced cleaning but may also be assisted by changes to equipment or premises.

The need for an environmental monitoring programme should be evaluated on the basis of risk. The key factors to include in the risk assessment include:

- The ability of pathogens/food spoilage organisms to survive on the packaging materials and contaminate the food production environment.
- The intended use of the packaging materials, for example food contact packaging for food products which are ready to eat or heat present a much higher risk than non-food contact.

Most packaging materials are unsuitable for the survival and growth of pathogens and therefore will not require an environmental monitoring programme to be in place.

Where an environmental monitoring programme is required then as a minimum this needs to include:

- A sampling protocol. It is important to ensure that the sampling method does not inadvertently create false positives (e.g. by allowing post-sampling contamination or growth of organisms) or false negatives (e.g. by killing organisms in the sample before the test is completed). Sampling must be appropriate for the target organisms, test methods and locations sampled; techniques may include swabs, air sampling, water/liquid samples etc.

Identification of suitable test locations, taking into account:

- Significance of the area or equipment in terms of the potential to contaminate packaging; for example, packaging contact surfaces, non- contact areas which are in proximity to open products, and non-contact areas some distance away from open products (e.g. floors, walls and drains)
- Areas or parts of equipment that are difficult to clean and could harbour pathogens
- Areas where scientific literature has identified a specific risk (e.g. drains)

Frequency of tests, taking into account:

- Products that support the growth of pathogens. These require a greater frequency of testing than those that do not support growth.
- Locations with previous positive results or an upward trend towards an action level

These are likely to require increased testing to confirm the effectiveness of the action taken

- Target organisms. These may include specific pathogens that present a risk to the product or environment (e.g. Listeria spp in wet environments or Enterobacteriacae in dry environments), specific spoilage organisms (e.g. yeast or mould) or indicator organisms (e.g. total plate count, total coliforms)
- Test methods. Rapid on-site and laboratory tests are available, and sites should consider the requirements of section 5.6 when deciding which methods and/or laboratories to use
- Evaluation of results. The significance of the results and any actions required must be considered.