



Foreign Body Detection

Lesson 1

Understanding the importance of foreign body detection and identifying the different ways to detect them in a food product is explained within this course.





Learning Objectives

- Define what a foreign body is
- Understand the importance of detection equipment testing and how and when it should be performed
- State how detection equipment should be used
- Recognise when and where detection equipment should be used





Learning Objectives

- Describe what to do if the detection equipment fails during testing
- Recognise the function and use of filters and sieves for foreign body detection
- Describe the function and use of metal detectors and x-ray equipment for foreign body detection
- Explain the types of metal detector and x-ray system





Learning Objectives

- State the key points included in a metal detector and x-ray equipment procedure
- Identify the function and use of magnets for foreign body detection
- Summarise the function and use of optical sorting equipment for foreign body detection
- Summarise the importance of container cleanliness in foreign body detection





A foreign body also known as a physical contaminant is an undesirable solid object found in food





The most common foreign bodies found in food are:

Metal Insects Bones Stalks and stones Glass Plastic Jewellery Hair



A food operative has a duty to ensure they do everything they can to prevent any foreign bodies from entering the food



A visual check of the ingredient, food or product is one of the most important checks to be carried out in order to prevent foreign body contamination of the product





Equipment is also used to detect or remove foreign bodies from product



An assessment is completed on each production process to decide which equipment is used to detect or remove any foreign body contamination.





Some foreign body detection/ removal equipment are:

- Filters
- Sieves
- Metal Detection
- Magnets
- Optical sorting equipment
- X-ray detection equipment
- Other separation equipment e.g. gravity separation

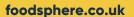


The type, location, sensitivity of the detection and or removal method will be documented





The equipment will be located as close to the end of the production process as possible so the whole process is monitored





The sensitivity of the detectors is specified, this takes into account the nature of the product and possible contaminants





Regular checks are completed using test pieces of a size just above the limit of detection



The frequency of routine tests will be determined when considering these five pieces of information

- 1. The need for extra checks at the start and end of shifts
- 2. Product Changeovers
- 3. The need for regular checks throughout the production process
- 4. Changes in machine settings
- 5. Customer requirements



If the equipment has been found to be not working then all product will need to be rechecked since it was last verified



If the detector fails during a routine test a re-inspection of all the product since the last successful test needs to be completed





The person responsible for completing the check must be trained on how to do the checks correctly





If foreign material is found by the detection equipment then there must be an investigation into the source of the material to eliminate any further incidents





Data on the foreign material can be used to identify any trends which could help to reduce any future contamination





Revision Activity 1

Name three types of foreign body detection equipment?