

A woman wearing a red hairnet and a white protective lab coat is working in a food processing facility. She is holding a large sheet of paper, likely a checklist or a set of instructions, and is pointing at it with her right index finger. The background shows industrial machinery and other workers in similar attire.

Foreign Material Control in Food Industry

Agenda

What is a Foreign Material

Why Foreign material Control

HACCP

Physical Foreign Material Controls

Bio-chemical Foreign material control

Conclusion

1. What is a Foreign Material?

- Foreign material is defined as any kind of outside contaminant, that shouldn't be present in the final product; and is introduced to the food product at any point in its production or distribution.
- It is considered as a potential hazard.

2. Why Foreign Material Control?

Identification of a foreign material at the earliest is crucial :

- To ensure product quality.
- To determine the source.
- To prevent recall and the financial loss.
- To avoid legal recall and for legal claims.
- To prevent adulteration/ fraud.

3. HACCP

- A systematic approach to identification, evaluation and control of food safety hazards.
- The potential sources and possibilities of hazards are identified and the CCPs are fixed accordingly.
- Each food plant has it's own HACCP team and it's on SOP for ensuring maximum safety and quality in the product.
- It is important to determine PRPs(Pre-Requisite Programs: GMP, GHP etc.)

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4. Physical Foreign Material Controls

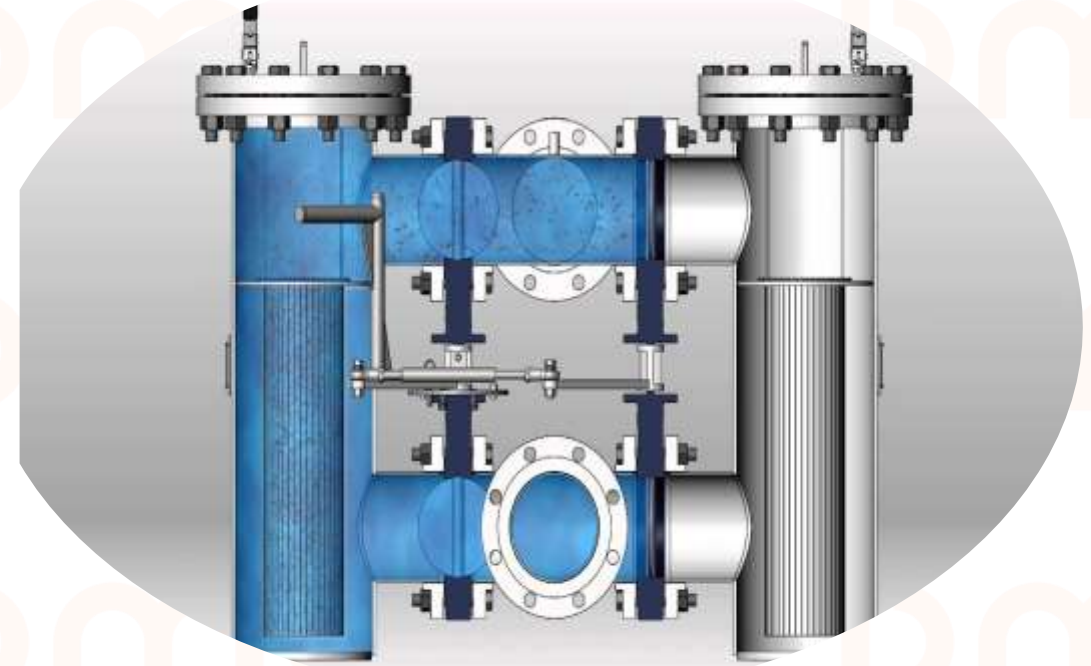
1. Magnets:

- Industrial strength magnets are used to separate metal contaminants.
- Sanitary magnetic separation systems are critical for the control of weakly-magnetic metal contamination in the likes of milk powders, lactose, protein powders, infant formula, dairy liquids, and other similar products.



2. Sieves and screens:

- They are used to remove materials with higher particle than the product.
- Basket strainers are one of the most commonly used in dairy industry.
- Simplex and duplex filters are used to ensure the maximum filtration.



3. Metal detectors:

- They are placed over conveyor belts, pipelines, and other product contact areas.
- They detect the presence of any metal contaminants present in the product.

4.X-Ray detectors:

- They are used in facilities that have high risk of multiple types of contaminants.
- In the dairy industry, X-ray has helped many producers reduce the number of reclamations by inspecting e.g., the fill level of their yogurt products.
- This way it is ensured, that customers receive only the top-quality products.



5. Bio-Chemical Foreign Material Control

- **Quality control laboratory**

Every Food plant should contain an organized and structured chemical and microbiological laboratory.

Tests should be done :

- On the reception of raw milk.
- Before processing
- After processing
- Before dispatch.

If there is any disparities with the quality requirements of the products, necessary actions should be taken immediately.



6. Conclusion

- There is no single system or procedure that can prevent food contamination.
- The most effective way will be to use the right combination of methods at the processing line.
- The last and most efficient prevention and detection will be the human vision.
- Staff and food handlers should be well trained and informed to make all these combinations fruitful and hence to avoid the financial risk of recall.



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