iMIS Food - Physical Hazards Table

Category	Origin	Characteristics	Health Effects	Prevention & Control	Detection
Glass	• Raw materials (field). • Packaging (jars, bottles). • Facility (lights, windows).	Hard, brittle, sharp. Transparent or colored.	Cuts, choking, internal injury. **Severity: Medium to High.**	• Use alternatives (plastics). • Protective covers for lights. • Glass breakage procedures.	• Visual inspection. • X-ray inspection. • Container integrity checks.
Metal	• Machinery (wear/tear). • Raw materials (wire, bullets). • Maintenance debris.	Hard, sharp. Magnetic or non-magnetic.	Cuts, choking, dental damage. **Severity: Medium to High.**	• Preventative maintenance. • Pre-start-up checks. • Avoidance of metal clips/staples.	• Metal detectors. • Magnets (ferrous only). • X-ray inspection.
Wood	• Pallets, crates. • Building structures. • Field contamination.	Splintery, fibrous. Hard or soft.	Cuts, choking, mouth injury. **Severity: Low to Medium.**	• Use alternatives (plastic pallets). • Strict pallet control. • Regular maintenance.	• Visual inspection. • Sieves. • Manual sorting.
Stones / Minerals	• Harvested raw materials (soil). • Crumbling concrete/building.	Hard, dense, abrasive.	Dental damage, choking. **Severity: Medium.**	• Supplier GAP compliance. • Washing/Flotation steps. • Building maintenance.	• X-ray inspection. • Stone traps/De-stoners. • Flotation washers.
Plastic (Hard)	• Rigid packaging. • Equipment guards/parts. • Staff tools (pens).	Rigid, sharp fragments. Various colors.	Cuts, choking, injury. **Severity: Medium.**	• Equipment maintenance. • Use of metal-detectable plastics. • Control of brittle plastics.	• Visual inspection. • Optical sorters. • Sieves.

Category	Origin	Characteristics	Health Effects	Prevention & Control	Detection
Plastic (Soft)	• Packaging films/bags. • Soft seals, tubing. • PPE (gloves).	Flexible, light. Films, strands.	Choking hazard. **Severity: Low to Medium.**	• Proper waste handling. • Use of detectable PPE. • Regular seal inspections.	• Visual inspection. • Difficult to detect automatically.
Personal Effects	• Staff (jewelry, buttons, pens). • Medical items (band-aids).	Variable shapes and materials.	Choking, injury, contamination. **Severity: Low to Medium.**	• Staff training & GMPs. • Ban on jewelry/loose items. • Use of company-issued pens.	• Visual supervision. • Metal detectors (if metallic).
Pests	• Infested raw materials. • Environment entry.	Insects, larvae, droppings.	Consumer aversion, pathogens. **Severity: Low to High.**	• Integrated Pest Management (IPM). • Building proofing/screens. • Sanitation.	• Visual inspection. • Traps (light/pheromone). • Optical sorters.
Bone Fragments	• Meat, poultry, fish processing.	Hard, sharp fragments.	Choking, dental damage, cuts. **Severity: Medium.**	• Validated deboning processes. • Manual trimming. • Supplier specifications.	• X-ray inspection. • Visual checks.
Unwanted Natural Components	• Fruit pits/stones. • Nutshells. • Stems/stalks.	Hard, fibrous, sharp.	Choking, dental damage. **Severity: Low to Medium.**	• Sourcing "seedless" varieties. • Effective pitting/shelling process. • Sifting/Sorting.	• Optical sorters. • X-ray inspection (dense items). • Sieves.