iMIS Food - Physical Hazards Table					
Component	Origin	Characteristics	Severity	Control	Prevention
Glass	Raw materials (agricultural, horticultural), packaging materials (jars, bottles), light fixtures, utensils, gauge covers, thermometers.	Sharp, brittle, transparent or colored, various sizes.	Medium to High. Can cause cuts, internal bleeding, dental damage. Small fragments may pose a choking hazard. Consumer aversion, brand damage.	Visual inspection of raw materials and finished products, glass breakage policies, sieves, X-ray inspection, metal detection (for some glass types with metallic content).	Use alternatives to glass where possible (e.g., plastic). Protective coverings for lights. Regular inspection of glass containers. Staff training on handling glass. Keep glass out of production areas.
Metal	Machinery (blades, sieves, wires, nuts, bolts), agricultural sources (wire, bullets), packaging (staples, cans), staff (jewelry, pens), cleaning equipment (scourers).	Sharp, hard, various shapes and sizes (fragments, shavings, wires).	Medium to High. Can cause cuts, choking, internal injury, dental damage. Magnetic or non-magnetic.	Metal detectors, X-ray inspection, magnets, sieves, visual inspection. Regular maintenance of equipment.	Proper equipment maintenance and pre-start up checks. Staff training on foreign object control and personal hygiene (no jewelry). Controlled use of staples and metal clips.
Wood	Pallets, crates, boxes, field debris, building	Splintery, various	Low to Medium. Can cause choking, cuts,	Visual inspection, sieves, X-ray inspection	Use food-grade plastic or metal pallets/containers. Regular inspection and maintenance of wooden structures

sizes, can be hard

Hard, various

abrasive.

shapes and sizes,

Flexible or rigid,

various shapes,

sizes, and colors.

Can be sharp if

Various materials

shapes, and sizes.

(metal, plastic,

fabric, glass),

Whole insects,

insect fragments,

droppings, hair.

larvae, eggs, rodent

Hard, sharp, brittle,

various sizes.

Hard, potentially

sharp, or cause

unpleasant texture;

varies in size and

density depending

on the source.

broken.

or soft.

food

with

wooden structures

Avoid using wood

contact areas if

possible. Sourcing

good agricultural

Effective cleaning

of raw materials.

prevent crumbling

direct

equipment.

approved

and

from suppliers

practices.

Building

concrete.

maintenance

Use detectable

plastics where

possible. Proper

maintenance of

materials. Staff

handling plastics.

Staff training and enforcement of

GMPs, including

policies on

jewelry, hair

coverings, and

personal items in

production areas.

Use of detectable band-aids.

**Integrated Pest** 

(IPM) program,

proper sanitation,

sealing of building

Management

entry points,

inspection of

incoming raw

materials, good

Sourcing from

suppliers with

trimming and

inspection of

handling and

materials with

fewer defects.

Using specific

varieties (e.g.,

Effective primary

techniques (e.g.,

Supplier controls.

efficient pitting,

destemming).

"seedless").

processing

shelling,

processing. Sourcing highquality raw

training in

meat/fish. Staff

good deboning

practices. Careful

reputable

storage practices.

Control of

packaging

training on

plastic equipment.

dependent),

programs.

wood control

Stone traps, de-

X-ray

stoners,

flotation

sieves,

visual

Visual

inspection,

inspection

dependent),

color sorting

Strict personal

secure band-

aids), metai

inspection.

Pest control

sieves, filters,

inspection,

insect light

fumigation

appropriate).

inspection,

inspection, bone

systems (e.g.,

grinders with

eliminators),

programs (traps, bait

stations)

visual

traps,

(where

X-ray

visual

bone

sieves.

Sorting

(manual,

mechanical,

machinery,

equipment, X-

ray inspection

items like pits),

specific gravity separators.

(for denser

filtration,

shelling

optical), sieving,

destoning/pitting

removal

hygiene policies

(e.g., no jewelry,

detectors, X-ray

equipment.

(density

sieves, X-ray

washers,

inspection,

inspection.

(density

mouth or throat

microorganisms.

irritation. May

Medium. Can

cause choking,

dental damage,

Low to Medium.

choking, internal

blockage. May

Low to Medium.

choking, cuts, or

internal injury.

May introduce

microbiological

contamination.

Low to High.

disgust, allergic

Can cause

reactions,

pathogens,

introduce filth.

Medium. Can

mouth/throat,

internal injury.

Low to Medium.

Can cause

children or

damage, or

discomfort.

Reduces

and

(especially in

elderly), dental

product quality

acceptability.

choking

cuts in

cause choking,

transmit

Can cause

Can cause

chemicals.

leach

internal injury.

harbor



Stones/Minerals

**Plastic** 

Personal

Pests/Insects

Bone

**Fragments** 

Unwanted

Components

Natural

Effects

materials,

utensils,

cleaning

equipment

(brushes).

Agricultural

raw materials

(fields, soil),

building

materials

(concrete,

pebbles),

aids.

processing

Packaging materials

fragments,

equipment

fragments),

containers.

utensils), staff

raw material

Staff (jewelry,

buttons, pens,

hair clips,

taise naiis

band-aids).

Fields,

storage areas,

processing

environment,

raw materials.

Meat, poultry,

fish raw

Raw

agricultural

materials

(e.g., fruit

pits/stones,

shells from

nuts or

pieces of

produce).

seeds, stems,

seafood, hard

materials.

parts.

PPE

(films.

ties).

(worn

(pens.