

## Module 03 - lecture 01

# Good Manufacturing / Hygienic Practice

# **Good Manufacturing Practices (GMP)**

**That combination of manufacturing  
and quality control procedures  
aimed at ensuring that products are  
consistently manufactured to their  
specifications**

***IFST ( UK )***

# **Good Hygienic Practices (GHP)**

**All practices regarding  
the conditions and measures  
necessary to ensure  
the safety and suitability of food  
at all stages of the food chain**

***( Based on the Codex definition of Food Hygiene )***

# Codex General Principles of Food Hygiene (1)

Identify the *essential* principles of food hygiene applicable *throughout the food chain*, to achieve the goal of ensuring that food is safe and suitable for human consumption

# Food safety

**Assurance that food will not  
cause harm to the consumer  
when it is prepared  
and /or eaten  
according to its intended use**

***Codex 1997***

# Food suitability

**Assurance that food is acceptable  
for human consumption  
*according to its intended use***

***Codex 1997***

# Contaminant

**Any biological or chemical agent,  
foreign matter, or substances  
not intentionally added to food  
which may compromise  
food safety or suitability**

***Codex 1997***

# Contamination

**The introduction  
or occurrence  
of a contaminant in  
a food or  
food environment**

# Cleaning

**The removal of  
soil, food residue, dirt, grease  
or other objectionable matter**

***Codex 1997***

# **Disinfection**

**The reduction,  
by means of  
chemical agents and/or physical methods,  
of the number of microorganisms  
in the environment,  
to a level that does not compromise  
food safety or suitability**

# **Codex General Principles of Food Hygiene ( 2 )**

- **Provides a baseline structure for other, more specific, codes applicable to particular sectors**
- **Such specific codes should be read in conjunction with this document and its appendix on HACCP and Guidelines for its application**

# Areas examined under GHP

- 1. Primary production**
- 2. Establishment: design and facilities**
- 3. Control of operation**
- 4. Establishment: maintenance and sanitation**
- 5. Establishment: personal hygiene**
- 6. Transportation**
- 7. Product information and consumer awareness**
- 8. Training**

# Primary production

**Hygienic practices should reduce the likelihood of introducing hazards that may be difficult or impossible to control at later stages of the food chain**

**Examples: pesticides, antibiotics, mycotoxins, microorganisms in foods eaten raw or fresh**

# Establishment : design (1)

**Premises, equipment, surfaces and facilities  
should be located,  
designed and constructed to ensure:**

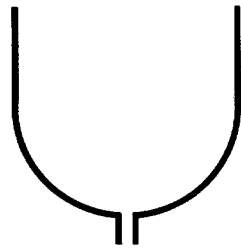
- ◆ **mimimum contamination**
- ◆ **proper maintenance, cleaning, disinfection**
- ◆ **protection against pests**

# Establishment: design (2)

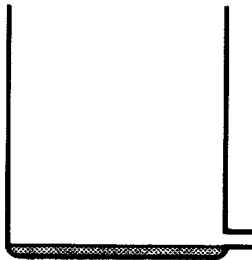
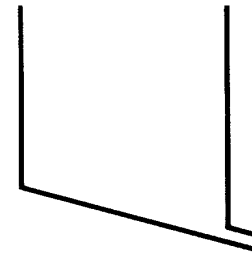
**Evaluation of the premises takes into account:**

- **Location**
- **Equipment**
- **Facilities :** water  
air  
lighting  
storage

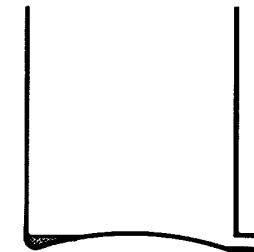
# Examples of hygienic equipment design



**Good**



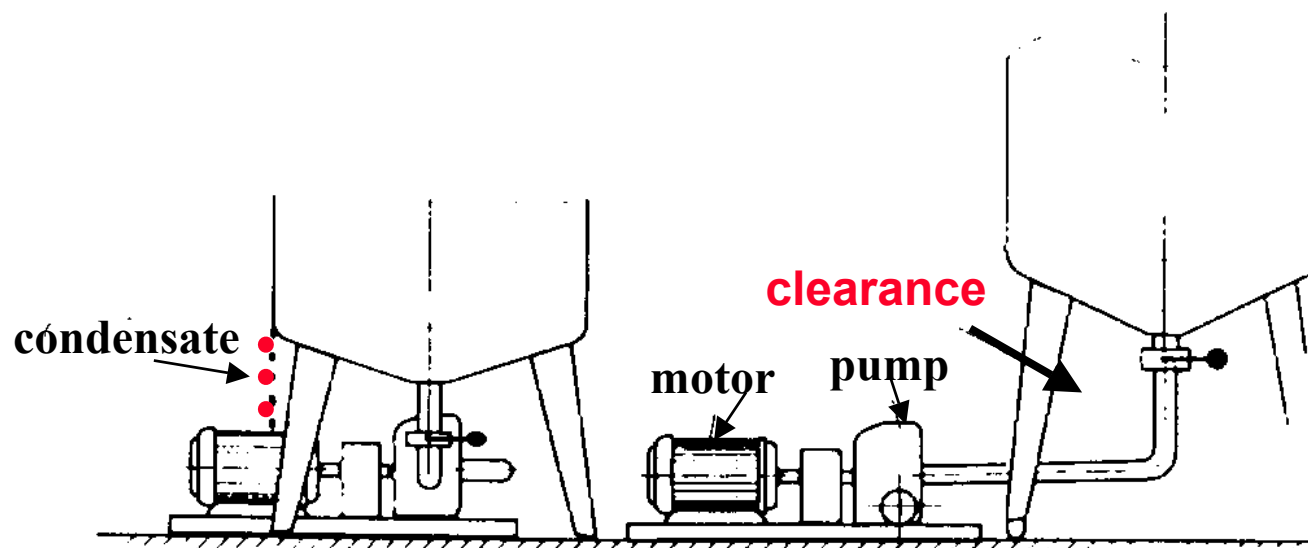
**Bad**



# Inaccessibility of equipment

Hygiene risk

Correct



# Establishment : practice

- ◆ **“Good housekeeping” applies to the surroundings and the roof of the establishment**
- ◆ **Pest control starts at the boundaries of the premises**
- ◆ **Water management deals with incoming and used water**
- ◆ **Windows are closed or screened**
- ◆ **Internal surfaces are smooth and easy to clean**
- ◆ **Floors have rounded corners**
- ◆ **Ceilings and ducts are accessible for cleaning**

## **Establishment : practice ( cont. )**

- ◆ **Dry zones are designed to remain dry**
- ◆ **Drains can be cleaned**
- ◆ **Cable trays carry cables, not dirt or dust**
- ◆ **Insectocuters are effective**
- ◆ **Only potable water is in contact with food**
- ◆ **Air handling systems deliver the required air quality (and not contaminants)**
- ◆ **Doors are closed when not used**

# Control of operation

- ◆ **Control of food hazards through HACCP**
- ◆ **Hygiene control:**
  - Time & temperature**
  - Humidity**
  - (Cross) contamination**
  - Microbiological specifications**
- ◆ **Incoming materials (incl. packaging materials)**
- ◆ **Water, air, steam**
- ◆ **Management, documentation, recall procedures**

# Control : practice

- **Keep potentially contaminated materials separated from uncontaminated ones**
- **Assure effectiveness of treatments**
- **Assure effectiveness of cleaning**
- **Assure reliability of measurements, tests and recording**
- **Perform hazard analysis when changes occur**
- **Assure updating of HACCP plan**

# Establishment : maintenance & sanitation

## *Objective*

**to control possible sources of food contamination  
through:**

- ◆ **Maintenance and cleaning**
- ◆ **Pest control systems**
- ◆ **Waste management**
- ◆ **Monitoring**

# Maintenance

**Establishments and equipment should be kept in condition to:**

- ◆ **facilitate sanitation procedures**
- ◆ **function as intended, particularly at Critical Control Points (CCPs)**
- ◆ **prevent contamination of food e.g. metal shards, flaking plaster, debris, chemicals, pests, dust etc.**

# Cleaning

## Cleaning procedures involve:

- ◆ removing gross debris from surfaces
- ◆ applying a detergent solution
- ◆ rinsing with water
- ◆ disinfection where necessary
- ◆ dry cleaning

# Pest control

## Good hygienic practices should:

- ◆ prevent pests from entering the premises
- ◆ protect food from pests
- ◆ eradicate infestations immediately
- ◆ include regular inspections

# Establishment : personal hygiene

**To prevent food  
from being contaminated by the people  
who come in contact with it,  
personnel must receive clear instruction  
on the following:**

- **Health status**
- **Illness and injuries**
- **Personal cleanliness**
- **Personal behaviour**

# Transportation

## Measures should be taken to :

- **protect food from :**
  - i) contamination sources**
  - ii) damage likely to render the food unsuitable for consumption**
  
- **provide an environment which controls the growth of pathogenic or spoilage microorganisms and the production of toxins in food**

# Product information and consumer awareness

- **Lot identification**
- **Product information**
- **Labelling**
- **Consumer education**

# Consumer information

**Consumers should know enough about food hygiene to be able to :**

- ◆ **understand the importance of product information**
- ◆ **make informed choices appropriate to the individual**
- ◆ **prevent contamination and growth or survival of foodborne pathogens by storing, preparing and using it correctly**

# Training

- **Awareness and responsibilities**
- **Training programmes**
- **Instruction and supervision**
- **Refresher training**

# Key messages

- **Good Manufacturing Practices are the basis of the production and preparation of safe food**
- **Good Hygienic Practices deal with safety and suitability requirements to be followed world-wide**
- **Each food operation should adapt existing codes to their specific set of conditions**
- **Food operations should also decide which practices are critical for the safety of a product and thus have to be included in the HACCP plan**