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*Food hygiene: personnel hygiene, plant hygiene, water quality*

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# Outline

- Introduction
- Personal Hygiene
- General Safety measures to be followed in the Dairy Plant
- Water quality
- Water purification method
- Treatment of hard water
- Standard for water in a Dairy plant
- Water treatment



## Introduction

The good manufacturing practices requirement specified are designed to :

- Assist employees to maintain high quality standards, wholesomeness and safety of products manufactured and distributed by the dairy plants.
- Educate employees about correct sanitary practices.
- Stress the importance of personnel hygiene and cleanliness.

## Personal Hygiene:

- Employee grooming and hygiene related items
- Hair
- Hands
- Clothing
- Jewellery
- Shoe
- Other habits



## General safety measures to be followed in the Dairy plant:

- Food or drink is not permitted in the plant. Drinking water is provided at drinking fountains / basins.
- Maintain lockers clean and free of soiled clothing and food materials to prevent attraction of pests.
- Avoid uncontrolled, uncovered coughing or sneezing in manufacturing and packaging area.
- Wear safety goggles where chemical materials are used and handled.
- Hearing protection must be worn in designated area. They must be kept clean. Do not leave them on equipment surfaces when not in use.
- Mask should be used in designated areas.
- Nobody should be allowed to enter production area without wearing the apron and cap.
- Use of muffler is prohibited in production area.



## Water Quality

- Impurities in water
- Dissolved matter
- Suspended matter
- Amount of impurities in water
- Colloidal suspension
- Purpose of purification
- Filtration and Chlorination
- Industrial water supply and softening
- Effect of hard water



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## Water Purification methods

- Sedimentation
- Plain sedimentation
- Coagulation and sedimentation
- Water supply to dairy
- Water requirements
- Water resources



## Treatment of hard water

- Reutilization

## Standards for water in a Dairy Plant

**Table 11.1 Bacteriological Standards for Dairy Plant Water Quality**

Quality	Total colony count/ml	
	22 <sup>0</sup> C	37 <sup>0</sup> C
Satisfactory	100	100
Doubtful	100 - 1000	10 – 100
Unsatisfactory	1000	100



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## Water Treatment

A good number of methods are available for water treatment. They are filtration, ozone treatment, etc. The most effective process is chlorine treatment. It is said that a residual chlorine level of 0.3- 0.6 ppm is sufficient to produce safe tube well water supply.





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Thank you