



**SNS COLLEGE OF TECHNOLOGY
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Coimbatore.**

Unit I - Topic 6

Quality standards for beverages

Quality Management for Beverages

In the beverage industry, quality (level of excellence) can be defined as the product that achieves great rewards and performance. A quality beverage is defined as a product that meet the demands of the manufacturer as well as the consumer in the sense of performance, quality standards, preferences, excellency, safety, and healthy. The standards include physiochemical quality, organoleptic characteristics, higher sensory properties, enhanced shelf life, free from microorganisms or pathogens (product safety), and should have the reasonable cost. The quality management means to control all these factors that can adversely affect the quality of the final product. Management involves the objectives and planning in how they can control these parameters without damaging the ultimate quality of the product. The beverage industry relies on quality parameters that are preferred by consumer, such as taste, texture or physical appearance and microbial safety, as the product should be free from any health hazard.

Good Manufacturing Practice (GMP)

The Food and Drug Administration has recommended the best practices that stickers or tags should be required for juices and juice products; those are not treated to attain 5-log reduction in relevant microorganisms (Fig. 1.3). GMPs guidelines (general provision) consist of plant management aspects, which are very important to maintain the reliable quality of the product including different aspects of hygiene and personal hygiene. This system ensures that the product does not contain any pathogenic contamination throughout the processing chain along with the surety of cleanliness or hygienic conditions and personnel working, who maintained a degree of good personal hygiene, and adequate handwashing, regulation of personal habits, that is, no chewing gum, eating food, drinking beverages, or using tobacco in food exposed areas along with their education and training. Education and training include guidelines for taking ownership and responsibilities for personnel as employees should identify sanitation failures or food contamination. Personnel should have an educational background, experience, and trainings (proper food handling techniques, dangers of poor personal hygiene, and unsanitary practices and food protection principles) to provide a level of skill to produce safe food.

Other aspects of GMPs include guidelines for building and ground sites for the proper storage of equipment and removal of waste. It comprises of general recommendations for reducing pest harbor age, drainage and waste disposal, sufficient space for equipment and storage, reducing the potential for contamination, building controls (cover floors, walls, ceilings, lighting, ventilation, and screening for pests), sanitary facilities and controls (water supply, plumbing, sewerage, and toilets), and good handwashing (hot water, sanitary towels, refuse receptacles for waste towels, and signs for direction of using sanitizer). However, processing line GMPs including equipment and utensils should be maintained in an acceptable condition



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and free from any contamination or adulteration (lubricants, fuel, metal fragments, contaminated water). Production and processing should be appropriate to control quality operations, that is, safe food packaging materials, uncontaminated raw material, proper overall sanitation, and CIP. Manufacturing operations (freezing, dehydration, heat processing, acidification, and refrigeration) should be monitored to ensure that mechanical breakdowns, time delays, temperature fluctuations, and other factors do not contribute to food contamination. Finally, natural or unavoidable defects should occur at low levels that are not hazardous to health. For this purpose, current defect action levels will be established, that is, pesticide residues in raw ingredients or final products. It is important to note that mixing of food containing defects above the current defect action level with another lot of food is not permitted and renders the final food adulterated, regardless of the defect level of the final food.