TRINITY COLLEGE FOR WOMEN
NAMAKKAL
DEPARTMENT OF NUTRITION AND DIETETICS

SBEC- FOOD PRESERVATION
EVEN SEMESTER

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FOOD PRESERVATION

Food preservation is the science and practice of treating and handling food to stop or slow down spoilage, prevent illness, and extend shelf life while maintaining its nutritional and sensory quality.



LOW TEMPERATURE

- **Refrigeration**
- **Freezing**
- **Dehydro – Freezing**



Refrigeration

Low-temperature food preservation slows down microbial growth, enzyme activity, and chemical reactions by removing heat energy from food, though it does not sterilize or kill all pathogens.



Food stored in the refrigerator

Freezing

Food temperatures are reduced to below 0°C to decrease the activity of harmful bacteria. The process can be used to preserve the majority of foods including fruits, vegetables, meat, fish, and ready meals.



Dehydro-freezing

Dehydro-freezing (or dehydrofreezing) is an advanced food preservation technique that combines partial dehydration with freezing. In this process, food products—primarily highly perishable fruits and vegetables—are first dehydrated to remove roughly **50% to 70% of their original water content** before being quick-frozen



ADVANTAGES OS LOW TEMPERATURE

Slows Microbial Growth: Subdues the multiplication and metabolic rate of spoilage bacteria, yeasts, and molds.

Reduces Enzymatic Activity: Dumps the speed of natural internal food enzymes that cause over-ripening, browning, and decay.

Preserves Sensory Quality: Retains the original color, texture, flavor, and aroma much better than high-heat or chemical methods.

Minimizes Nutrient Loss: Protects heat-sensitive vitamins and minerals (such as Vitamin C and B-complex) that often degrade during thermal processing

THANK YOU

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