

FOOD PRESERVATION

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WHAT IS PRESERVATION ?

- It is a science
- Deals with delay of food decay or spoilage
- Involves techniques to increase the shelf life of the food
- Most common examples- boiling milk & pickling

WHAT IS PRESERVATION ?

- Use of heat –To inactivate enzymes.
- Canning
- Chilling – Cold water washing. (temp. up to 15°C)
- Irradiation – Providing specifically γ ray treatment for sprouting growths delay (roots and tubers)

WHAT IS PRESERVATION ?

- Drying – Dehydrated diced cubes are rotated in chambers, pressure applied. Process also known as **EXPLOSIVE PUFFING**
- Freezing – Frozen storage(temp.-18 to -40°C)

WHAT IS PRESERVATION ?

- Irradiation – Providing specifically γ ray treatment for sprouting growths delay (roots and tubers)



ADDITION OF PRESERVATIVES

- HOUSEHOLD PRESERVATIVES
 - Salt, Sugar, Oil & spices
 - Used for preparing pickles, chuttnies, sauces
 - Reduces the risk of microbial attack
 - Concentration varies
- CHEMICAL PRESERVATIVES
 - Sodium benzoate (benzoic acid / sodium salt of benzoic acid) & potassium meta bisulphate
 - Pot. Meta bisulphate is not suitable for anthocyanin pigment

PURPOSE

- To kill or restrict the growth of micro-organisms
- To prevent spoilage due to enzymatic action
- To prevent or delay sprouting & fermentation growth
- To provide long shelf-life to the foodstuffs

METHODS

THERE ARE BASIC TWO CATEGORIES

- Bacteriostatic methods – To inactivate micro organisms
- Bacteriocidal methods – To kill the micro-organisms

PRESERVATION OF VEGETABLES

- Removing the moisture content
- Increasing nutrients life
- Saving soft tissues
- To make off-season availability
- For off-region availability

READY TO EAT VEGETABLES



(Top): Niles Dalal from Kohinoor Foods stands at his stall offering a diverse array of Indian foods. (Above): A mehndi artist (l) draws an intricate design on the palm of a visitor at the fair. (Right): Desi fashionistas strut their stuff at the Berkeley food festival. (Som Sharma/Digital iVision photos)



PRESERVED VEGETABLES



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METHODS FOR VEGETABLE PRESERVATION

- Asepsis – Protective coverings
- Removal of micro-organisms – Using water
- Use of high temperature – Heating, cooking, blanching
- Use of low temperature – Chilling & Freezing

METHODS FOR VEGETABLE PRESERVATION

- Drying - Through heat
- Using preservatives
- Household preservatives-Salt, sugar, spices
- Chemical preservatives – Benzoic acid, potassium metabisulphate
- Irradiation – α , β , γ & sun rays

PICKLED VEGETABLES



PRESERVATION OF FRUITS

- To prevent natural rotting / over softening of tissues
- For proving long shelf life
- Off season and off region availability
- Increasing nutrients life



METHODS OF FRUIT PRESERVATION

- Asepsis
- Removal of micro-organisms
- Use of heat – Canning
- Use of low temperature – Chilling, freezing
- Drying
- Canning – Air tight sealing in air tight, sterilized containers

METHODS OF FRUIT PRESERVATION

- Chilling – Iodine wrappers, Sulphite paper
- Freezing – Temperature ranges -4 to -29°C
- Drying – dehydration and dehydro-cooling
- Use of preservatives
- Preservatives – Sugar , salt, iodine sulphite papers, sulphurous papers ,sodium benzoate and potassium metabisulphate

PRESERVED FRUITS



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PRESERVATION OF MEAT

- To safe moisture content
- For delaying the coarsening of muscular tissues
- To safe the haemoglobin and myoglobin pigments
- To delay microbial attack
- To decrease enzymatic reactions

METHODS OF MEAT PRESERVATION

- Asepsis – Sprinkling water
- Using heat – Canning, blanching & cooking
- Low temperature – Chilling (2 to -1°C) &
- Freezing (-12 to -30°C)
- Irradiation – Ultraviolet rays
- Drying – Sundrying (dehydration) & pickling

METHODS OF MEAT PRESERVATION

- Preservatives - Salt, sodium nitrite, & vinegar
- Curing – Salting
- Smoking – Burning vapours exposure
- Antibiotics – Chloramphenicol, chlorotetracycline etc. (injected or added)

PRESERVED MEAT



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YOUR CAREER

YOUR FUTURE

YOUR ABILITY

YOUR SUCCESS

YOUR DREAMS

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