

# Food Preservation, Nutrition & Medicine

These notes are your ultimate revision weapon to revise Food Preservation, Nutrition, Medicine, etc. We've distilled years of previous exam questions (PYQs) into one powerful, concise resource. Everything you need to know, nothing you don't.

- **PYQs, Decoded:** All key concepts from past exams, organized and simplified.
- **Revise in Record Time:** Short, precise, and designed for last-minute review.
- **Focus on What Matters:** Master high-probability topics and boost your confidence.

## Food Preservation & Processing

### Preservation Methods



- **Chemical Preservatives:**
  - Sodium Benzoate: Used for preserving foodstuffs and fruit juice.
  - Benzoic Acid: Used in food preservation.
  - Sodium Chloride (Common Salt): Used in food preservation.
  - Acetic Acid (in vinegar): Used as a preservative (e.g., pickling).
- **Physical & Atmospheric Methods:**
  - **Refrigeration:** Preserves food by reducing the rate of biochemical reactions, including the respiration rate in fruits and vegetables, thereby extending their life.
  - **Nitrogen Gas Packing:** Potato chips are packed in nitrogen gas to prevent oxidation and rancidity.
  - **Wax Coating:** A wax emulsion is applied to fruits and vegetables to create a shiny appearance and extend storage life.

### Food Additives & Components

- **Flavour & Appearance Enhancers:**
  - Monosodium Glutamate (MSG): Used as a flavour enhancer.
  - Triclosan: A chemical (potentially harmful with long-term, high-level exposure) most likely present in toiletries like soaps and toothpaste.
  - Animal Charcoal: Used in the decolorization of raw sugar.
- **Food Processing:**
  - **Homogenization:** Milk is homogenized by breaking down its fat particles to a microscopic size using a centrifuge.
- **Organic Food:** Defined as food grown without the use of artificial fertilizers and pesticides.

## Sugars and Sweeteners

### Types and Sources of Sugars

- **Common Sugars:**
  - Sucrose: Table sugar; sourced from beet.
  - Glucose: Grape sugar.
  - Fructose: Fruit sugar; the main component of honey and the sweetest common sugar.
  - Lactose: Milk sugar.
  - Honey: Primarily contains a mixture of glucose and fructose.
- **Other Sources:**
  - Cotton is a source of cellulose.
  - Guava is the most suitable fruit for jelly making.

### Properties and Sweeteners

- **Invert Sugar:** Sweeter than sucrose; produced by the hydrolysis (breakdown) of sucrose.
- **Natural Sweetener:** Stevia.
- **Artificial Sweetener:** Aspartame.
  - Made from amino acids.
  - Several times sweeter than table sugar, providing high sweetness with very few calories.

## Medicines and Drugs

### Classifications and Examples

- **Analgesics/Antipyretics** (Pain and Fever Relievers): Aspirin, Paracetamol.
- **Antibiotics**: Penicillin, Chloromycetin (also used as an antityphoid drug).
  - *Note: Aspirin is not an antibiotic.*
- **Other Medicinal Classifications**:
  - Antimalarial: Quinine.
  - Antirachitic (prevents rickets): Calciferol (Vitamin D).
  - Antiseptic: Crystal Violet.
    - *Note: Aspirin is not an antiseptic.*
  - Sedative: Potassium Bromide.
  - Anesthetic: Aspirin is not an anesthetic.

## Chemicals, Compounds, and Processes



### Refrigerants

- A common refrigerant used in domestic refrigerators is Freon.

### Toxins and Blood

- Carbon Monoxide (CO) forms an irreversible and dangerous complex with hemoglobin in the blood.

### Natural Extracts

- Eugenol is the main extract from clove oil.

## Summary Table: Key Chemicals and Their Uses

| Chemical Compound | Primary Use / Function |
|-------------------|------------------------|
|-------------------|------------------------|

|                            |                                                             |
|----------------------------|-------------------------------------------------------------|
| Sodium Benzoate            | Food Preservation                                           |
| Benzoic Acid               | Food Preservation                                           |
| Sodium Chloride            | Food Preservation                                           |
| Acetic Acid                | Food Preservation (e.g., pickling)                          |
| Monosodium Glutamate (MSG) | Flavour Enhancer                                            |
| Triclosan                  | Found in Toiletries (e.g., soaps, toothpaste)               |
| Fructose                   | Main sugar in Honey; Sweetest common sugar                  |
| Freon                      | Refrigerant                                                 |
| Aspartame                  | Artificial Sweetener                                        |
| Aspirin                    | Analgesic and Antipyretic (not an antibiotic or antiseptic) |
| Chloromycetin              | Antibiotic (also used as an antityphoid drug)               |
| Quinine                    | Antimalarial drug                                           |
| Calciferol (Vitamin D)     | Antirachitic substance                                      |
| Crystal Violet             | Antiseptic                                                  |
| Potassium Bromide          | Sedative                                                    |
| Carbon Monoxide (CO)       | Forms toxic complex with hemoglobin                         |
| Eugenol                    | Main extract from clove oil                                 |

### Know More About Food Preservation, Nutrition, Medicine, etc:

- [Food Preservation, Nutrition, Medicine, etc – Old Year Questions](#)
- [Food Preservation, Nutrition, Medicine, One Liner Questions & Answers](#)