

### 1- Food Additives

Substances added to food to enhance the flavor, texture, or appearance, thereby increasing its appeal and marketability.

#### Examples:

Artificial sweeteners (aspartame), flavor Enhancer (e.g. msg), and food coloring

#### Significance:

Food additives plays a crucial role in modern food processing, but their excessive use can have adverse health effects.

### 2-Food Preservatives

Substances added to food to prevent spoilage, extend shelf life, and maintains its quality.

#### Examples:

Sodium benzoates, Potassium sorbate and nitrites.

#### Importance:

Preservatives help prevent foodborne illnesses, reduce food waste, and ensure a stable food quality.

### 3-Food Preservation Methods

Techniques used to prevent food spoilage, extend shelf life and slow down the growth of microorganism, enzymatic reactions.

### Examples:

Canning, freezing, and vacuum-sealing.

### Relevance:

Food preservation methods are essential for ensuring food security, particularly in developing countries.

## 4- Food Adulteration

Intentional addition of inferior or harmful substances to food, thereby compromising its quality and safety.

### Examples:

Adding water to milk, mixing stones with grains, or using artificial colors in food products.

### Consequences:

Food adulteration can lead to serious health problems, economic losses, and erosion of consumer trust.

## 5- Food Contamination

Presence of harmful substances or microorganisms in food, thereby compromising its safety and quality.

### Examples:

Bacterial contamination (Salmonella), chemical contamination (e.g. Pesticides), physical contamination (e.g. Foreign objects).

### Impact:

It can have severe health and economic consequences, highlighting the need for effective food measures.

## Difference

### 1. Food additives Vs. food Preservatives:

- o Additives enhance quality, while preservatives prevent spoilage.

### 2. Food Preservatives Vs. Food Preservation methods:

- o Preservatives are substance, while Preservation methods are techniques.

### 3. Food adulteration Vs. food contamination:

- o Adulteration is intentional; while food contamination is often unintentional.

### 4. Food Additives Vs. food Adulteration:

- o Additives are generally enhance quality of food, while adulteration involve adding harmful substances.

### 5. Food Preservatives Vs. food contamination

- o Preservatives prevent spoilage, while contamination introduces harmful substances.