

# ***Food additives (Part -4)***



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***Semester - VI, Paper DSE-3***

# Food additives



## Antioxidants :

Antioxidants are added to food to slow the rate of oxidation and if used properly can extend the shelf life of food in which they have been used.

Example:

BHA( butylated hydroxy anisole) , BHT(butylatedhydroxy toulene)

Antioxidants are commonly used in vegetable oil meat ,fish , poultry margarine, dairy products , mayonnaise / salad dressing potato products (instant mashed potato) etc.

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## Antioxidants :

### **Side effects:**

- Hyperactivity
- Asthma
- Angiodema
- Rhinitis
- Urticaria
- Affects ESTROGEN levels
- Cancer in animals

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## ANTIFOAMING AGENTS

Antifoaming agents reduce or prevent foaming in foods.

Example- Poly dimethylsiloxane (a type of silicone).

Silicone oil is also added to cooking oil to prevent foaming in deep-frying $\underline{g}$ .

## CURING AGENTS

These are additives used to preserve (cure) meats, give them desirable colour and flavor, discourage growth of micro-organisms, and prevent toxin formation.

Example- Sodium nitrite has been used for centuries as a preservative and colour stabilizer in meat and fish products.



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## **EMULSIFIERS**

Emulsifiers allow water and oils to remain mixed together in an emulsion as in mayonnaise, ice cream, and homogenized milk. E.g Lecithin

## **FLAVOURS AND FLAVOUR ENHANCERS**

Flavouring additives are the ingredients, both naturally occurring and added, which give the characteristic flavor to foods.

Flavour enhancers are not flavours themselves but they amplify the flavours of other substance through a synergistic effect.

Examples – Artificial flavours such as MSG and

natural flavours e.g extracted from milk, egg ,nuts e.t.c

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## **ANTICAKING AGENTS**

Anticaking agents keep powders such as milk powder from caking or sticking. Examples - Sodium bicarbonate , Calcium silicate , Sodium aluminosilicate , Bentonite

## **BULKING AGENTS**

Bulking agents such as starch are additives that increase the mass and volume of a food without affecting its nutritional value. Examples- Cellulose, Inulin, Polydextrose

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## **ACIDULANTS**

Food acids are added to make flavors "sharper", and also act as preservatives and antioxidants.

Examples- vinegar, citric acid, tartaric acid, malic acid, fumaric acid, and lactic acid.

## **ACID REGULATORS**

Acidity regulators are used to change or otherwise control the acidity and alkalinity of foods.

Examples - Acetic acid, Citric acid

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## **GLAZING AGENTS**

Glazing agents provide a shiny appearance or protective coating to foods.

Stearic acid

Beeswax

Candelilla wax

## **FLOUR TREATMENT AGENTS**

Flour treatment agents are added to flour to improve its color or its use in baking.

azodicarbonamide

carbamide

# Food additives



## Toxicity and Adverse Effects of Food Additives

- Digestive disorders – diarrhoea, stomach pain
- Nervous disorders – hyperactivity, insomnia and irritability
- Respiratory problems – asthma and sinusitis
- Skin problems – hives, itching, rashes and swelling

*Thank You*

