

College of Applied Medical Sciences

Department of Environmental Health

*Introduction to Food Safety and
Microbiology*

Lecture 9



What are preservatives ?

- Is a detrimental effect for microorganisms (bacteria, fungi and yeasts), where activity and inhibit their reproduction. In the sense that it has maintained influence for food material is the most important natural preservatives - sugar, salt and organic acids such as acetic acid and lactic acid, spices, oils and carbon dioxide, which is used assistant in keeping sodas As these materials can be added to food any concentration consistent with consumer tastes and the nature of the material saved.

What is the purpose of preservatives ?

- -Increase the period of keeping a food item, especially if that food is produced in the seasonal times.
- -Packaged in order to expand their distribution or stored for a long period of several months or several years.

Types of chemical preservatives:

1-preservative

This material works to preserve food for longer periods without • damage and traditional examples of these materials: sugar, salt (table salt), vinegar, and for some of the material ability to prevent or

discourage the activity and the growth of bacteria, and add this material a few food quantities and rely to add to the quality of the food and the way he is the author, as well as the microbe that damage may occur.

2-Antioxidants :

- These materials act to prevent or delay the chemical changes that occur as a result of oxygen with oils or fats, as well as the interaction of fat-soluble vitamins and antioxidants that prevent the oxidation of frozen fruit. And symbolizes the symbol of antioxidants (E) followed by numbers from 300 to 399

3-Acid and alkali solutions, and organization:

- PH is considered to be important in the industry and prepare a lot of food The rate of hydrogen concentration (pH) may affect the food color or texture or smell, therefore maintaining the pH is essential in the production of some of these foods.

4-Colorful material:

- Use these colorful materials both natural or manufactured in abundance in the food industry, when the natural color of food product disappears during the preparation of the food plants add color material, and often this article natural, colorful materials to make food more attractive and increase the consumer rush on it, but for food children Vamajaz use of these pigments are three types are all sources of vitamins.

Are all foods with added preservatives harmful?

- All foods containing no harmful preservatives, there are natural preservatives but how consumers can recognize them ?? When he finds mark (E) and what does this mean the symbol? Afford the added materials to the food product name scientifically long and complex, and its trade name varies from one country to another 0 may not be scientific or commercial name no matter what the vast majority of consumers,

Honey substitute for preservatives

- Revealed US study that honey can be a substitute for preservatives that are added to some foods in order to store them and make them valid for as long as possible, in order to contain the waterproof material Oksdh.onql doctor dot-com site for researcher Nicky Anguezaz, he replaced the amino acid (EDTA) to prevent oil oxidants found in salad dressings and in sweet corn liquid, which is placed in a lot of gravy products to give it flavor and taste Haloua.oukal Anguezaz an assistant professor in the Department of food at the University of Illinois chemistry shows us that the antioxidants in honey maintained the quality of salad for about nine months and it made it taste sweet natural.
- He added that he conducted tests on 19 types of honey to determine their impact and their characteristics and their ability to save materials that are added to it, turned out to be mostly contain compounds can of food preservation for several months.

What damage preservatives?

- - decrease Of satisfactory quality (quality eating, drinking or otherwise)
- - decrease Of health benefits by sometimes up to 40%. Especially in the most fruits or vegetables
- - Increase In density ratio within preservatives, which makes when human Alcalá them frequently be vulnerable to obesity more than you consume fresh material
- - matter Preservatives inhibit the body immunity of the bacteria that cause skin rashes
- - matter Preservatives inhibit the body to resist damage from viruses or microbes All
- - decrease Flavor preservatives for fresh food by 20% as a minimum for the piece