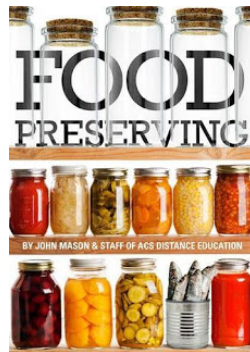


Historical And Mordern Preservatives



मई 08, 2021



Challenge - 4 (Egypt Tour)

You and your family are on a tour in Egypt and have gone to see the famous Pyramids of Cairo. While there, your travel guide tells that the dead bodies of the Pharaohs were treated with salt.

Why do you think this was done? Create artifacts to explain the problem with a suitable solution. What are the other alternative chemicals which are available now-a-days.

Preservatives use in real world.



<https://youtu.be/JzaBiWjczAw>

What is preservatives?

A preservative is a substance or a chemical that is added to products such as food products, beverages, pharmaceutical drugs, paints, biological samples, cosmetics, wood, and many other products to prevent decomposition by microbial growth or by undesirable chemical changes.

Uses & Benefits



Preservatives in food: Preservatives are added to food to **fight spoilage** caused by bacteria, molds, fungus, and yeast. Preservatives can keep food fresher for longer periods of time, extending its shelf life.

Food preservatives also are used to slow or prevent changes in color, flavor or texture and delay rancidity.

Chemical Compound

Use in Foods

1	sorbic acid, sodium sorbate and sorbates	common for cheese, wine, baked goods, personal care products
2	benzoic acid and benzoates	used in acidic foods such as jams, salad dressing, juices, pickles, carbonated drinks, soy sauce
3	parabens	stable at a broad pH range, personal care products

4	sulfur dioxide and sulfites	common for fruits, wine
5	nitrites	used in meats to prevent botulism toxin
6	nitrites	used in meats
7	lactic acid	-
8	propionic acid and propionates	baked goods
9	isothiazolinones (MIT, CMIT, BIT)	home and personal care products, paints/coatings
10	formaldehyde releasers (DMDM hydantoin)	home and personal care products

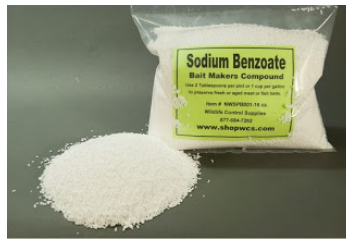
No.	chemical compound	Use in Food
1	ascorbic acid, sodium ascorbate	cheese, chips
2	butylated hydroxytoluene, butylated hydroxyanisole	also used in food packaging
3	gallic acid and sodium gallate	oxygen scavenger
4	sulfur dioxide and sulfites	beverages, wine
5	tocopherols	vitamin E activity

Safety And Preservative Food :- The use of preservatives in food products is strictly studied, regulated and monitored by the U.S. Food and Drug Administration (FDA). Federal regulations require evidence that food additives are safe for their intended use.

Traditional Chemical Food Preservatives

❖ Traditional chemical food preservatives and their use in fruit and vegetable processing technologies could be summarised as follows:

❑ Common salt : Brined vegetables Sugars (sucrose, glucose, fructose and syrups):

Safety of Preservatives in Medicine and Pharmaceuticals:- Preservatives in medicines and drugs are generally considered to be “inactive ingredients” by FDA. Inactive ingredients (such as dyes, preservatives, and flavouring agents) are parts of a drug or medicine that do not affect the therapeutic action of the active ingredients. FDA's *Inactive Ingredient Database* provides information on inactive ingredients present in FDA-approved drug products. FDA, the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH) and other federal agencies regularly monitor and conduct research on vaccine safety.

Preservatives Medicine names:-

Preservative Concentration for Liquid Oral Preparation

Sr. No.	Name	Recommended Concentration
1.	Benzoic Acid	0.1 to 0.2%
2.	Sorbic Acid	0.1 to 0.2%
3.	Methyl Paraben	0.25%
4.	Propyl Paraben	0.5 to 0.25%
5.	Sodium Benzoate	0.1 to 0.2%
6.	Bronidol	0.001 to 0.05%



Preservatives use overdose for body: Whereas, chemical/artificial preservatives (sodium benzoate, sorbic acid, butylated hydroxyanisole, potassium metabisulfite, butylated hydroxytoluene, etc.) may cause severe allergic reactions, gut diseases, heart diseases, cancer, hypersensitivity, obesity and number of long-term negative effects on our health.

Additives & Preservatives	
Ingredient	Purpose
Citric Acid (aka vit C)	 Prevents the fruit on your fruit tart from browning
Sunflower Lecithin	 Prevents your almond milk from separating in your coffee
Calcium disodium EDTA purpose	 Prevents your mayonnaise from spoiling.
Sorbic acid	 Keeps your wine free from fungi, bacteria & yeast grown

Five Most Common Types of Preservatives Used in Cosmetics:

- **Parabens.** Examples. Germaben II. Methylparben. ...
- **Formaldehyde Releasers.** Examples. Germall Plus. DMDM Hydantoin. ...
- **Isothiazolinones.** Examples. Kathon. ...
- **Phenoxyethanol.** Examples. Optiphen, Optiphen Plus (contains **phenoxyethanol** combined with others for broad spectrum protection) ...
- **Organic acids.** Examples. **Benzoic Acid**/Sodium Benzoate.

Preservatives

- Natural or synthetic ingredients
- Prevent bacterial growth, spoilage
- Keep products fresh for longer
- Can be toxic in larger concentrations



History Of Preservatives: In the Beginning, For early civilizations (and some later ones), food preservation was essential to human preservation. As far back as 5,000 B.C., the Babylonians were using the fruit of the date palm to help wine and vinegar be used for food and as a **preservative or pickling agent**



The ancient Egyptians would dry grains and store them in sealed containers to ensure they kept for the longest period possible, while the ancient Greeks and the Romans packed their meat and fish in salt to keep it edible for months after it was caught. In 2003 a 2,400 year old shipwreck from the bottom of the Black Sea was found to contain the bones of a seven-foot catfish that had been dried and cut into steaks to feed the ship's crew during the ill-fated voyage.

As well as keeping soldiers fed, the great explorers of the age would take canned food on expeditions all over the globe, allowing them to explore farther than ever before. Unfortunately, not all canning methods were safe at the time, as demonstrated by an ill-fated expedition to the Arctic in 1845 led by John Franklin. When the bodies of the crew were recovered, lead poisoning from the solder used to seal canned food was found to have been a factor in their deaths.



Chemistry in Everyday Life

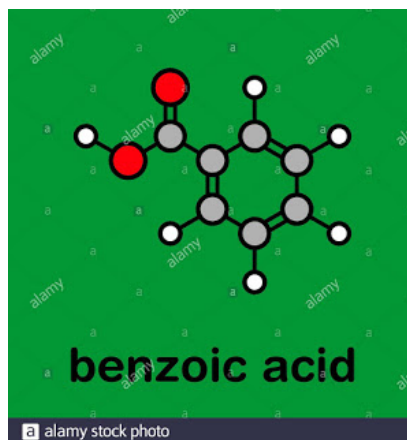
Drugs and Drugs and their Classification:-Drugs are chemicals of low molecular masses (~100 – 500u). These interact with macromolecular targets and produce a biological response. When the biological response is therapeutic and useful, these

chemicals are called medicines and are used in diagnosis, prevention and treatment of diseases.

Drug-Target Interaction: Macromolecules of biological origin perform various functions in the body. For example, proteins which perform the role of biological catalysts in the body are called enzymes, those which are crucial to communication system in the body are called receptors.

Enzymes as Drug Targets:-(a) Catalytic action of enzymes For understanding the interaction between a drug and an enzyme, it is important to know how do enzymes catalyse the reaction. In their catalytic activity, enzymes perform two major functions:

Structure Of Preservatives



<https://scratch.mit.edu/projects/527090324>

Click this link and play the game and remixed your own ideas 🙌🙌🙌🙌🙌🙌🙌🙌

Bibliography:-

<https://en.wikipedia.org/wiki/Preservative#:~:text=A%20preservative%20is%20a%20substance,or%20by%20undesirable%20chemical%20changes.>

<https://www.chemicalsafetyfacts.org/preservatives/>

Thank you

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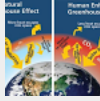


अपनी टिप्पणी लिखें...

इस ब्लॉग से लोकप्रिय पोस्ट

Carbon Footprint

दिसंबर 17, 2020



CLASS-11 SUBJECT-CHEMISTRY UNIT-14 TOPIC:- ENVIROMENTAL CHEMISTRY ENVIRONMENTAL POLLUTION Environmental pollution is the effect of undesirable changes in our surroundings that have harmful effects on plants, animals and human beings. A substance, which causes pollution, is known as a pollutant. ...

[और पढ़ें](#)

Cyclone

जुलाई 25, 2020



This project is for class 9. Subject : Geography Chapter - 6th Man and environment Cyclone चक्रवात क्या है? कम वायुमंडलीय दबाव के कारणों और गर्म हवा की तेज आंधी को चक्रवात कहते हैं. दक्षिणी गोलार्ध में इन गर्म हवा को चक्रवात के नाम से जानते हैं और ये घड़ी की सुई के साथ चलते हैं. उत्तरी गोलार्ध में इन गर्म हवा को हरीकेन या टाइफून कहते हैं. ये घड़ी की ...

[और पढ़ें](#)

 Blogger द्वारा संचालित

Michael Elkan के शीम विव