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Artificial Preservatives

What are artificial preservatives?



Preservatives are added to many different products to increase their shelf life.

Preservatives are a group of chemicals that are added to paints, biological samples, food, wood, and many other products to increase the product's shelf life. **Artificial preservatives** are chemical compounds that are derived from a living or nonliving source.

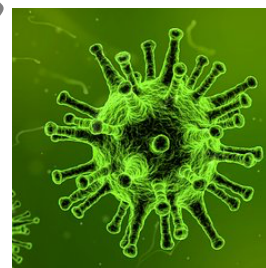
Interesting Fact!

Since the prehistoric times, preservatives have been used. Smoking meats was one of the primary ways to preserve food.

What are the different kinds of artificial preservatives?

There are three different kinds of artificial preservatives. They are:

- **Antimicrobial agents:** These are chemicals that destroy bacteria and prevent further bacterial growth. Benzoates, propionates, sorbates, and nitrates are antimicrobial agents.



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- **Chelating agents:** These are chemicals that are added to food to help bind metal ions. Without these agents, metal would cause detrimental effects on food by altering the color, aroma, and/or texture. Ethylenediaminetetraacetic acid (EDTA) is one of the more common chelating agents used.

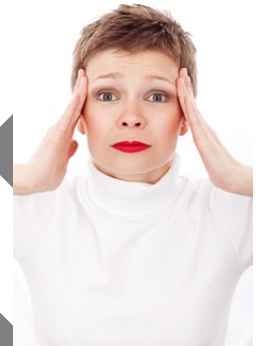
Is there difference between additives and artificial preservatives?

Additives are substances that are added to the product that change the product before it is consumed. Artificial preservatives are additives as they are added before the product is consumed and they alter the shelf life of the product.

Are artificial preservatives harmful?

The side effects of artificial preservatives vary from person to person. They can be very mild to life threatening. Here are some harmful side effects associated with some artificial preservatives:

- Sulfites: May cause headaches, allergies, and palpitations.
- Nitrates and Nitrites: May cause stomach cancer.



Sulfites may cause headaches.

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Examples of artificial preservatives:

- Ascorbyl palmitate – Used as a preservative in various foods.
- Calcium disodium EDTA - Used as a preservative in various foods.
- Formic acid - Used as a preservative in silage, which is fermented food to be fed to cattle, sheep, and other animals.
- Potassium phosphate (monobasic) - Used as a color preservative for frozen eggs
- Sodium nitrate - Used as a preservative and color fixative for smoked and cured salmon, chad, sable fish, and in red meats and poultry. It is often used with sodium nitrite.
- Sorbic acid - Used as a preservative in various foods. It is often used alongside other preservatives.



Formic acid is used as a preservative in livestock

Reading Comprehension Questions:

1. What are
2. What are artificial preservatives?
3. What are
4. True or False: All artificial preservatives are additives and all additives are artificial preservatives.
5. Which

Extension Questions:

6. Research three of your favorite packaged snacks. What artificial preservatives does it contain?

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References

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