

Calcium Propionate



CALCIUM PROPIONATE

Calcium propionate, molecular formula $C_6H_{10}CaO_4$, is a naturally-occurring organic salt formed by a reaction between calcium hydroxide and propionic acid.

Calcium propionate helps preserve food by interfering with the ability of microorganisms, such as molds and bacteria, to reproduce. It's commonly used as a food additive, known as E282, to help preserve various foods.

Used in a wide variety of food products, calcium propionate has been approved for use by the Food and Drug Administration (FDA), World Health Organization (WHO), and Food and Agriculture Organization of the United Nations (FAO).

HISTORY

As early as 1906, calcium propionate was discovered to be effective against rosy bacteria in bread. Both propionic acid and its calcium salt derivative have been well established as antimicrobials. Since the 1930s, propionates have been used to preserve bread in the U.S.

PRODUCTION

Calcium propionate serves to mitigate a costly issue in the baking industry: mold and bacterial growth. As a food additive, it is used to extend the shelf life of various goods in a wide variety of products, including but not limited to: bread, other baked goods, processed meat, whey, and other dairy products.

APPLICATIONS

In **bakery products**, calcium propionate can be used:

- for mold control, especially for yeast-leavened product
- for consistent protection against mold, with minimal organoleptic impact

Calcium propionate can be combined with acidulants such as:

- acetic acid
- citric acid
- benzoic acid
- lactic acid
- etc.

Format

- dry

Sources:

https://en.wikipedia.org/wiki/Calcium_propionate

<https://www.sciencedirect.com/science/article/pii/S1021949816300552>

<https://www.healthline.com/nutrition/calcium-propionate#calcium-propionate>

<https://bakerpedia.com/ingredients/calcium-propionate>

