



Betaine Monohydrate

Version 1.1

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Product Name: Betaine Monohydrate

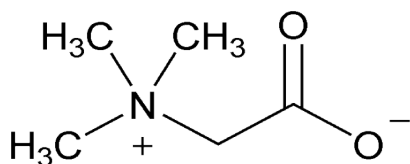
Chemical name: Trimethylglycine

CAS number: 590-47-6

Molecular formula: $C_5H_{11}NO_2 \cdot H_2O$

Molecular Weight: 135.16

Chemical Structure:

**Function:** Source of betaine**Physical/Chemical characteristics**

Appearance: White to off-white crystals

Odor: odorless or faint characteristic odor

Melting point: 293 °C

Bulk density: 0.7-0.75g/mL

Product specification*

Assay: min 99% d.s.

pH(10% solution in 0.2M KCL): 5.0-7.0

Loss on drying: max 15%

Residue on ignition: max 0.1%

*Only selected data is represented here, for a full set of specifications we refer to our Specifications sheet.

Solubility

Betaine solubility at 25 °C in:

Water 160g/100g

Methanol 55g/100g

Ethanol 8.7g/100g

Applications

Betaine is an important human nutrient, distributed widely in animals, plants, and microorganisms. It is rapidly absorbed and utilized as an osmolyte and source of methyl groups and thereby helps to maintain liver, heart, and kidney health. The growing body of evidence shows that betaine is an important nutrient for the prevention of chronic disease. Betaine is used in many applications like: beverages, chocolate spreads, cereals, nutritional bars, sports bars, snack products and vitamin tablets, capsule filling, etc.

Potential benefits

- May prevent or reduce accumulation of fat in the liver, a common result of obesity, high fat diet, diabetes and alcohol consumption, and may have the potential to aid in the treatment of Alcoholic Liver Disease
- May enhance athletic performance by improving a sense of well-being, lessening fatigue, providing greater strength and endurance, and increasing a desire for (and performance of) physical and mental work
- A flavor-enhancer that has been approved by the FEMA GRAS as a flavoring substance and can be easily added to foods and

beverages

- Extend the shelf life of foods by acting as a humectant

Usage

As a food supplement Betaine is usually taken in doses of 500-1,500 mg daily with food.

The therapeutic dosages recommended by doctors are usually around 1.5 - 6.0 grams daily in two or three divided doses.

For specific conditions usually the following doses are advised under the supervision of a doctor:

For the treatment of alcohol-induced fatty liver, the recommended amount for Betaine citrate is 1 to 2 grams three times daily.

For cardiovascular disease, take 1500 - 3000 mg Betaine per day.

For treatment of homocystinuria, the dose should be 6 grams Betaine per day.

As humectant of food :0.3-0.5%, or 50% solution sprayed on the surface.

Safety

Betaine is lactose free and gluten free; it does not contain any animal derived ingredients.

The product conforms to the current editions of Food Chemical Codex.

It is lactose free and gluten free, Non-GMO, Non-ETO; BSE/TSE free.

Regulatory information

USA: DSHEA for nutritional supplements

FEMA GRAS as a flavor enhancer in all foods (up to 0.5%) and labeled as betaine or natural flavor

GRAS substance under 21 CFR 170.30 for use as a humectant and flavor enhancer/modifier in selected foods and is labeled as betaine

Japan: Approved as a food additive

Korea: Approved as a natural food.

Shelf life

Two year from date of manufacture when stored in original packaging.

Storage conditions

Store in the original sealed container in a cool and dry place out of direct sunlight. Store below 40°C (104°F).

Packaging

25 kg fiber drums with two polyethylene inner bag or as per your request.

Further information

The tolerances are given in the product specification sheet. Further safety information is provided in our Material Safety Data Sheet.



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