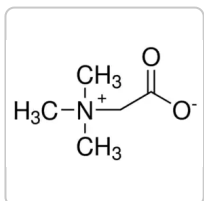


Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



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Documents

[↓ SDS](#)

[🔍 COO/COA](#)

[📄 Specification Sheet](#)

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B2629 ▶ **Sigma-Aldrich®**

Betaine

≥98% (perchloric acid titration)

Synonym(s):

(Carboxymethyl)trimethylammonium inner salt, Oxyneurine, Trimethylglycine

Linear Formula:

$(\text{CH}_3)_3\text{N}^+\text{CH}_2\text{COO}^-$

CAS Number: **107-43-7**

Molecular Weight: 117.15

Beilstein: 3537113

EC Number: **203-490-6**

MDL number: **MFCD00012123**

PubChem Substance ID: **24891663**

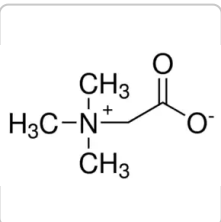
NACRES: NA.77

SKU	Pack Size	Availability	Price	Quantity	
B2629-50G	50 G	✓ Only 5 left in stock (more on the way) Details...	€42.30	<input type="text" value="−"/> <input type="text" value="+"/> <input type="button" value="i"/>	
B2629-100G	100 G	✓ Available to ship on October 10, 2022 Details...	€54.60	<input type="text" value="−"/> <input type="text" value="+"/> <input type="button" value="i"/>	
B2629-1KG	1 KG	✓ Only 6 left in stock (more on the way) Details...	€254.00	<input type="text" value="−"/> <input type="text" value="+"/> <input type="button" value="i"/>	

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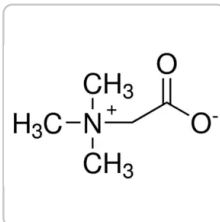
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RECOMMENDED PRODUCTS



Sigma-Aldrich
61962
Betaine
BioUltra, ≥99.0% (NT)

[View Price and Availability](#)



Sigma-Aldrich
B0300
Betaine solution
5 M, PCR Reagent

[View Price and Availability](#)

PROPERTIES

biological source	sugar beets
Quality Level	200
assay	≥98% (perchloric acid titration)
form	powder or crystals
mp	310 °C (dec.)
solubility	water: 50 mg/mL, clear, colorless to faintly yellow

storage temp.	2-8°C
SMILES string	<chem>C[N+](C)(C)CC([O-])=O</chem>
InChI	1S/C5H11NO2/c1-6(2,3)4-5(7)8/h4H2,1-3H3
InChI key	KWIUHFFTVRNATP-UHFFFAOYSA-N

Looking for similar products? Visit [Product Comparison Guide](#)

DESCRIPTION

General description

Betaine is a quaternary ammonium zwitterion, extensively present in animals, plants and microorganisms. It also forms a good dietary source as it is found in wheat, spinach, shellfish and sugar beets. Betaine is a methyl derivative of the amino acid glycine. It is known by different names such as trimethylglycine, glycine betaine, lcyne and oxynurine.

Application

Betaine has been used to study the effects of antioxidants on regrowth from cryopreservation.

Packaging

50, 100 g in poly bottle

1 kg in poly bottle

Biochem/physiol Actions

Apart from betaine taking part in transmethylation, it acts as an organic osmolyte in protecting cells under stress. This is being significantly observed in plants and microorganisms. Betaine is also known to increase the levels of *S*-adenosylmethionine and thus this might reduce the effects of hepatic steatosis.

End-product of oxidative metabolism of choline, betaine is a general methyl donor, in particular in a minor pathway of methionine biosynthesis. It is used to treat homocystinuria, which is a defect in the major pathway of methionine biosynthesis.

Other Notes

Tested metabolites are featured on Scripps Center for Metabolomics METLIN Metabolite Database. To learn more, visit sigma.com/metlin.

SAFETY INFORMATION

Storage Class Code

11 - Combustible Solids

WGK

WGK 3

Flash Point(F)

Not applicable

Flash Point(C)

Not applicable

Personal Protective Equipment

dust mask type N95 (US),

[Eyeshields](#), [Gloves](#)

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

How to enter Lot Number (COA)

Certificate of Origin

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

How to enter Lot Number (COO)

Product Information Sheet

Product Information Sheet - B2629

More Documents

[FT-IR Condensed Phase](#)

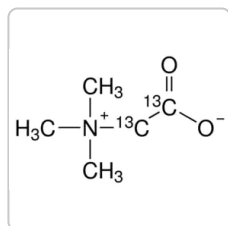
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[Spectra for FT-IR Raman](#)

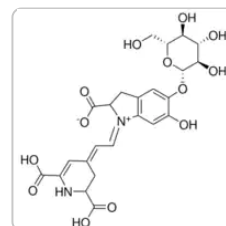
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Sigma-Aldrich

766801**Betaine-1,2-¹³C₂**99 atom % ¹³C, 99% (CP)[View Price and Availability](#)

Sigma-Aldrich

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L Garcia-Gonzalez et al.*International journal of food microbiology*, 129(3), 253-263 (2009-01-23)

High pressure carbon dioxide (HPCD) treatment is currently considered as an attractive non-thermal process for preserving food. Industrial application of this technique requires, among others, systematic (quantitative) data on the inactivation of food relevant pathogenic and spoilage microorganisms, and in-depth

Loss of WTAP Impairs Early Parthenogenetic Embryo Development.

Jindong Hao et al.*Animals : an open access journal from MDPI*, 11(6) (2021-07-03)

m⁶A is one of the most common and abundant modifications of RNA molecules present in eukaryotes. The methyltransferase complex, consisting of methyltransferase-like 3 (METTL3), METTL14, and WTAP, is responsible for the m⁶A modification of RNA. WTAP was identified as an

Antioxidant and anti-stress compounds improve regrowth of cryopreserved Rubus shoot tips

Uchendu EE, et al.

In Vitro Cellular & Developmental Biology, 46(4), 386-393 (2010)

Attenuation of Experimental Autoimmune Uveitis in Lewis Rats by Betaine.

Yuna Choi et al.

Experimental neurobiology, 30(4), 308-317 (2021-09-07)

Experimental autoimmune uveitis (EAU) is an animal model of human autoimmune uveitis that is characterized by the infiltration of autoimmune T cells with concurrent increases in pro-inflammatory cytokines and reactive oxygen species. This study aimed to assess whether betaine regulates

Dimethyl Sulfoxide-Free Cryopreservation of Human Umbilical Cord Mesenchymal Stem Cells Based on Zwitterionic Betaine and Electroporation.

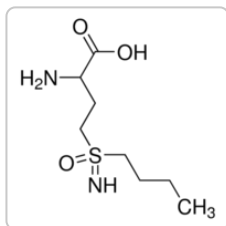
Lei Gao et al.

International journal of molecular sciences, 22(14) (2021-07-25)

The effective cryopreservation of mesenchymal stem cells (MSCs) is indispensable to the operation of basic research and clinical transplantation. The prevalent protocols for MSC cryopreservation utilize dimethyl sulfoxide (DMSO), which is easily permeable and able to protect MSCs from cryo-injuries

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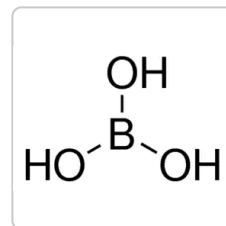
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Sigma-Aldrich

B2640

DL-Buthionine-(S,R)-sulfoximine



Sigma-Aldrich

B2645

Boric acid

tablet, 1 g boric acid per tablet

[View Price and Availability](#)[View Price and Availability](#)

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