VIO PHARMACEUTICALS OUR SCIENCE, YOUR PRODUCT

High quality synthetic Ectoine

ADVANTAGES

Ectoine is a natural, highly-soluble, low-molecular-weight, zwitterionic cyclic amino acid derivative, found in several species of extremophilic microorganisms. It is a compatible solute, also called extremolyte, which serves to stabilize the physiological properties of the cells and protect them from external osmotic stress, caused by high salinity, heat, loss of water and UV irradiation.

Ectoine exerts cell-protective, anti-inflammatory and anti-allergic activity, and demonstrates a high efficacy and safety profile.

FEATURES

- Prevention of stress mediators,
- natural protection of cells,
- lubrication and hydration effect,
- anti-inflammatory activity,
- anti-allergic activity.

BENEFITS

We offer high quality synthetic Ectoine, ≥98% (HPLC).

Low biological burden

Contrary to fermentation, our synthetic ectoine has low biological burden, which makes it, readily suitable for all applications.

Cost effective high volume production

We have developed and optimized our chemical process in-house for safe, lean and scalable cGMP manufacturing, providing significant economic benefits for high volume

APPLICATION

Ectoine has commercial uses as an enzyme stabilizer and as a cell protectant in skin and health care applications.

In dermatology, it is often contained in cream preparations for the treatment of skin dryness, roughness and scaliness (atopic dermatitis, psoriasis), UV-induced sunburn cells and overall skin dehydration.

Thanks to its lubricating effect, ectoine is also administered for the treatment of eye disorders. It relieves irritation and inflammation by stabilizing the watery layer and the lipid layer of the tear film, thus ensuring optimal protection.

Ectoine is also used in nasal sprays to treat symptoms of respiratory impairment, induced by carbon-related lung inflammation, allergic rhinitis or asthma.

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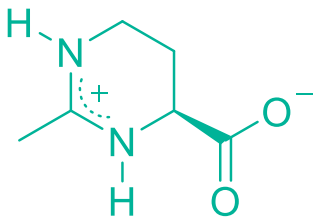
TECHNICAL PROFILE

- Chemical name: (S)-2-methyl-3,4,5,6-tetrahydropyrimidine-4-carboxylic acid
- CAS No: 96702-03-3
- Empirical formula: $C_6H_{10}N_2O_2$
- Molecular weight: 142.16

CHEMICAL STRUCTURE



TEST	METHOD REFERENCE	SPECIFICATION
Appearance	In-house	White or off-white powder
Identification by a. IR b. Melting Range	In-house	a. The IR spectrum of the sample conforms to the reference standard. b. 315-320ºC
Solubility	In-house	Soluble in water, sparingly soluble in methanol, practically insoluble in ethanol and acetone
Specific Optical Rotation (C=1%w/v in water)	Ph.Eur. 2.2.7	+135º to +145º
%Water content (by KF)	Ph.Eur. 2.5.12	Not more than 0.5% w/w
Loss on drying (105°C, 3 hrs no vacuum)	Ph.Eur. 2.2.32	Not more than 0.5% w/w
%Sulfated ash	Ph.Eur. 2.4.14	Not more than 0.2% w/w
Hydrochloride content (by titrimetry)	In-house	Not more than 0.2% w/w
pH of aqueous solution (2% w/v in water)	In-house	pH 5-7
%Purity (by HPLC)	In-house	Not less than 98.0%
%Assay (by HPLC)	In-house	98.0-102.% w/w on as is basis
Optical purity	In-house	Minimum 99.8% ee

For API inquiries, contact us on +30 2311 999963 or send us an e-mail at info@viopharmaceuticals.com