

ProductInformation

Cat. No. B-107
L-BMAA HYDROCHLORIDE

Synthetic preparation of a neurotoxic amino acid originally isolated from *Cycas circinalis* which causes Guam disease, a form of amyotrophic lateral sclerosis (ALS).

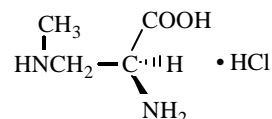
Mol. Formula: C₄H₁₀N₂O₂·HCl

Mol. Wt.: 154.6 (anhyd.)

m.p.: 172-173°C (dec.)

CAS Registry No.: 16012-55-8

Chemical Name: (+)-L-β-N-Methyl-αβ-diaminopropionic acid hydrochloride



Physical Properties: White solid; $[\alpha]_D^{20} = +35^\circ$ (c = 1.15, 5N HCl).

Caution: POTENT NEUROTOXIN. Wear gloves and mask when handling this product. Avoid contact by all modes of exposure.

Storage: Store tightly sealed at -20°C.

Solubility: Soluble in water. Solutions may be stored for several days at 4°C.

Disposal: Dissolve or mix the compound with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. This substance is toxic to humans and all precautions must be taken to avoid ingestion by any route, skin contact, or inhalation of fumes during the destruction process.

References:

1. Vega, A., Bell, E.A. "α-Amino-β-methylaminopropionic acid, a new amino acid from seeds of *Cycas circinalis*." *Phytochemistry* **6**, 759-762 (1967).
2. Lewin, R. "Environmental hypothesis for brain diseases strengthened by new data." *Science* **237**, 483-484 (1987).
3. Spencer, P.S., Nunn, P.B., Hugon, J., Ludolph, A.C., Ross, S.M., Roy, D.N., Robertson, R.C. "Guam amyotrophic lateral sclerosis-parkinsonism-dementia linked to a plant excitant neurotoxin." *Science* **237**, 517-522 (1987).
4. Kurland, L.T. "Amyotrophic lateral sclerosis and Parkinson's disease complex on Guam linked to an environmental neurotoxin." *TINS* **11**, 51-54 (1988).
5. Weiss, J.H., Choi, D.W. "βN-Methylamino-L-alanine neurotoxicity: requirement for bicarbonate as a cofactor." *Science* **241**, 973-975 (1988).
6. Mroz, E.A. "Possible role of carbamates in neurotoxicity and neurotransmitter inactivation." *Science* **243**, 1615 (1989).
7. Copani, A., Canonico, P.L., Nicoletti, F. "β-N-Methyl-amino-L-alanine (L-BMAA) is a potent agonist of 'metabotropic' glutamate receptors." *Eur. J. Pharmacol.* **181**, 327-328 (1990).

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