Product Information

Valnoctamide
Item No. 18456

CAS Registry No.: 4171-13-5
Formal Name: 2-ethyl-3-methyl-pentanamide
Synonyms: NSC 32363, NSC 34092, Valmethamide, Valoctamidum
MF: C₈H₁₇NO
FW: 143.2
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that valnoctamide be stored as supplied at -20°C. It should be stable for at least two years.

Valnoctamide is supplied as a crystalline solid. A stock solution may be made by dissolving the valnoctamide in the solvent of choice. Valnoctamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of valnoctamide in these solvents is approximately 25, 30, and 16 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of valnoctamide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of valnoctamide in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Valnoctamide is an isomer of the valproic acid amide, valpromide. It has been marketed as an anxiolytic and sedative compound and suppresses neuropathic pain.¹² Unlike valpromide, valnoctamide is not metabolized to its acid form, valnoctic acid, in vivo and has no teratogenicity.¹ It abolishes the activity of myo-inositol-1-phosphate synthase in human brain crude homogenates (Kᵢ = 0.18 mM).³ Valnoctamide suppresses electrographic seizures in animal models of status epilepticus, suggesting potential applications in managing epilepsy.⁴

References