

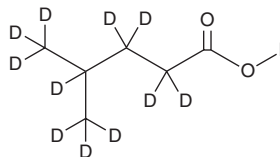
PRODUCT INFORMATION



4-Methylpentanoic Acid-d₁₂

Item No. 27873

CAS Registry No.: 116287-57-1
Formal Name: 4-(methyl-d₃)-pentanoic-2,2,3,3,4,5,5,5-d₈ acid-d
Synonyms: 4-Methylvaleric Acid-d₁₂, FA 6:0-d₁₂, Isobutylacetic Acid-d₁₂, Isocaproic Acid-d₁₂, Isohexoic Acid-d₁₂
MF: C₆D₁₂O₂
FW: 128.2
Chemical Purity: ≥98% (4-Methylpentanoic Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₁₂); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

4-Methylpentanoic acid-d₁₂ is intended for use as an internal standard for the quantification of 4-methylpentanoic acid by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

4-Methylpentanoic acid-d₁₂ is supplied as a solid. A stock solution may be made by dissolving the 4-methylpentanoic acid-d₁₂ in the solvent of choice. 4-Methylpentanoic acid-d₁₂ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 4-methylpentanoic acid-d₁₂ in these solvents is approximately 10 mg/ml.

Description

4-Methylpentanoic acid is a short-chain volatile fatty acid that is produced during wastewater treatment using anaerobic membrane bioreactors.¹ It is a synthetic intermediate in the synthesis of biodiesel, polyhydroxyalkanoate (PHA) biopolymers, and various organic compounds.

Reference

1. Khan, M.A., Ngo, H.H., Guo, W., *et al.* Selective production of volatile fatty acids at different pH in an anaerobic membrane bioreactor. *Bioresour. Technol.* **283**, 120-128 (2019).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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