

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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## Lieferung & Zahlungsart

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# PRODUCT INFORMATION



## 4-Methylpentanoic Acid-d<sub>12</sub>

Item No. 27873

CAS Registry No.: 116287-57-1

Formal Name: 4-(methyl-d<sub>3</sub>)-pentanoic-2,2,3,3,4,5,5,5-d<sub>9</sub>

Synonyms: Isobutylacetic Acid-d<sub>12</sub>, Isocaproic Acid-d<sub>12</sub>,

Isohexoic Acid-d<sub>12</sub>, 4-Methylvaleric Acid-d<sub>12</sub>

C<sub>6</sub>D<sub>12</sub>O<sub>2</sub> 128.2 MF: FW:

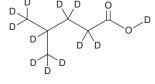
≥98% (4-Methylpentanoic Acid) **Chemical Purity:** 

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>12</sub>);  $\leq$ 1% d<sub>0</sub>

Supplied as: A solid -20°C Storage: Stability: ≥2 years

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



### **Laboratory Procedures**

4-Methylpentanoic acid-d<sub>12</sub> 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-d<sub>12</sub> is supplied as a solid. A stock solution may be made by dissolving the 4-methylpentanoic acid-d<sub>12</sub> in the solvent of choice. 4-Methylpentanoic acid-d<sub>12</sub> 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-d<sub>12</sub> 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.<sup>1</sup> 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.

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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