

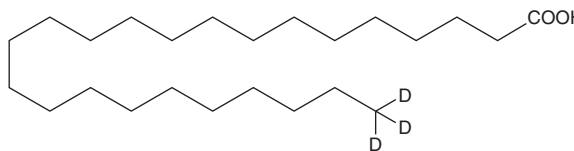
PRODUCT INFORMATION



Lignoceric Acid-d₃

Item No. 28084

CAS Registry No.: 851073-55-7
Formal Name: tetracosanoic-24,24,24-d₃ acid
Synonym: C24:0-d₃, FA 24:0-d₃
MF: C₂₄H₄₅D₃O₂
FW: 371.7
Chemical Purity: ≥98% (Lignoceric Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤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

Lignoceric acid-d₃ is intended for use as an internal standard for the quantification of lignoceric acid (Item No. 13353) 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).

Lignoceric acid-d₃ is supplied as a solid. A stock solution may be made by dissolving the lignoceric acid-d₃ in the solvent of choice, which should be purged with an inert gas. Lignoceric acid-d₃ is soluble in organic solvents such as chloroform and THF. The solubility of lignoceric acid-d₃ in these solvents is approximately 2 and 5 mg/ml, respectively.

Description

Lignoceric acid is a 24-carbon saturated (24:0) fatty acid. In mammals, it is synthesized during brain development and is found in cerebroside.¹ The deficient peroxisomal oxidation of very-long-chain fatty acids, including lignoceric acid, contributes to certain syndromes, including Zellweger cerebro-hepato-renal syndrome and X chromosome-linked adrenoleukodystrophy.² Lignoceric acid is also a by-product of lignin production.

References

1. Bourre, J.M., Paturneau-Jouas, M.Y., Daudu, O.L., *et al.* Lignoceric acid biosynthesis in the developing brain. Activities of mitochondrial acetyl-CoA-dependent synthesis and microsomal malonyl-CoA chain-elongating system in relation to myelination. *Eur. J. Biochem.* **72(1)**, 41-47 (1977).
2. Singh, I., Moser, A.E., Goldfischer, S., *et al.* Lignoceric acid is oxidized in the peroxisome: Implications for the Zellweger cerebro-hepato-renal syndrome and adrenoleukodystrophy. *Proc. Natl. Acad. Sci. USA* **81(13)**, 4203-4207 (1984).

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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