Product Information

9-OxoODE-d₃
Item No. 338420

Formal Name: 9-oxo-10E,12Z-10,12,13-d₃-octadecadienoic acid
Synonym: 9-KODE-d₃
MF: C₁₈H₂₆D₃O₃
FW: 297.5
Chemical Purity: ≥98%
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
Stability: ≥1 year at -80°C
Supplied as: A solution in acetonitrile
UV/Vis.: λmax: 275 nm
e: 19,000

Laboratory Procedures
9-OxoODE-d₃ contains three deuterium atoms at the 10, 12, and 13 positions. It is intended for use as an internal standard for the quantification of 13-OxoODE by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 9-OxoODE-d₃ be stored as supplied at -80°C. It should be stable for at least one year.

9-OxoODE-d₃ is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 9-OxoODE-d₃ in these solvents is approximately 50 mg/ml.

9-OxoODE-d₃ is used as an internal standard for the quantification of 9-OxoODE by stable isotope dilution 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).

Rabbit reticulocyte mitochondrial and plasma membranes contain small amounts of 9-oxoODE and 13-oxoODE. These species represent about 2% of the total linoleate residues in the membranes. Approximately 88% of the oxo fatty acids in these membranes are esterified to membrane lipids. The occurrence of oxidized fatty acids in these membranes has been attributed to the action of a reticulocyte 15-lipoxygenase.

References

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