

# Produktinformation



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# **Product Information**



# 4-hydroxy Hexenal-d<sub>3</sub>

Item No. 10007657

**CAS Registry No.:** 148706-05-2

Formal Name: (±)-4-hydroxy-2E-hexenal-6,6,6-d<sub>3</sub>

Synonym: 4-HHE-d<sub>3</sub> MF:  $C_6H_7D_3O_2$ FW: 117.2

**Chemical Purity:** ≥98% 4-hydroxy Hexenal

Deuterium

 $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>);  $\leq$ 1% d<sub>0</sub> Incorporation:

Stability: ≥1 year at -80°C

Supplied as: A solution in methyl acetate

 $\lambda_{max}$ : 221 nm UV/Vis.:

### **Laboratory Procedures**

4-hydroxy Hexenal-d<sub>3</sub> contains three deuterium atoms at the 6, 6, and 6 positions. It is intended for use as an internal standard for the quantification of 4-hydroxy hexenal (Item No. 32060) by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 4-hydroxy hexenal-d<sub>3</sub> be stored as supplied at -80°C. It should be stable for at least one year.

4-hydroxy Hexenal-d<sub>3</sub> is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the 4-hydroxy hexenal-d<sub>3</sub> 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 4-hydroxy hexenal-d, in these solvents is approximately 50 mg/ml.

4-hydroxy Hexenal-d<sub>3</sub> is used as an internal standard for the quantification of 4-hydroxy hexenal 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).

### Description

4-hydroxy Hexenal is a lipid peroxidation product derived from oxidized ω-3 fatty acids such as DHA.<sup>1,2</sup>

- 1. van Kuijk, F.J.G.M., Holte, L.L., and Dratz, E.A. 4-Hydroxyhexenal: A lipid peroxidation product derived from oxidized docosahexaenoic acid. Biochim. Biophys. Acta 1043, 116-118 (1990).
- van Kuijk, F.J.G.M., Siakotos, A.N., Fong, L.G., et al. Quantitative measurement of 4-hydroxyalkenals in oxidized low-density lipoprotein by gas chromatography-mass spectrometry. Anal. Biochem. 224, 420-424 (1995).

WARNING: This product is for laboratory research only: not for administration to humans. Not for human or veterinary DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all. of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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