

PRODUCT INFORMATION



9(S)-HODE-d₄ MaxSpec[®] Standard

Item No. 25368

CAS Registry No.: 890955-25-6

Formal Name: 9S-hydroxy-10E,12Z-octadecadienoic-9,10,12,13-d₄ acid

MF: C₁₈H₂₈D₄O₃

FW: 300.5

Purity: ≥95%

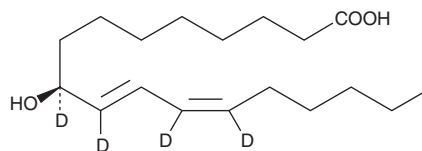
Supplied as: A solution in ethanol; in a deactivated glass ampule

Concentration: 10 µg/ml (nominal); see certificate of analysis for verified concentration

Storage: -20°C

Stability: ≥7 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*

Special Conditions: Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.



Description

9(S)-HODE-d₄ is intended for use as an internal standard for the quantification of 9-HODE by GC- or LC-MS. (±)-9-HODE is formed *via* non-enzymatic oxidation of linoleic acid (Item Nos. 90150 | 90150.1 | 21909).¹ 9(S)-HODE and 9(R)-HODE are formed by lipoxygenase- and cyclooxygenase-mediated oxidation of linoleic acid, respectively.²⁻⁴

9(S)-HODE-d₄ MaxSpec[®] standard is a quantitative grade standard of 9(S)-HODE-d₄ (Item No. 338410) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This 9(S)-HODE-d₄ MaxSpec[®] standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. **Note:** *The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.*

References

1. Gardner, H.W. Soybean lipoxygenase-1 enzymically forms both (9S)- and (13S)-hydroperoxides from linoleic acid by a pH-dependent mechanism. *Biochim. Biophys. Acta* **1001(3)**, 274-281 (1989).
2. Spiteller, P. and Spiteller, G. 9-Hydroxy-10,12-octadecadienoic acid (9-HODE) and 13-hydroxy-9,11-octadecadienoic acid (13-HODE): Excellent markers for lipid peroxidation. *Chem. Phys. Lipids* **89(2)**, 131-139 (1997).
3. Kühn, H., Belkner, J., and Wiesner, R. Subcellular distribution of lipoxygenase products in rabbit reticulocyte membranes. *Eur. J. Biochem.* **191(1)**, 221-227 (1990).
4. Godessart, N., Camacho, M., López-Belmonte, J., *et al.* Prostaglandin H-synthase-2 is the main enzyme involved in the biosynthesis of octadecanoids from linoleic acid in human dermal fibroblasts stimulated with interleukin-1β. *J. Invest. Dermatol.* **107(5)**, 726-732 (1996).

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.

WARRANTY AND LIMITATION OF REMEDY

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