

# PRODUCT INFORMATION



## Linoleic acid-d<sub>11</sub> ethyl ester

Item No. 37973

**Formal Name:** 9Z,12Z-octadecadienoic-14,14,15,15,16,16,17,17,18,18,18-d<sub>11</sub> acid, ethyl ester

**Synonyms:** C18:2 (cis-9,12)-d<sub>11</sub> ethyl ester, Ethyl cis-9,12-Octadecadienoate-d<sub>11</sub>, Ethyl Linoleate-d<sub>11</sub>, Telfairic Acid-d<sub>11</sub> ethyl ester, SFE 22:4-d<sub>11</sub>

**MF:** C<sub>20</sub>H<sub>25</sub>D<sub>11</sub>O<sub>2</sub>

**FW:** 319.6

**Chemical Purity:** ≥98% (Linoleic Acid ethyl ester)

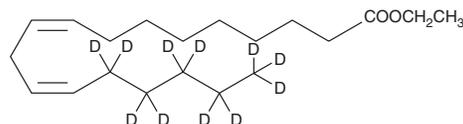
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>11</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A 1 mg/ml solution in ethanol

**Storage:** -20°C

**Stability:** ≥2 years



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

### Laboratory Procedures

Linoleic acid-d<sub>11</sub> ethyl ester is intended for use as an internal standard for the quantification of linoleic acid ethyl ester (Item No. 10008198) 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).

Linoleic acid-d<sub>11</sub> ethyl ester is supplied as a solution in ethanol. A stock solution may be made by dissolving the linoleic acid-d<sub>11</sub> ethyl ester in the solvent of choice, which should be purged with an inert gas. Linoleic acid-d<sub>11</sub> ethyl ester is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of linoleic acid-d<sub>11</sub> ethyl ester in these solvents is approximately 100 mg/ml.

### Description

Linoleic acid ethyl ester is an esterified form of linoleic acid (Item Nos. 90150 | 90150.1 | 21909). It is active against the bacteria *S. mutans*, *A. actinomycetemcomitans*, *P. gingivalis*, *S. gordonii*, and *S. sanguis* and the fungus *C. albicans* when used at a concentration of 25 µg/ml.<sup>1</sup> Linoleic acid ethyl ester (3 mg/kg) prevents arteriosclerosis in rabbits fed a high-cholesterol diet.<sup>2</sup>

### References

- Huang, C.B., George, B., and Ebersole, J.L. Antimicrobial activity of n-6, n-7 and n-9 fatty acids and their esters for oral microorganisms. *Arch. Oral Biol.* **55(8)**, 555-560 (2010).
- Datey, K.K., Purandare, N.M., and Dalvi, C.P. Ethyl linoleate as an antiatherogenic agent. An experimental study in rabbits. *Angiology* **17(10)**, 732-737 (1966).

#### 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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