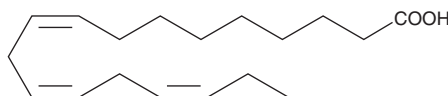


PRODUCT INFORMATION

α -Linolenic Acid

Item No. 90210

CAS Registry No.: 463-40-1
Formal Name: 9Z,12Z,15Z-octadecatrienoic acid
Synonyms: ALA, C18:3 n-3, C18:3 (9Z,12Z,15Z), FA 18:3
MF: $C_{18}H_{30}O_2$
FW: 278.4
Purity: $\geq 98\%$
Supplied as: A neat oil
Storage: -20°C
Stability: ≥ 2 years



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

Laboratory Procedures

α -Linolenic acid (ALA) is supplied as a neat oil. A stock solution may be made by dissolving the ALA in the solvent of choice, which should be purged with an inert gas. ALA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ALA in these solvents is approximately 100 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ALA can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of ALA in PBS (pH 7.2) is approximately 100 $\mu\text{g}/\text{ml}$ and approximately 1 mg/ml in 0.15 M Tris-HCl (pH 8.5). We do not recommend storing the aqueous solution for more than one day.

Description

ALA is an essential ω -3 polyunsaturated fatty acid found in plants.¹ It is converted to the longer-chain fatty acids eicosapentaenoic (Item Nos. 90110 | 90110.1 | 21908), docosapentaenoic (Item Nos. 90165 | 21907), and docosahexaenoic acid (Item No. 90310).² It is also catabolized via fatty acid β -oxidation for energy or the synthesis of saturated and monounsaturated fatty acids, or stored in adipose tissue. Dietary consumption of α -linolenic acid-containing foods is positively associated with a moderately lower risk of cardiovascular disease.¹

References

1. Pan, A., Chen, M., Chowdhury, R., et al. α -Linolenic acid and risk of cardiovascular disease: A systematic review and meta-analysis. *Am. J. Clin. Nutr.* **96**(6), 1262-1273 (2012).
2. Burdge, G.C. Metabolism of α -linolenic acid in humans. *Prostaglandins Leukot. Essent. Fatty Acids* **75**(3), 161-168 (2006).

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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