

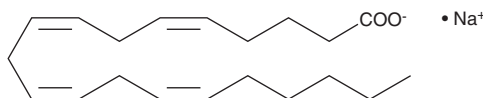
PRODUCT INFORMATION



Arachidonic Acid (sodium salt)

Item No. 10006607

CAS Registry No.: 6610-25-9
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoic acid, monosodium salt
Synonyms: FA 20:4, Sodium Arachidonate
MF: C₂₀H₃₁O₂ • Na
FW: 326.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

Arachidonic acid (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the arachidonic acid (sodium salt) in the solvent of choice, which should be purged with an inert gas. Arachidonic acid (sodium salt) is soluble in the organic solvent ethanol at a concentration of approximately 1.5 mg/ml.

Arachidonic acid (sodium salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, arachidonic acid (sodium salt) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Arachidonic acid (sodium salt) has a solubility of approximately 0.5 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Caution: The sodium salts of arachidonic acid are very sensitive to oxidation and will turn dark yellow to orange and deteriorate rapidly in air. Once opened the product must be used quickly or transferred into an inert atmosphere or nitrogen as soon as possible.

Description

Polyunsaturated fatty acids (PUFAs) are essential nutrients that show distinct deficiency syndromes when not present in adequate amounts in the diet.^{1,2} Virtually all cellular arachidonic acid is esterified in membrane phospholipids where its presence is tightly regulated through multiple interconnected pathways.³ Free arachidonic acid is a transient, critical substrate for the biosynthesis of eicosanoid second messengers. Receptor-stimulated release, metabolism, and re-uptake of free arachidonate are all important aspects of cell signalling and inflammation.⁴

References

1. Simopoulos, A.P. Omega-3 fatty acids in health and disease and in growth and development. *Am. J. Clin. Nutr.* **54**, 438-463 (1991).
2. Holman, R.T. Control of polyunsaturated acids in tissue lipids. *J. Am. Coll. Cardiol.* **5**, 183-211 (1986).
3. Nixon, A.B., Greene, D.G., and Wykle, R.L. Comparison of acceptor and donor substrates in the CoA-independent transacylase reaction in human neutrophils. *Biochim. Biophys. Acta* **1300**, 187-196 (1996).
4. Burgoyne, R.D. and Morgan, A. The control of free arachidonic acid levels. *Trends Biochem. Sci.* **15**, 365-366 (1990).

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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