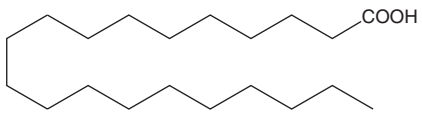
PRODUCT INFORMATION

Arachidic Acid

Item No. 9000339

CAS Registry No.: 506-30-9
Formal Name: eicosanoic acid
Synonyms: Arachic Acid, C20:0, *n*-Eicosanoic Acid, FA 20:0, Icosanoic Acid, NSC 93983
MF: $C_{20}H_{40}O_2$
FW: 312.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Arachidic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the arachidic acid in an organic solvent purged with an inert gas. Arachidic acid is soluble in organic solvents such as ethanol and dimethyl formamide (DMF). The solubility of arachidic acid in these solvents is approximately 0.1 and 2 mg/ml, respectively.

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

Description

Arachidic acid is a long-chain saturated fatty acid that has been found in peanut butter and anaerobic fungi.[1,2] It inhibits rabbit neutrophil aggregation induced by N-formyl-methionyl-leucyl-phenylalanine (fMLP; Item No. 21495) when used at a concentration of 5 µM.[3] Formulations containing arachidic acid have been used as surfactants in the manufacture of soaps and cosmetics.

Reference

1. Negoita, M., Mihai, A.L., Adascalului, A., *et al.* Comparison of the fatty acid composition of peanut butter by applying different fat extraction procedures. *Rev. Chim. (Bucharest)* **69(11)**, 3023-3032 (2018).
2. Koppová, I., Novotná, Z., Štrosová, L., *et al.* Analysis of fatty acid composition of anaerobic rumen fungi. *Folia Microbiol. (Praha)* **53(3)**, 217-220 (2008).
3. Naccache, P.H., Moiski, T.F., Volpi, M., *et al.* Modulation of rabbit neutrophil aggregation and degranulation by free fatty acids. *J. Leukoc. Biol.* **36(3)**, 333-340 (1984).

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