



168 Tressler Street
Pleasant Gap, PA 16823
Tel: 800-342-3595 / 814-359-5060
Fax: 814-359-5062
Email: customerservice@matreya.com
Web: www.matreya.com

PRODUCT DATA SHEET

PUFA-3 mix (qualitative)

Catalog number: 1177

Synonyms: Polyunsaturated fatty acids mix

Source: Natural, Menhaden oil

Storage: -20°C

Solubility: Alcohols, Hexane, Chloroform

TLC System: Hexane/ Ethyl ether (85:15)

GC Conditions

Column: Omegawax 250 30m x 0.25mm x 0.25µm

Oven: 205°C isothermal

Carrier: Helium @ 30cm/sec.

Detector: FID, 260 °C

Injector: 250°C

Elution Order Carbon Number

1	C14:0
2	C16:0
3	C16:1 ω7
4	C16:2 ω4
5	C16:3 ω4
6	C16:4 ω1
7	C18:0
8	C18:1 ω9
9	C18:1 ω7
10	C18:2 ω6
11	C18:2 ω4

Elution Order Carbon Number

12	C18:3 ω4
13	C18:3 ω3
14	C18:4 ω3
15	C20:1 ω9
16	C20:4 ω6
17	C20:4 ω3
18	C20:5 ω3
19	C21:5 ω3
20	C22:5 ω3
21	C22:6 ω3

Application notes:

This polyunsaturated fatty acid mixture contains 18 naturally occurring omega fatty acids and 3 saturated fatty acids. They are all methyl esters for the qualitative identification of unknowns. The product is a naturally occurring mixture from Menhaden fish oil and is an excellent standard for identifying unknown omega fatty acids in samples.¹ Research has shown a reduction in some cancers with the use of fish oils² but it can cause bacterial complications.³ Because it is extracted from natural materials, relative peak sizes for the mix may vary from lot to lot. This is a qualitative mixture and should not be used for quantitative purposes.

Selected References:

1. Thomas C. Y. Hsleh, Stephen S. Williams, Warinda Vejaphan and Samuel P. Meyers "Characterization of volatile components of menhaden fish (Brevoortia tyrannus) oil" *Journal of the American Oil Chemists' Society*, Jan. Vol. 66:1 pp. 114-117, 1989
2. Yu Shao, Lani Pardini and Ronald S. Pardini "Dietary Menhaden Oil Enhances Mitomycin C Antitumor Activity Toward Human Mammary Carcinoma MX-1" *Lipids*, Nov. Vol. 30:11 pp. 1035, 1995
3. K. L. Fritsche, L. M. Shahbazian, C. Feng and J. N. Berg "Dietary fish oil reduces survival and impairs bacterial clearance in C3H/He mice challenged with *Listeria monocytogenes*" *Clinical Science*, 92(95-101), 1997

All chemicals listed are for investigational research purposes only. They are not intended for human consumption or to be used in food or food additives. None are for general drug or medicinal use on humans. We believe that the information, offered in good faith, is accurate.