



>>Entry Name: 4,7,10,13,16,19-Docosahexaenoic acid



CAS Registry Number: 2091-24-9

Extra CAS Registry Numbers(s): 25167-62-8

Molecular Formula: C₂₂H₃₂O₂

Molecular Weight: 328.494

Accurate Mass: 328.24023

Percentage Composition: C 80.44%; H 9.82%; O 9.74%

>>Variant: (*all-Z*)-form

Synonym(s): Clupanodonic acid. **Doconexent**, INN. Cervonic acid

CAS Registry Number: 6217-54-5

Extra CAS Registry Numbers(s): 32839-18-2

Type of Compound Code(s): XA2290 XA5970 VA0600 XA1645 XA5640 XA1650

Molecular Formula: C₂₂H₃₂O₂

Molecular Weight: 328.494

Accurate Mass: 328.24023

Percentage Composition: C 80.44%; H 9.82%; O 9.74%

Biological Source: Metabolic prod. of α -Linolenic acid present in fish oils and in many phospholipids. Tuna eyeballs are a major source

Use/Importance: Extensively marketed as a dietary supplement in Japan. Essential for the functional development of nervous system including retina. Modulates arachidonic metab. and has antiinflammatory effects. May also depress platelet aggregation, augment efficiency of anticancer drugs, prevent arrhythmia and reduce serum cholesterol.

Platelet aggregation inhibitor. Antihypertensive and antihypercholesterolaemic activities. Putative nootropic agent

Calculated Log P Data: Log P 7.44 (uncertain value) (calc)

Other Data: Component of Omega-3 Marine Triglycerides [BRD35-A](#)

Aldrich: 27155-1

Fluka: 43938

Sigma: D8782

Supelco: R30-3930

>>Derivative: Me ester

CAS Registry Number: 2566-90-7

Extra CAS Registry Numbers(s): 301-01-9

Molecular Formula: C₂₃H₃₄O₂

Molecular Weight: 342.52

Accurate Mass: 342.25588

Percentage Composition: C 80.65%; H 10.00%; O 9.34%

Physical Description: Oil

>>Derivative: Et ester

CAS Registry Number: 81926-94-5

Extra CAS Registry Numbers(s): 84494-72-4

Molecular Formula: C₂₄H₃₆O₂

Molecular Weight: 356.547

Accurate Mass: 356.27153

Percentage Composition: C 80.85%; H 10.18%; O 8.97%

Physical Description: Oil

References:

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- Hands, A.R. *et al.*, *Biochem. J.*, 1963, **87**, 263
- Beach, D.H. *et al.*, *Biochim. Biophys. Acta*, 1974, **369**, 16, (*biosynth*)
- Morales, R.W. *et al.*, *Biochim. Biophys. Acta*, 1976, **431**, 206, (*isol*)
- Sanders, T.A.B. *et al.*, *Am. J. Clin. Nutr.*, 1978, **31**, 805
- Moreno, V.J. *et al.*, *Lipids*, 1979, **14**, 15, (*biosynth*)
- Selivonchick, D.P. *et al.*, *Lipids*, 1979, **14**, 66, (*isol*)
- Dyerberg, J., *Nutr. Rev.*, 1986, **44**, 125, (*rev*)
- Bazan, N.G., *Prog. Clin. Biol. Res.*, 1989, **312**, 95, (*rev*)
- Kim, H.Y. *et al.*, *Prostaglandins*, 1990, **40**, 539, (*metab*)
- Anderson, R.E. *et al.*, *Adv. Exp. Med. Biol.*, 1992, **318**, 285, (*rev*)
- Aursand, M. *et al.*, *Chem. Phys. Lipids*, 1992, **62**, 239, (*cmr*)
- Taber, D.F. *et al.*, *J.O.C.*, 1995, **60**, 139-142, (*Et ester, synth, pmr, cmr, ir, ms*)
- Sandri, J. *et al.*, *J.O.C.*, 1995, **60**, 6627, (*synth, ir, pmr, cmr*)