



**>>Entry Name: Eicosanoic acid**

**Synonym(s):** Arachidic acid. Icosanoic acid. Arachic acid

**CAS Registry Number:** 506-30-9

**Related CAS Registry Numbers(s):** 14923-81-0

**Type of Compound Code(s):** VA0300

$\text{H}_3\text{C}(\text{CH}_2)_{18}\text{COOH}$

**Molecular Formula:**  $\text{C}_{20}\text{H}_{40}\text{O}_2$

**Molecular Weight:** 312.535

**Accurate Mass:** 312.30283

**Percentage Composition:** C 76.86%; H 12.90%; O 10.24%

**Biological Source:** Constit. of arachis (*Arachis hypogaea*) (ground-nut) oil glycerides. Widely distributed in other seed oils

**Physical Description:** Cryst. (EtOH)

**Melting Point:** Mp 77°

**Boiling Point:** Bp<sub>1</sub> 203-205°

**Solubility:** BERDY SOL: Sol.  $\text{CHCl}_3$ , hexane; poorly sol.  $\text{H}_2\text{O}$

**Aldrich:** E23-1

**Fluka:** 10933

**Sigma:** A3631

**>>Derivative: Me ester**

**CAS Registry Number:** 1120-28-1

**Molecular Formula:**  $\text{C}_{21}\text{H}_{42}\text{O}_2$

**Molecular Weight:** 326.562

**Accurate Mass:** 326.31848

**Percentage Composition:** C 77.24%; H 12.96%; O 9.80%

**Melting Point:** Mp 45.8-46.3°

**Boiling Point:** Bp<sub>10</sub> 215-216°. Bp<sub>2</sub> 188°

**Aldrich:** 25222-0

**Fluka:** 10941

**Sigma:** A3881

**>>Derivative: Et ester**

**CAS Registry Number:** 18281-05-5

**Type of Compound Code(s):** VA0370

**Molecular Formula:**  $\text{C}_{22}\text{H}_{44}\text{O}_2$

**Molecular Weight:** 340.588

**Accurate Mass:** 340.33413

**Percentage Composition:** C 77.58%; H 13.02%; O 9.40%

**Biological Source:** Constit. of *Cassia javanica* leaves

**Melting Point:** Mp 41.4-42°

**Boiling Point:** Bp<sub>100</sub> 295-297°. Bp<sub>2</sub> 186-187°

**Sigma:** A9010

**>>Derivative: Amide**

**Molecular Formula:**  $\text{C}_{20}\text{H}_{41}\text{NO}$

**Molecular Weight:** 311.55

**Accurate Mass:** 311.318814

**Percentage Composition:** C 77.10%; H 13.26%; N 4.50%; O 5.14%

**Melting Point:** Mp 109°

**>>Derivative: Nitrile**

**Molecular Formula:**  $\text{C}_{20}\text{H}_{39}\text{N}$

**Molecular Weight:** 293.535

**Accurate Mass:** 293.308249

**Percentage Composition:** C 81.84%; H 13.39%; N 4.77%

**Melting Point:** Mp 49.5°