



**SIGMA-ALDRICH**

3050 Spruce Street  
Saint Louis, Missouri 63103 USA  
Telephone 800-325-5832 • (314) 771-5765  
Fax (314) 286-7828  
email: techserv@sial.com  
sigma-aldrich.com

## Product Information

### Oleic acid

Product Number **O1008**

Storage Temperature -0 °C

#### Product Description

Molecular Formula:  $C_{18}H_{34}O_2$

Molecular Weight: 282.5

CAS Number: 112-80-1

Density: 0.891 gm/ml

Melting Point: 13 °C

Oleic acid is a major component of many plant seed oils.<sup>1</sup> Plant derived oils are a source for its isolation.<sup>2</sup>

Lipid oxidation, mechanisms, products and biological significance for fatty acids, including linolenic acid, linoleic acid and oleic acid have been discussed.<sup>3</sup>

A method to remove traces of hydroperoxides and other conjugated lipid impurities commonly present in commercial samples has been published.<sup>4</sup> Removal of the impurities from oleic and linoleic acids was done by anaerobic low temperature crystallization from acetonitrile.

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

Oleic acid is soluble in chloroform (50 mg/ml) yielding a clear, colorless solution.

Oleic acid is practically insoluble in water; soluble in alcohol, benzene, chloroform, ether, fixed and volatile oils.<sup>2</sup>

#### Storage/Stability

The product should be kept well closed and protected from light. The neat liquid on exposure to air, especially when impure, can cause oxidization and the oleic acid can acquire a yellow to brown color and a rancid odor.<sup>2</sup>

The dissolved product should be kept in glass containers and protected from light. The solvents that dissolve oleic acid may interact with plastic. There should be <1% degradation per year when stored in the freezer at 50 mg/ml in chloroform.

#### References

1. "Oil Crops of the world", Eds. Robbelen, G., et al., pg. 66-67 (1989).
2. The Merck Index, 12th ed., Entry# 6965
3. Frankel, E.N., J. Am. Oil Society, **61**, 1908 (1984).
4. Auridi, R. et al., Purification of oleic acid and linoleic acid. J. Lipid Research, **24(4)**, 485-488 (1983).

RLG/NSB 5/06

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.