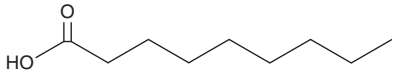
PRODUCT INFORMATION

Nonanoic Acid

Item No. 26718

CAS Registry No.: 112-05-0
Synonyms: C9:0, FA 9:0, Nonoic Acid, Nonylic Acid, NSC 62787, NSC 65450, NSC 65455, Pelargonic Acid
MF: $C_9H_{18}O_2$
FW: 158.2
Purity: ≥98%
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Nonanoic acid is supplied as a neat oil. A stock solution may be made by dissolving the nonanoic acid in the solvent of choice, which should be purged with an inert gas. Nonanoic acid is soluble in the organic solvent chloroform at a concentration of approximately 2.5 mg/ml.

Description

Nonanoic acid is a medium-chain saturated fatty acid. It is a volatile compound that has been found in raw and roasted pecans.[1] Nonanoic acid inhibits mycelial growth and spore germination in the plant pathogenic fungi *M. roreri* and *C. perniciosa* in a concentration-dependent manner.[2] It has herbicidal activity against a variety of species, including crabgrass.[3,4] Nonanoic acid has been used as an internal standard for the quantification of free fatty acids in olive mill waste waters.[5] Formulations containing nonanoic acid have been used in indoor and outdoor weed control and as cleansing and emulsifying agents in cosmetics.

References

1. Gong, Y., Kerrihard, A.L., and Pegg, R.B. Characterization of the volatile compounds in raw and roasted Georgia pecans by HS-SPME-GC-MS. *J. Food Sci.* **83(11)**, 2753-2760 (2018).
2. Aneja, M., Gianfagna, T.J., and Hebbar, P.K. Trichoderma harzianum produces nonanoic acid, an inhibitor of spore germination and mycelial growth of two cacao pathogens. *Physiol. Mol. Plant Pathol.* **67(6)**, 304-307 (2005).
3. Fukuda, M., Tsujino, Y., Fujimori, T., *et al.* Phytotoxic activity of middle-chain fatty acids I: Effects on cell constituents. *Pesicide Biochem. Physiol.* **80(3)**, 143-150 (2004).
4. Miller, T.W. Natural herbicides and amendments for organic weed control. *Crop protection products for organic agriculture.* Felsot, A.S. and Racke, K.D., editors, American Chemical Society (2006).
5. Procida, G. and Ceccon, L. Gas chromatographic determination of free fatty acids in olive mill waste waters. *Anal. Chim. Acta* **561(1-2)**, 103-106 (2006).

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