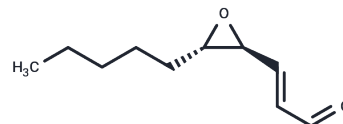


trans-4,5-epoxy-2(E)-Decenal

Chemical Properties

CAS No. :	134454-31-2
Formula:	C ₁₀ H ₁₆ O ₂
Molecular Weight:	168.236
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Polyunsaturated fatty acids such as arachidonate and linoleate, while essential to health maintenance, are subject to random peroxidation by ambient oxygen, resulting in fragmented and reactive decomposition products. One prominent autoxidation product of either trilinolein or arachidonic acid is trans-4,5-epoxy-2(E)-decenal. One prominent autoxidation product of either trilinolein or arachidonic acid is trans-4,5-epoxy-2(E)-decenal. This aldehyde is responsible for a pungent metallic flavor of decomposed lipids, with a detection threshold of 1.5 pg/l in air.[1] trans-4,5-epoxy-2(E)-Decenal also reacts with nucleophiles (lysine amino groups) on proteins, leading to loss of cell function and viability.[2] This reactive aldehyde is therefore a useful tool in elucidating the effects of peroxidative damage in experimental models.
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Solubility Information

Solubility	DMF: 30 mg/mL Ethanol: 30 mg/mL DMSO: 30 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.9439 mL	29.7194 mL	59.4389 mL
5 mM	1.1888 mL	5.9439 mL	11.8878 mL
10 mM	0.5944 mL	2.9719 mL	5.9439 mL
50 mM	0.1189 mL	0.5944 mL	1.1888 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Lin, J., Fay, L.B., Welts, D.H., et al. Quantification of key odorants formed by autoxidation of arachidonic acid using isotope dilution assay. *Lipids* 36(7), 749-756 (2001).

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