

Methyl levulinate

Chemical Properties

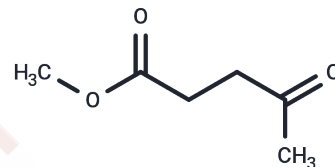
CAS No. : 624-45-3

Formula: C₆H₁₀O₃

Molecular Weight: 130.14

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Methyl levulinate is a green reagent derived from biomass, widely used in biochemical experiments and drug synthesis research.
Targets(IC50)	Others
In vitro	Methyl levulinate was converted to methyl 4-alkoxyvalerate by reductive etherification of fatty alcohols, resulting in biomass-derived surfactants with very good surface tension and critical micelle concentration properties. Among different bifunctional acid/metal catalysts, Pd gave the best Results on carbonic acid-containing sites. The reaction occurs via the formation of an enol ether intermediate followed by hydrogenation. Pd in high-density planes is the active hydrogenating species and the optimum crystal size was found to be around 10 nm. The reductive etherification of fatty alcohols was extended to other aliphatic and cyclic ketones and aldehydes obtained from biomass, and excellent Results were obtained on supported Pd catalysts using the reaction route and experimental conditions described in this work. [1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	7.684 mL	38.4202 mL	76.8403 mL
5 mM	1.5368 mL	7.684 mL	15.3681 mL
10 mM	0.7684 mL	3.842 mL	7.684 mL
50 mM	0.1537 mL	0.7684 mL	1.5368 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Garcia-Ortiz A, et al. Transforming Methyl Levulinate into Biosurfactants and Biolubricants by Chemoselective Reductive Etherification with Fatty Alcohols. ChemSusChem. 2020 Feb 21;13(4):707-714.

Montejano-Nares E, et al. Modeling and Thermodynamic Studies of γ -Valerolactone Production from Bio-derived Methyl Levulinate. Glob Chall. 2023 Feb 22;7(4):2200208.

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