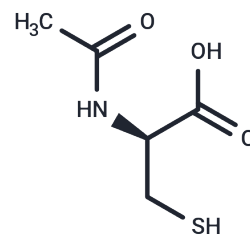


## N-Acetyl-D-cysteine

## Chemical Properties

CAS No. :	26117-28-2
Formula:	C <sub>5</sub> H <sub>9</sub> NO <sub>3</sub> S
Molecular Weight:	163.19
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	N-Acetyl-D-cysteine exhibits antioxidant activities and scavenges ROS through its thiol group reaction.
Targets(IC50)	Reactive Oxygen Species, ROS
In vitro	Consistent with the known stereoselectivity of many biological processes, the unnatural D isomer of N-acetylcysteine failed to increase hepatic glutathione. Liver concentrations remained similar to control suggesting that the D isomer was unable to increase the rate of glutathione synthesis. The D isomer further differed from its L enantiomer in failing to increase the plasma concentration and the urinary excretion of inorganic sulfate. Congruent with these observations, much more N-acetyl-D-cysteine (47% of dose) was recovered unchanged in 24 hr urine than N-acetyl-L-cysteine (6.1% of dose)[2].

## Solubility Information

Solubility	H <sub>2</sub> O: 122.5 mg/mL (750.66 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.1278 mL	30.6391 mL	61.2783 mL
5 mM	1.2256 mL	6.1278 mL	12.2557 mL
10 mM	0.6128 mL	3.0639 mL	6.1278 mL
50 mM	0.1226 mL	0.6128 mL	1.2256 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

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Maika Deffieu, et al. Glutathione Participates in the Regulation of Mitophagy in Yeast. J Biol Chem. 2009 May 29;284(22):14828-37.

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