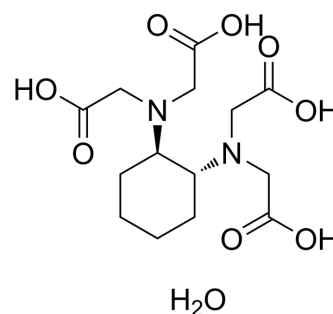


## DCTA monohydrate

<b>Cat. No.:</b>	HY-W013178
<b>CAS No.:</b>	125572-95-4
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>24</sub> N <sub>2</sub> O <sub>9</sub>
<b>Molecular Weight:</b>	364.35
<b>Target:</b>	Biochemical Assay Reagents
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (68.62 mM); ultrasonic and warming and heat to 60°C					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		2.7446 mL	13.7231 mL	27.4461 mL
		<b>5 mM</b>		0.5489 mL	2.7446 mL	5.4892 mL
	<b>10 mM</b>		0.2745 mL	1.3723 mL	2.7446 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.86 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	DCTA monohydrate is an organic acid. DCTA refers to N,N,N',N'-tetraacetic acid, which has a strong chelating ability. DCTA monohydrate can be used as a chelating agent and coordination reagent for metal ions. DCTA monohydrate, for example, forms stable complexes with many metal ions, including calcium, magnesium and zinc. DCTA modified with ethylene glycol is selective to calcium ions in the presence of magnesium ions <sup>[1][2]</sup> .
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### REFERENCES

[1]. Nakagawa G, et al. The Selective Chelatometry of Calcium in the Presence of Magnesium with Ethylene Glycol-bis (β-aminoethyl ether)-N, N, N', N'-tetraacetic Acid[J]. Bulletin of the Chemical Society of Japan, 1963, 36(3): 320-324.

[2]. Anisimov AV, et al. Measuring of water transport selectively along the plant root plasmodesmata using gradient nuclear magnetic resonance with paramagnetic doping. Plant Physiol Biochem. 2023 Jan;194:263-270.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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