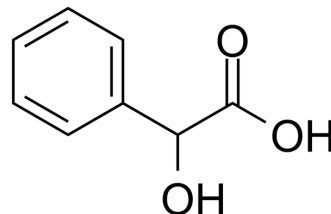


## Mandelic acid

<b>Cat. No.:</b>	HY-W015591		
<b>CAS No.:</b>	90-64-2		
<b>Molecular Formula:</b>	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	152.15		
<b>Target:</b>	Bacterial; Endogenous Metabolite		
<b>Pathway:</b>	Anti-infection; Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (657.25 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	6.5725 mL	32.8623 mL	65.7246 mL
	<b>5 mM</b>	1.3145 mL	6.5725 mL	13.1449 mL
	<b>10 mM</b>	0.6572 mL	3.2862 mL	6.5725 mL
Please refer to the solubility information to select the appropriate solvent.				
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution</li> </ol>			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Mandelic acid ((±)-Mandelic acid), an alpha-hydroxycarboxylic acid, has been widely used as an intermediate of pharmaceutical and fine chemicals. Mandelic acid shows antimicrobial activity and has been used for the research of urinary tract infections and vaginal trichomoniasis. Mandelic acid exhibits high sperm-immobilizing activity and low vaginal irritation <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Human Endogenous Metabolite

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## In Vitro

Mandelic acid ((±)-Mandelic acid) exhibits significant sperm-immobilizing effects and caused mild plasma membrane injury, suggesting that it has potential for development as a future non-surfactant spermicide<sup>[1]</sup>.

Mandelic acid, an alpha-hydroxyacid derived from the hydrolysis of an extract of bitter almonds, has been studied extensively for its possible uses in health care products, such as photoaging, irregular pigmentation, and antimicrobial<sup>[2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

[1]. Xia M, et al. dl-Mandelic acid exhibits high sperm-immobilizing activity and low vaginal irritation: A potential non-surfactant spermicide for contraception. *Biomed Pharmacother.* 2020;126:110104.

[2]. Tang LP, et al. DL-mandelic acid intercalated Zn-Al layered double hydroxide: A novel antimicrobial layered material. *Colloids Surf B Biointerfaces.* 2018;165:111-117.

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

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