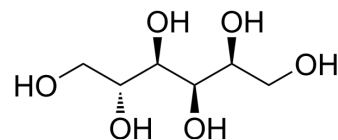


## D-Sorbitol

Cat. No.:	HY-B0400
CAS No.:	50-70-4
Molecular Formula:	C <sub>6</sub> H <sub>14</sub> O <sub>6</sub>
Molecular Weight:	182.17
Target:	Endogenous Metabolite; Bacterial
Pathway:	Metabolic Enzyme/Protease; Anti-infection
Storage:	<div> Powder -20°C 3 years </div> <div> 4°C 2 years </div> <div> In solvent -80°C 2 years </div> <div> -20°C 1 year </div>



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 100 mg/mL (548.94 mM; Need ultrasonic)  
DMSO : 100 mg/mL (548.94 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		5.4894 mL	27.4469 mL	54.8938 mL
	5 mM		1.0979 mL	5.4894 mL	10.9788 mL
	10 mM		0.5489 mL	2.7447 mL	5.4894 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 110 mg/mL (603.83 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

D-Sorbitol (Sorbitol) is a six-carbon sugar alcohol and can be used as a sugar substitute. D-Sorbitol can be used as a stabilizing excipient and/or isotonicity agent, sweetener, humectant, thickener and dietary supplement<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

Microbial Metabolite

Human Endogenous Metabolite

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#### In Vitro

Chemically, D-Sorbitol (Sorbitol) can be produced from glucose or sucrose, by hydrogenation at high temperature. D-Sorbitol (Sorbitol) can also be produced by bacteria such as *Zymomonas mobilis* and *Candida boidini*, by an enzymatic process<sup>[1]</sup>.

D-Sorbitol (Sorbitol) is used as a fast disintegrant in capsules and plasticizer in capsule shells and tablet film coatings. In oral liquids, D-Sorbitol (Sorbitol) is used as a sugar substitute and as a drug stabilizer. D-Sorbitol (Sorbitol) is also used as a solubility enhancer for drugs such as indomethacin. D-Sorbitol (Sorbitol) is commonly used as a stabilizing excipient and/or isotonicity agent in both liquid and lyophilized parenteral protein formulations. D-Sorbitol (Sorbitol) is used in topical formulations as a humectant<sup>[1]</sup>.

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

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#### REFERENCES

[1]. Ranjeet Prasad Dash, et al. Use of sorbitol as pharmaceutical excipient in the present day formulations - issues and challenges for drug absorption and bioavailability. *Drug Dev Ind Pharm*. 2019 Sep;45(9):1421-1429.

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

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