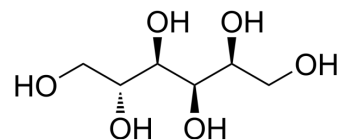


D-Sorbitol

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



SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (548.94 mM; Need ultrasonic)
 DMSO : 100 mg/mL (548.94 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	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^[1].

IC₅₀ & 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^[1].

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^[1].

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

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.

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

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