

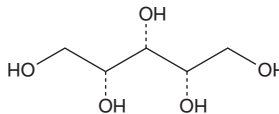
PRODUCT INFORMATION



Xylitol

Item No. 44823

CAS Registry No.: 87-99-0
Synonyms: NSC 25283, meso-Xylitol
MF: $C_5H_{12}O_5$
FW: 152.1
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Xylitol is supplied as a solid. Aqueous solutions of xylitol can be prepared by directly dissolving the solid in aqueous buffers. Xylitol is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Xylitol is a pentose sugar alcohol that has been found in various fruits and vegetables, including plums, strawberries, cauliflower, and pumpkin.^{1,2} It inhibits bacterial biofilm formation in the Lubbock chronic wound biofilm model using *P. aeruginosa*, *S. aureus*, and *E. faecalis* when used at 20% v/v.³ Topical application of xylitol (8.26% w/v) reduces transepidermal water loss in a mouse model of SDS-induced skin irritation.¹ Dietary administration of xylitol (10% in drinking water) improves glucose tolerance and increases serum insulin levels in a rat model of diabetes induced by high-fructose feeding and streptozotocin (STZ; Item No. 13104). Formulations containing xylitol have been used as artificial sweeteners.

References

1. Salli, K., Lehtinen, M.J., Tiihonen, K., *et al.* Xylitol's health benefits beyond dental health: A comprehensive review. *Nutrients* **11**(8), 1813 (2019).
2. Ur-Rehman, S., Mushtaq, Z., Zahoor, T., *et al.* Xylitol: A review on bioproduction, application, health benefits, and related safety issues. *Crit. Rev. Food Sci. Nutr.* **55**(11), 1514-1528 (2015).
3. Dowd, S.E., Sun, Y., Smith, E., *et al.* Effects of biofilm treatments on the multi-species Lubbock chronic wound biofilm model. *J. Wound Care* **18**(12), 508, 510-512 (2009).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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