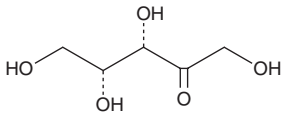
PRODUCT INFORMATION

D-Xylulose

Item No. 20830

CAS Registry No.:	551-84-8
Formal Name:	D-*threo*-2-pentulose
MF:	$C_5H_{10}O_5$
FW:	150.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 278 nm
Supplied as:	A solution in water
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

D-Xylulose is supplied as a solution in water. To change the solvent, simply evaporate the water under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as methanol purged with an inert gas can be used. D-Xylulose is miscible in these solvents.

Description

D-Xylulose is a ketopentose, a monosaccharide containing five carbon atoms and a ketone functional group.[1] It is converted from xylitol in the glucuronate-xylulose pathway. D-Xylulokinase catalyzes the ATP-dependent phosphorylation of D-xylulose to produce xylulose 5-phosphate, which is linked to the pentose-phosphate pathway.[2]

References

1. Nagy, G. and Pohl, N.L.B. Monosaccharide identification as a first step toward *de novo* carbohydrate sequencing: Mass spectrometry strategy for the identification and differentiation of diastereomeric and enantiomeric pentose isomers. *Anal. Chem.* **87(8)**, 4566-4571 (2015).
2. Bunker, D., Bulloch, E.M.M., Dickson, J.M.J., *et al*. Structure and function of human xylulokinase, an enzyme with important roles in carbohydrate metabolism. *J. Biol. Chem.* **288(3)**, 1643-1652 (2013).

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