

**Product Name** : D(+)-Xylose  
**Synonyms** : (+)-Xylose; Wood sugar; Xylose  
**Cat No.** : M19637  
**CAS Number** : 58-86-6  
**Molecular Formula** : C<sub>5</sub>H<sub>10</sub>O<sub>5</sub>  
**Formula Weight** : 150.13  
**Chemical Name** : —

**Description** : Xylose or wood sugar is an aldopentose - a monosaccharide containing five carbon atoms and an aldehyde functional group. It has chemical formula C<sub>5</sub>H<sub>10</sub>O<sub>5</sub> and is 40% as sweet as sucrose. Xylose is also found in mucopolysaccharides of connective tissue and sometimes in the urine. Xylose is the first sugar added to serine or threonine residues during proteoglycan type O-glycosylation. Therefore xylose is involved in the biosynthetic pathways of most anionic polysaccharides such as heparan sulphate and chondroitin sulphate. In medicine xylose is used to test for malabsorption by administering a xylose solution to the patient after fasting. If xylose is detected in the blood and/or urine within the next few hours it has been absorbed by the intestines. Xylose is said to be one of eight sugars which are essential for human nutrition the others being galactose glucose mannose N-acetylglucosamine N-acetylgalactosamine fucose and sialic acid. . Xylose in the urine is a biomarker for the consumption of apples and other fruits.

**Pathway** : Proteasome/Ubiquitin

**Target** : Endogenous Metabolite

**Receptor** : Endogenous Metabolite

**Solubility** : DMSO: 10 mM; Water: Soluble

**SMILES** : O[C@@H]1COC(O)[C@H](O)[C@H]1O

**Storage** : (-20°C)

**Stability** : ≥ 2 years

**Reference** :

1. Shoemaker J D Elliott W H. Automated screening of urine samples for carbohydrates organic and amino acids after treatment with urease.[J]. J Chromatogr 1991 562(1-2):125-138.