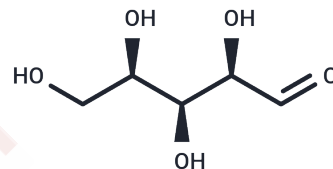


## D-(+)-Xylose

## Chemical Properties

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| CAS No. :         | 58-86-6                                                  |
| Formula:          | C <sub>5</sub> H <sub>10</sub> O <sub>5</sub>            |
| Molecular Weight: | 150.13                                                   |
| Appearance:       | no data available                                        |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year |



## Biological Description

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description   | D-(+)-Xylose (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. |
| Targets(IC50) | Endogenous Metabolite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Solubility Information

|            |                                                                                                                                                            |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solubility | DMSO: 60 mg/mL (399.65 mM), Sonication is recommended.<br>H <sub>2</sub> O: Soluble,<br>( $< 1$ mg/ml refers to the product slightly soluble or insoluble) |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Preparing Stock Solutions

|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 6.6609 mL | 33.3045 mL | 66.6089 mL |
| 5 mM  | 1.3322 mL | 6.6609 mL  | 13.3218 mL |
| 10 mM | 0.6661 mL | 3.3304 mL  | 6.6609 mL  |
| 50 mM | 0.1332 mL | 0.6661 mL  | 1.3322 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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.

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