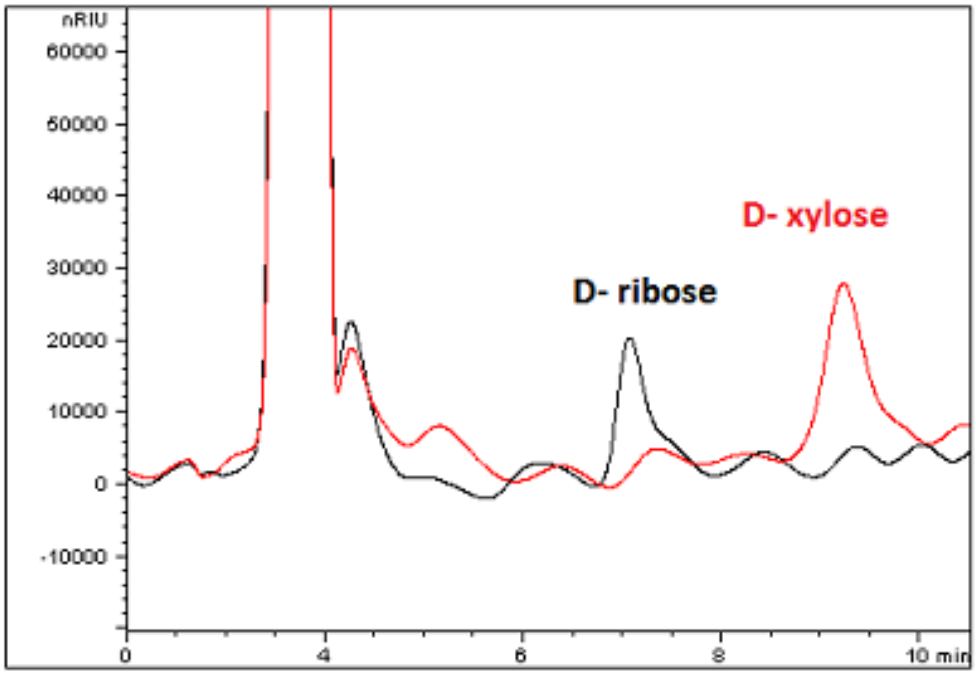
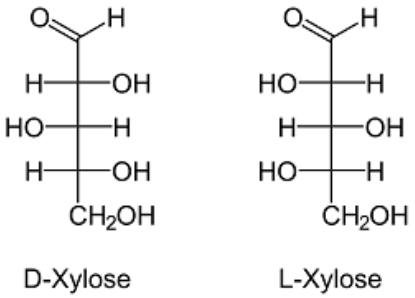
Ribose and Xylose – AppNote

Sugars can be difficult to analyze by HPLC due to their polarity. Columns with amine ligands are often used for retention of simple sugars like Ribose and Xylose, but they have a number of drawbacks. The amine group can form Schiff bases with Aldehydes in the sample, resulting in irreversible deactivation of the ligand's retention functionality.

Poor robustness and column life have been reported for Amine columns for this reason. The Cogent Amide Column avoids this problem because its ligand is less chemically reactive than an amine, while still obtaining good retention and separation of the two sugar analytes.





Peaks:

1. D-Ribose
2. D-Xylose

Method Conditions:

Column: Cogent Amide™, 4 µm, 100 Å

Catalog No.: 40036-10P

Dimensions: 4.6 x 100mm

Mobile Phase: 95% Acetonitrile / 5% DI Water / 0.1% Triethylamine (TEA) (v/v)

Flow Rate: 0.5 mL / minute

Detection: Refractive Index

Injection Volume: 5ul

Sample Preparation: D-Ribose and D-Xylose reference standards (3 mg/mL) in diluent of 50% Acetonitrile / 50% DI Water / 0.1% TEA (v/v)

MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

tel: (762) 380-8900, fax (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com

Note: *Ribose and Xylose are aldopentoses that differ only by a chiral center. In addition to the open chain forms, these sugars exist in equilibrium with ring forms (five or six membered) as well as α and β anomers. Both sugars are highly polar and not generally suitable for conventional Reversed Phase retention.*

Attachment

No 353 Ribose and Xylose.pdf 0.4 Mb Download File

MicroSolv Technology Corporation
9158 Industrial Blvd. NE, Leland, NC 28451
tel. (732) 380-8900, fax (910) 769-9435
Email: customers@mtc-usa.com
Website: www.mtc-usa.com