

Certificate of Analysis

D-(+)-Xylose

PurCert Standard

Product Number	PSR40357	CAS No.	58-86-6
Brand	PureSynth	Lot No.	X40357T0823
Molecular Formula	C ₅ H ₁₀ O ₅	Date of Mfg.	August.2023
Molecular Weight	150.13 g/mol	Date of Exp.	July.2027

Test	Specification	Result
Description	White Crystals	White Crystals
Assay (NMR)	≥ 98.0 %	98.78 %
Water (By KF)	NMT 2.0000 %	1.3391 %
Identification by ¹ H NMR	Conforms to structure	Conforms
Identification by MS	Conforms to molecular mass	Conforms
Identification by IR	Conforms to structure	Conforms

***Traceable to Internal Reference Standard**

Storage Condition: Store at room temperature and keep the container tightly closed.

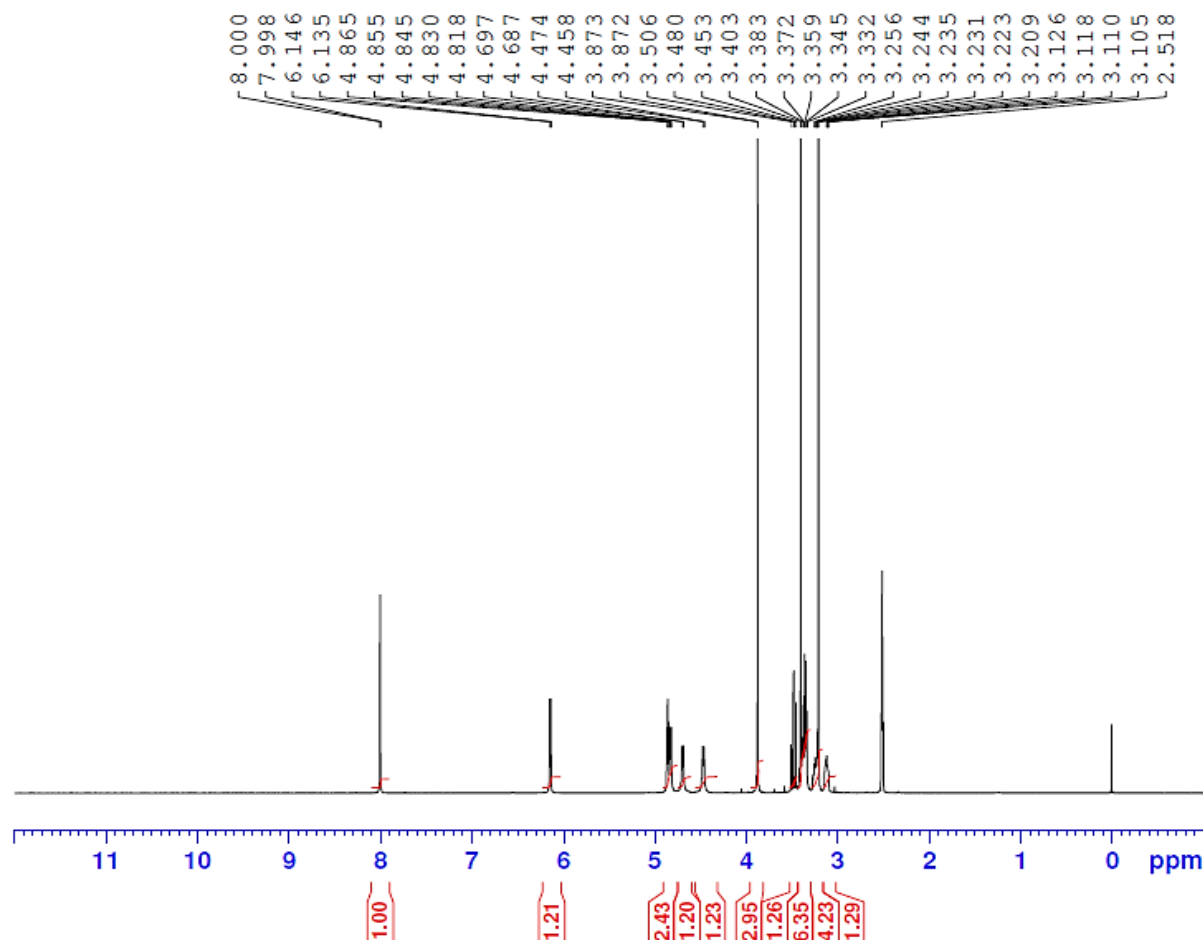
Remark: The batch complies with the prescribed quality of the above specification.

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Assay by NMR

D- (+)-Xylose
B.no-X40357T0823
Assay by ¹H-NMR



Assay (%w/w)	$I(A) \times MW(A) \times \text{No. of H's (B)} \times W(B) \times A(B)$
	$\text{No. of H's (A)} \times W(A) \times I(B) \times MW(B)$

Where

I(A)	the integral of the signal from sample	1.2100
I(B)	the integral of the signal from Internal Standard	1.0000
MW(A)	Molecular weight of sample	150.13
MW(B)	Molecular weight of internal standard (Caffeine)	194.19
W(A)	Weight of sample	6.000
W(B)	Weight of internal Standard	6.400
No. of H's (A)	the number of protons corresponding to the integrated signal of the sample	1.00
No. of H's (B)	the number of protons corresponding to the integrated signal of the internal standard	1.00
A(B)	Potency of the internal standard	99.00

¹H-NMR Assay	98.78
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Purity by NMR: 98.78 %

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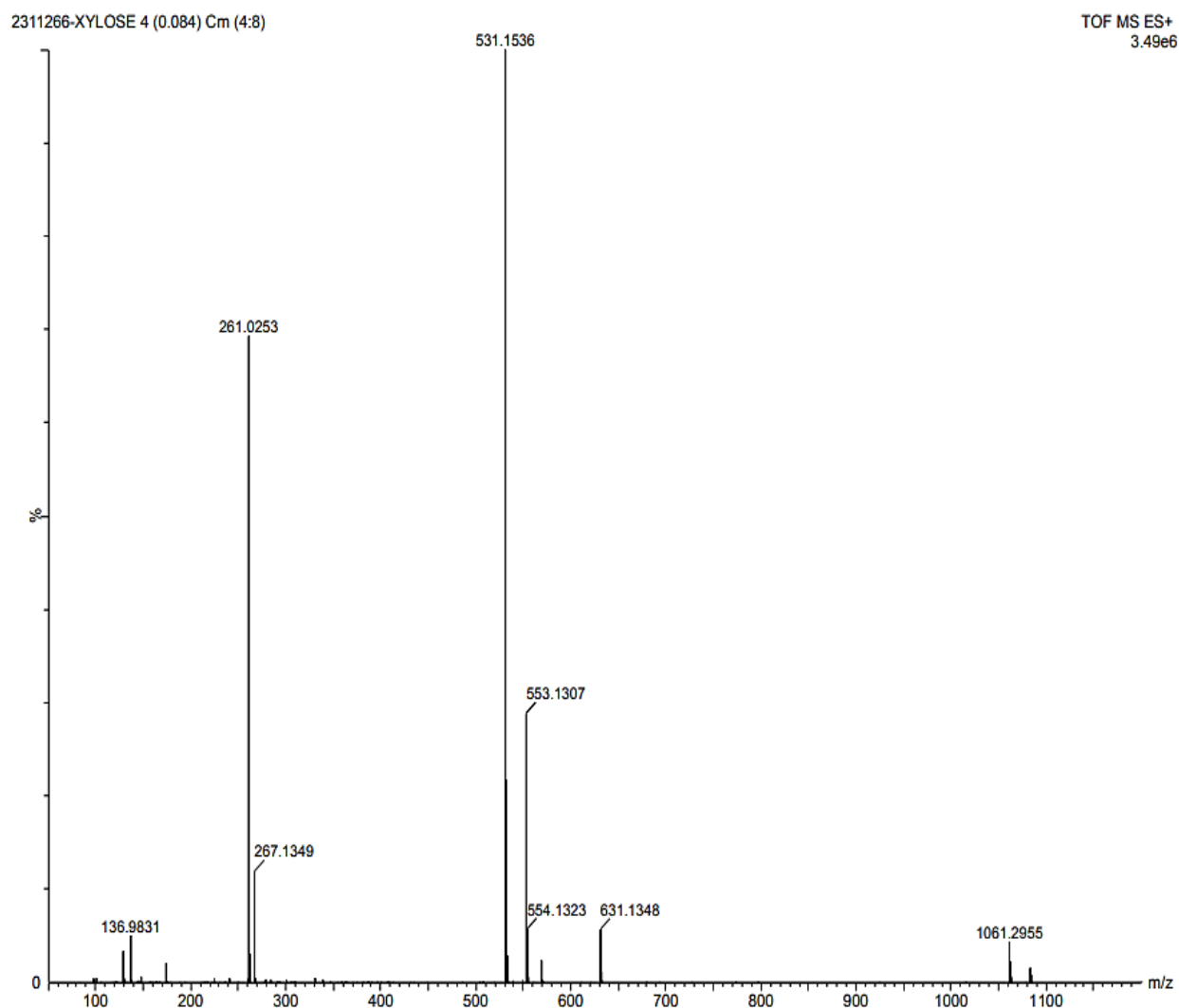
IDENTIFICATION TESTS

MS Spectrum:

Mass by MS:

Product Name: D-(+)-Xylose

Product Code: PSR40357



Identification by MS: Conforms to molecular mass

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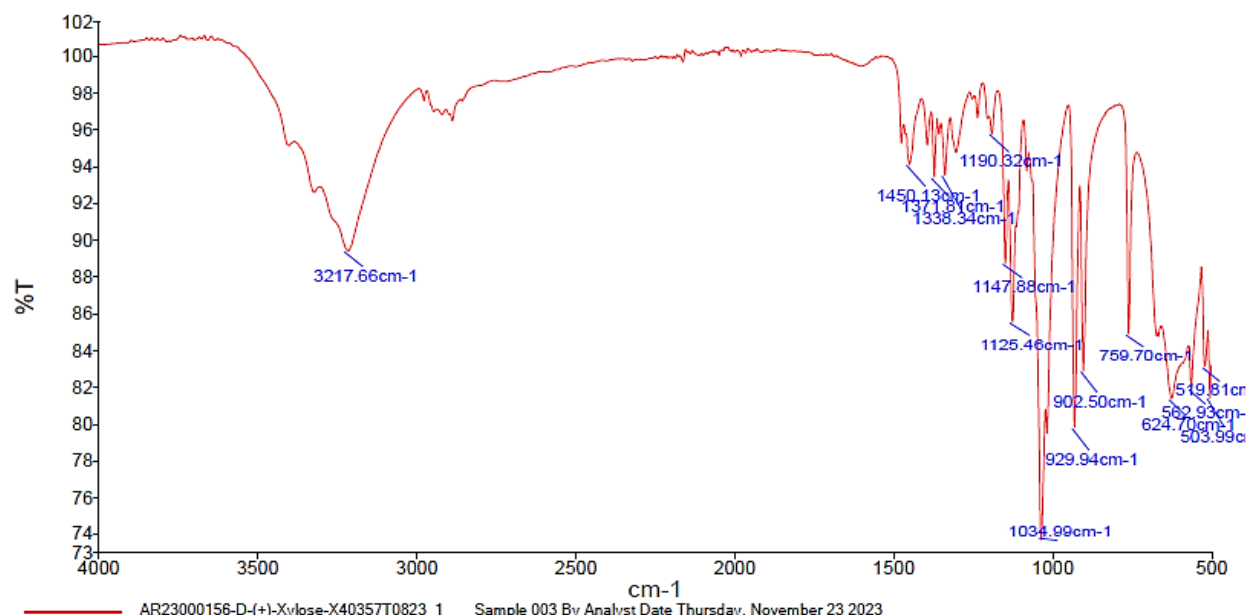
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Infrared spectrum:

Product Name: D-(+)-Xylose

Product Code: PSR40357

Analyst
Date



Source Spectra Results		
Spectrum Name		Number Of Peaks
AR23000156-D-(+)-Xylose-X40357T0823_1		15
List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3217.66	89.43
2	1450.13	94.15
3	1371.81	93.43
4	1338.34	93.54
5	1190.32	95.80
6	1147.88	88.76
7	1125.46	85.56
8	1034.99	73.70
9	929.94	79.84
10	902.50	82.92
11	759.70	84.91
12	624.70	81.39
13	562.93	81.94
14	519.81	83.14
15	503.99	81.44

Identification by IR: Conforms to structure

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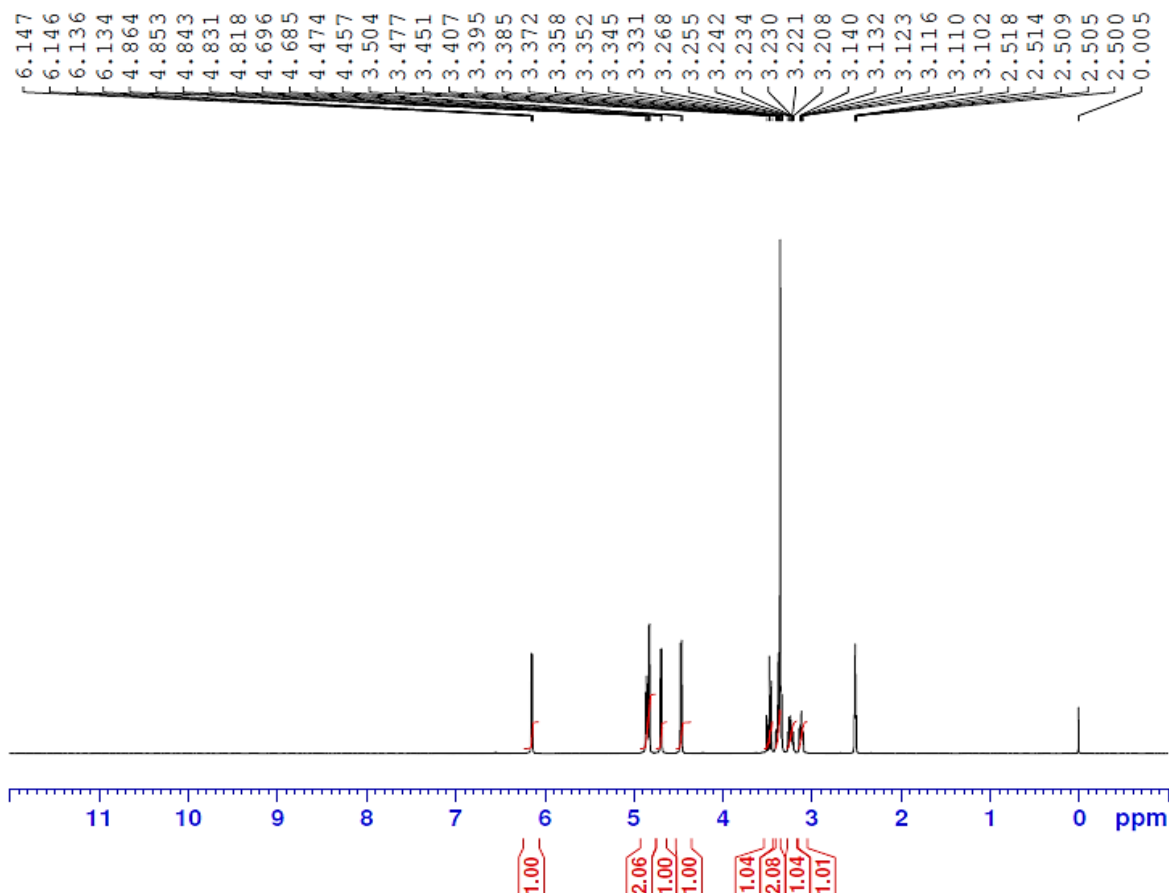
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¹H NMR Spectrum:

Product Name: D-(+)-Xylose

Product Code: PSR40357

D- (+)-Xylose
B.no-X40357T0823
1H-NMR in DMSO



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSR40357) = **1.3391%**

Approved By
Head - Technical

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