PureSynth
Research Chemicals

Certificate of Analysis

o-Xylene

PurTech Standard for GC

Product Number	PSI034	**CAS No.**	95-47-6
Brand	PureSynth	**Lot No.**	IS01
Molecular Formula	C_8H_{10}	**Date of Mfg.**	Jan.2022
Molecular Weight	106.17 g/mol	**Date of Exp.**	Dec.2026

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Clarity	Clear	Clear
Assay (GC-FID)	≥ 99.0 %	99.31 %
Water (by KF)	≤ 0.03 %	0.0235 %
Refractive index (n 20/D)	1.504 - 1.506	1.505
Non-volatile matter	Max. 0.002 %	<0.002 %
Identification by ^{1}H NMR	Conform to structure	Conforms
Identification by GC-MS	Conform to molecular	Conforms
Identification by IR	Conform to structure	Conforms

***Traceable to Internal Reference standard.**

Storage Condition: Store at ambient temperature and keep container tightly closed in a dry and well-Ventilated place.

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

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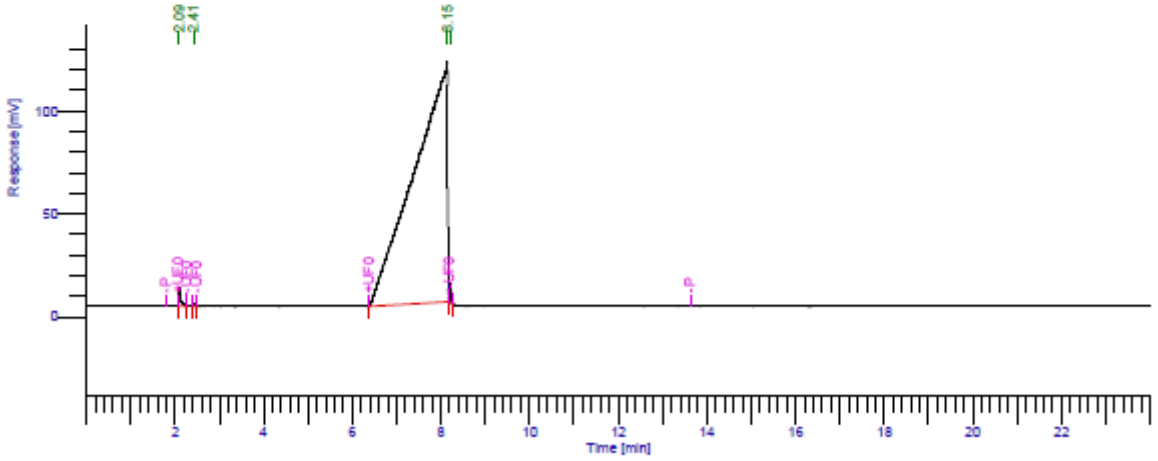
Assay by GC-FID

METHOD: G.C- FID conditions:

Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron
Instrument: PerkinElmer, GC 2014,
Detector: FID, **Carrier gas:** Nitrogen
Temp programming: Initial 50°C hold for 1min, 5°C Ramp/ min., 100 °C hold for 1 min., 25°C Ramp up to 250°C hold for 2 min., Run time 20 min.

Software Version	: 6.3.4.0700		Date	: 23/02/2022 3.35.32 PM	
Operator	: manager		Sample Name	: AR22000148-O-XYLENE-	IS01
Sample Number	: 1		Study	: GC Purity	
AutoSampler	: BUILT-IN		Rack/Vial	: 0/22	
Instrument Name	: Clarus 680		Channel	: A	
Instrument Serial #	: None		A/D mV Range	: 1000	
Delay Time	: 0.00 min		End Time	: 24.50 min	
Sampling Rate	: 12.5000 pts/s				
Sample Volume	: 1.000000 ul				
Sample Amount	: 1.0000		Area Reject	: 0.000000	
Data Acquisition Time	: 23/02/2022 2.56.46 PM		Dilution Factor	: 1.00	
			Cycle	: 1	



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		2.093	25411.60	9107.63	0.42
2		2.415	2885.07	1288.03	0.05
3		8.149	5993625.82	116509.52	99.31
4		8.228	13208.79	9057.26	0.22
			6035131.27	135962.43	100.00

Purity by GC-FID: 99.31 %

This is a computer-generated report -does not required sign

Worldwide Helpline No. 1800-120-1234-34 , Email: info@pure-synth.com , Website: www.pure-synth.com

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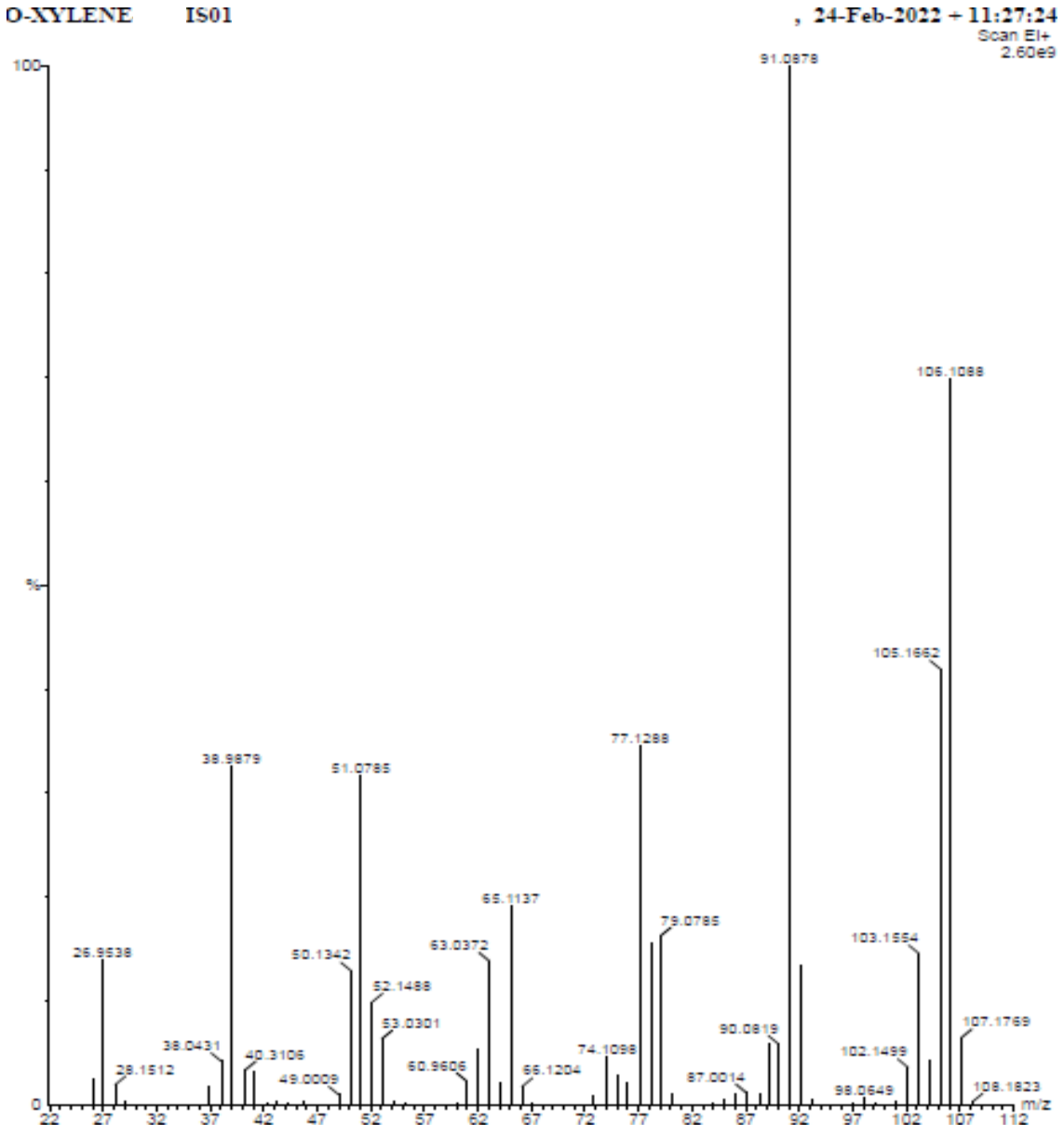
IDENTIFICATION TESTS

GC-MS Spectrum:

METHOD: G.C-MS conditions:
Column: Agilent Technologies, Elite -5MS, 30 m X 0.25 mm, 1.0micron
Instrument: Perkin Elmer, **Carrier gas:** Helium
Source Temp.: 230°C, Transfer line: 250°C
Inlet Temp.: 180°C, **Diluent:** Methanol
Source energy: 70eV

Mass by GC-MS:

Product Name: o-Xylene
Product Code: PSI034



Identification by GC-MS: Conform to molecular

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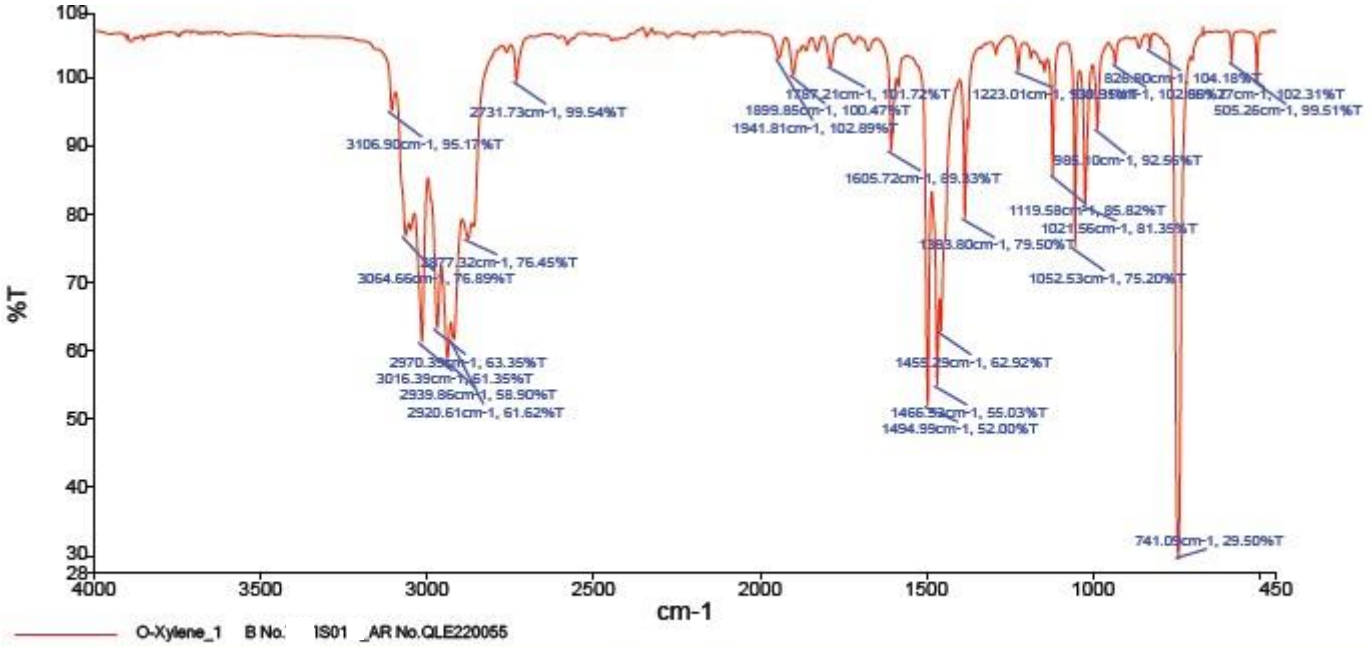
Research Chemicals

Infrared spectrum:

Product Name: o-Xylene

Product Code: PSI034



Source Spectra Results	
Spectrum Name	Number Of Peaks
O-Xylene_1	26

List of Peak Area/Height:

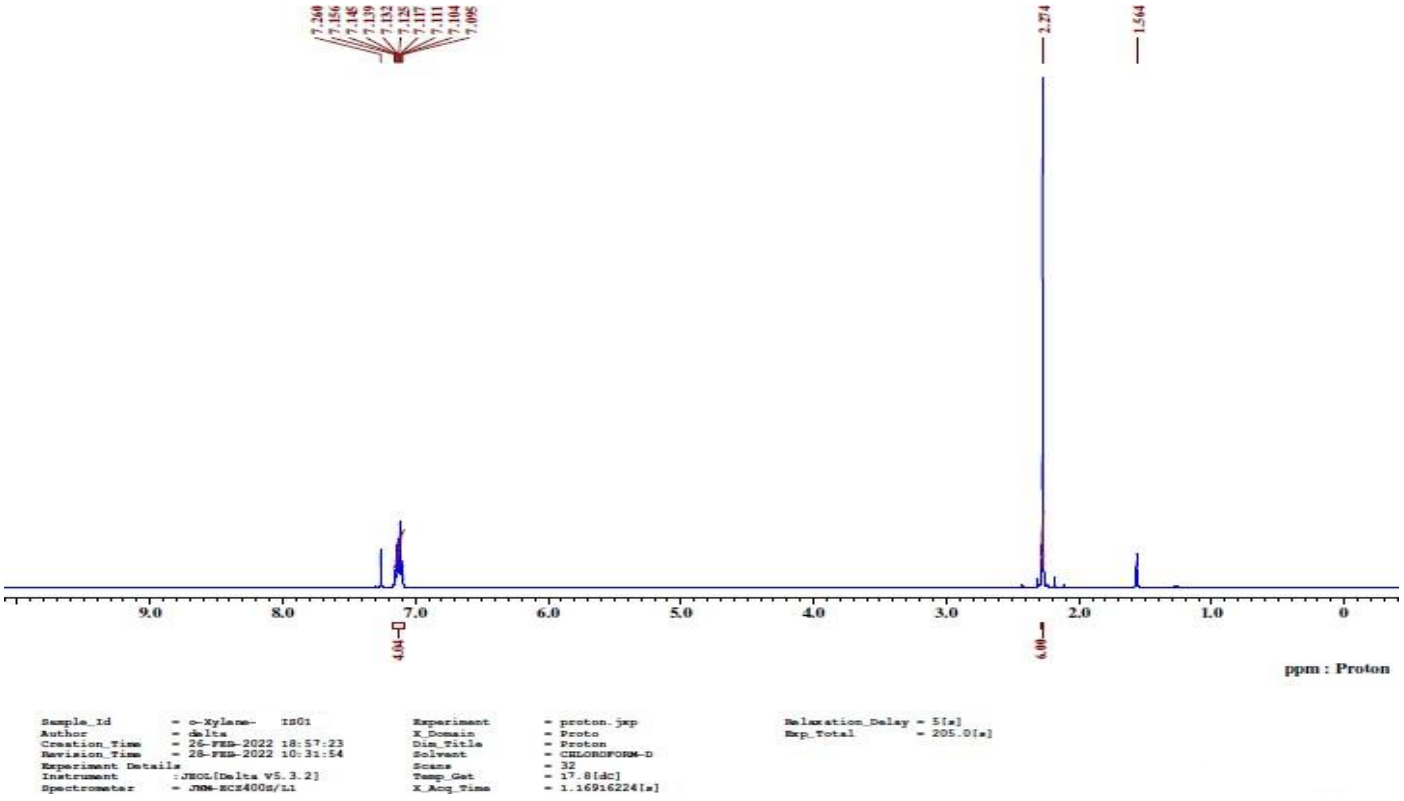
Peak Number	X (cm-1)	Y (%T)
1	3106.90	95.17
2	3064.66	76.89
3	3016.39	61.35
4	2970.39	63.35
5	2939.86	58.90
6	2920.61	61.62
7	2877.32	76.45
8	2731.73	99.54
9	1941.81	102.89
10	1899.85	100.47
11	1787.21	101.72
12	1605.72	89.33
13	1494.99	52.00
14	1466.53	55.03
15	1455.29	62.92
16	1383.80	79.50
17	1223.01	100.91
18	1119.58	85.82
19	1052.53	75.20
20	1021.56	81.35
21	985.10	92.56
22	931.35	102.05
23	826.90	104.18
24	741.09	29.50
25	581.27	102.31
26	505.26	99.51

Identification by IR: Conform to structure

[1]H NMR Spectrum:

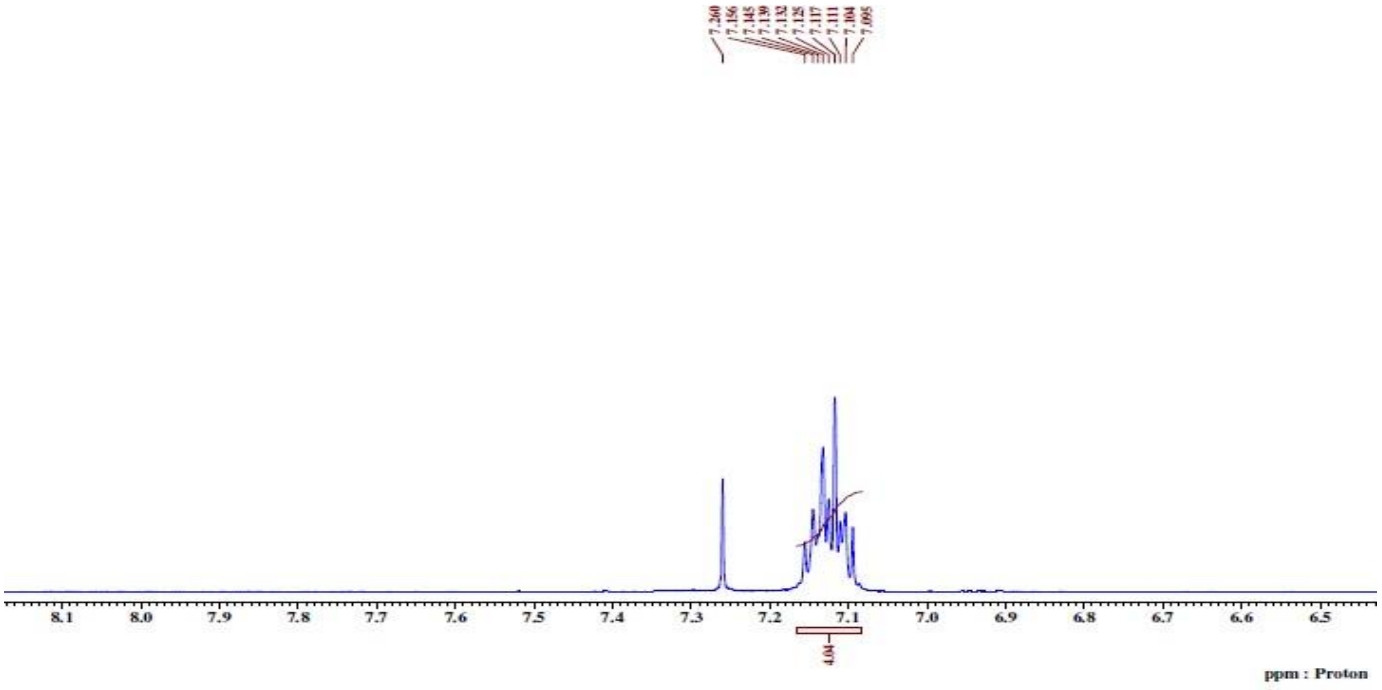
Product Name: o-Xylene

Product Code: PSI034



Sample_Id	= o-Xylene- IS01	Experiment	= proton.jxp	Relaxation_Delay	= 5[s]
Author	= delta	X_Domain	= Proto	Exp_Total	= 205.0[s]
Creation_Time	= 26-FEB-2022 18:57:23	Dim_Title	= Proton		
Revision_Time	= 28-FEB-2022 10:31:54	Solvent	= CHLOROFORM-D		
Experiment Details		Scans	= 32		
Instrument	:JEOL[Delta v5.3.2]	Temp_Get	= 17.8[dC]		
Spectrometer	= JNM-ECZ400S/L1	X_Acq_Time	= 1.16916224[s]		

[1]H NMR Spectrum: Expansion



Sample_Id	= o-Xylene- IS01	Experiment	= proton.jxp	Relaxation_Delay	= 5[s]
Author	= delta	X_Domain	= Proto	Exp_Total	= 205.0[s]
Creation_Time	= 26-FEB-2022 18:57:23	Dim_Title	= Proton		
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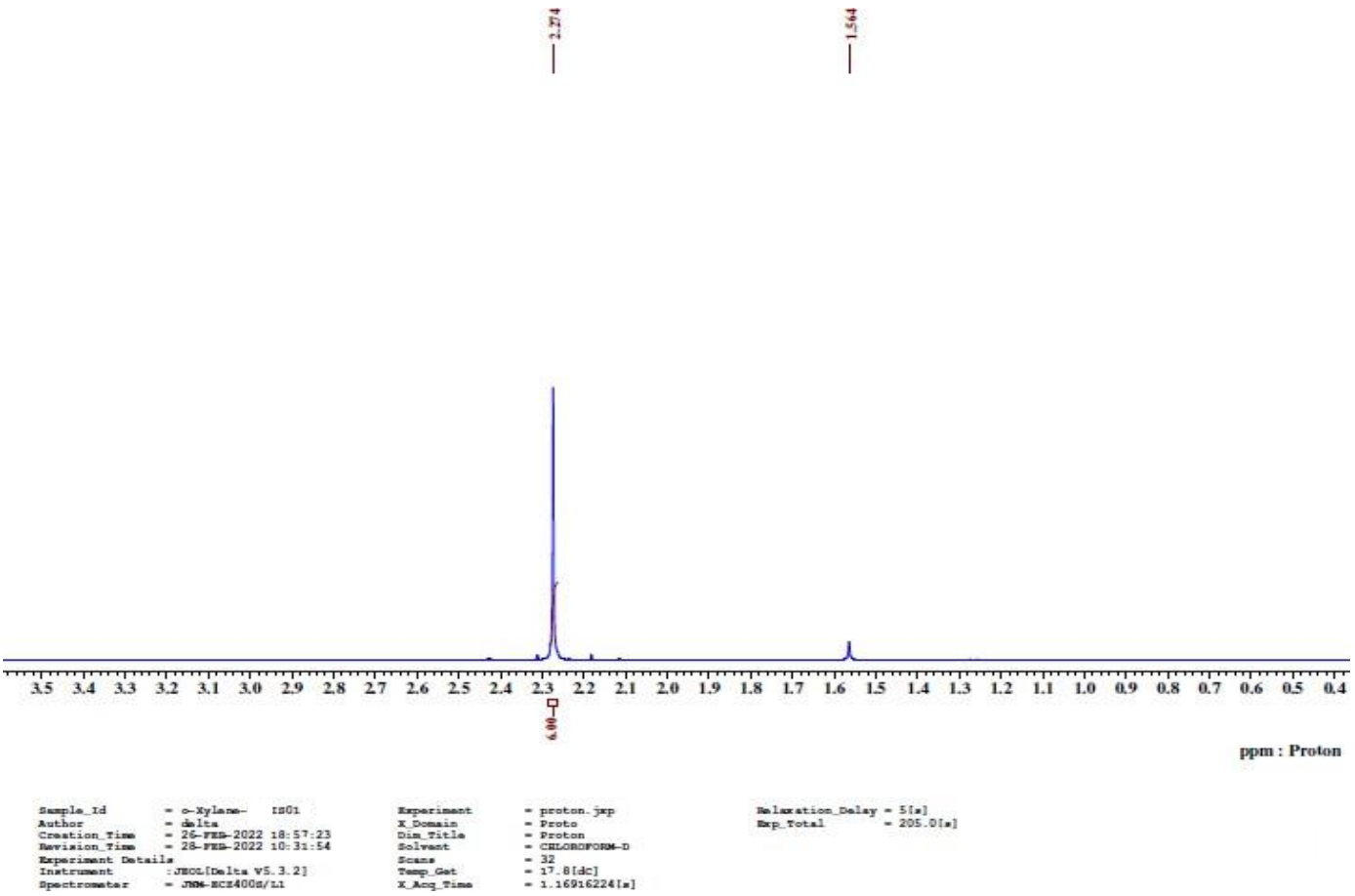
Instrument	:JEOL[Delta v5.3.2]	Temp_Get	= 17.8[dC]		
Spectrometer	= JNM-ECZ400S/L1	X_Acq_Time	= 1.16916224[s]		



Identification by ^{1}H NMR: Conform to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI034) = **0.0235 %**

Approved By

Head - Technical