

## Certificate of Analysis

<b>Product Name</b>	: ACETONITRILE GC STANDARD	<b>Product Code</b>	: 98113-100 ML
<b>Batch Number</b>	: F23F162	<b>CAS Number</b>	: 75-05-8
<b>Molecular Formula</b>	: CH <sub>3</sub> CN	<b>Formula Weight</b>	: 41.05
<b>Mfg. Month &amp; Year</b>	: June, 2023	<b>Exp. Month &amp; Year</b>	: May, 2026

Test	Results	Specification
<b>DESCRIPTION</b>	Complies	Clear colorless liquid.
<b>COLOR (APHA)</b>	Complies	Max. 10.0
<b>GUARANTEED ANALYSIS</b>		
ASSAY (GC/FID)*	100.0%	NLT 99.9%
POTENCY	99.99%	NLT 99.8%
DENSITY at 25°C	0.782 g/ml	0.782-0.783 g/ml
BOILING RANGE (95%)	80.5-81.0°C	80.0 - 82.0°C
REFRACTIVE INDEX AT 20°C	1.344	1.343 - 1.344
IDENTIFICATION by MASS	Complies	Conforms to Molecular mass
IDENTIFICATION by 1H NMR	Complies	Conforms to structure
IDENTIFICATION by FT-IR	Complies	Conforms to structure
<b>MAXIMUM LIMITS OF IMPURITIES</b>		
NON - VOLATILE MATTER	0.00020%	NMT 0.0005%
WATER (by KF)	0.012%	NMT 0.02%
OTHER IMPURITIES*	Nil	NMT 0.1%

**GC/FID\* Conditions :**

Column: HP1 30 m X 0.53 mm X 5.0 µm  
 Inj vol. 0.2µl , Splitless , Flow 3.0 ml/min (Nitrogen)  
 Inj temp. 200°C, Det.temp.250°C  
 Oven Prog. : 40.0°C 5 min, Ramp:10°C/min to 220.0°C 2 min

**Recommended Storage** : Store at room temperature below 30°C in original packing. Keep the container tightly closed away from source of ignition; handle at inert atmosphere.

[Traceable to USP Reference standard 1601340-R046M0](#)

**REMARKS:**

This is to certify that the above mentioned batch has been analysed at the time of quality release and has been found to be complying with the label claim/prescribed specifications.

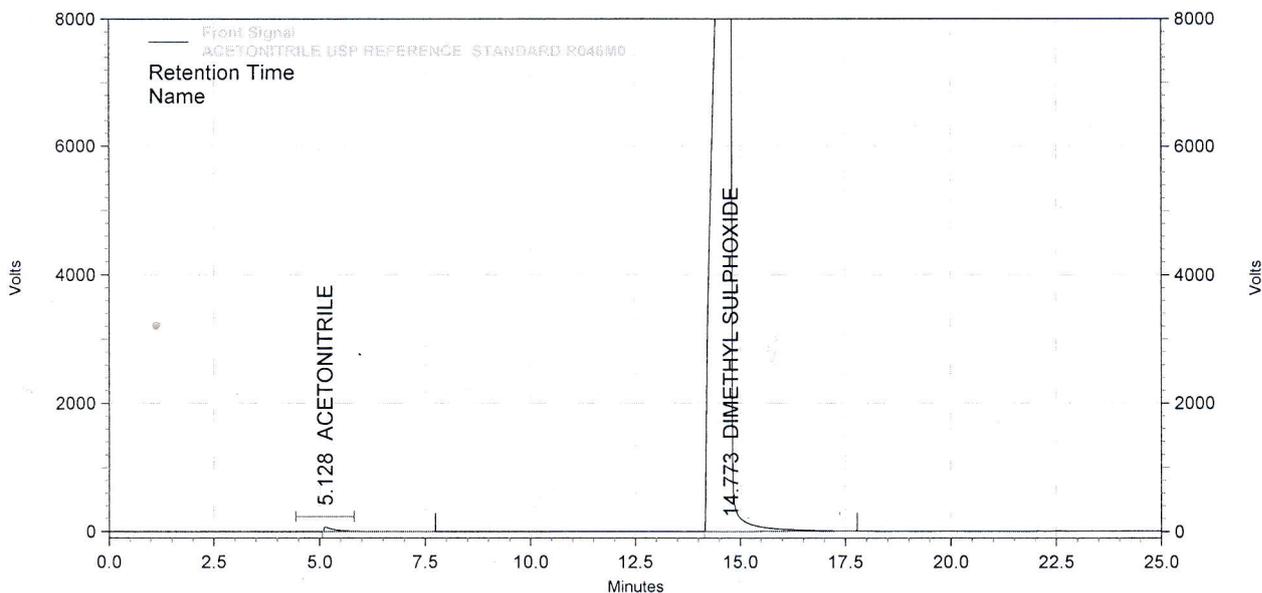
**Dr. Rashmi Ranjan Mohanty**  
 Director-Technical

This document has been produced electronically and is valid without signature.



**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\2020 DATA\Result\Result\ACETONITRILE USP REFERENCE STANDARD R046M0.rsl\ACETONITRILE USP REFERENCE STANDARD R046M0.dat  
 Method: D:\advent data D\2021 DATA\2022 DATA\Method\ACS STANDARD 40-220 (MANUAL).met  
 Acquired: 06/22/23 15:08:38 (GMT +05:30)  
 Printed: 06/23/23 09:01:18 (GMT +05:30)



**Front Signal  
Results**

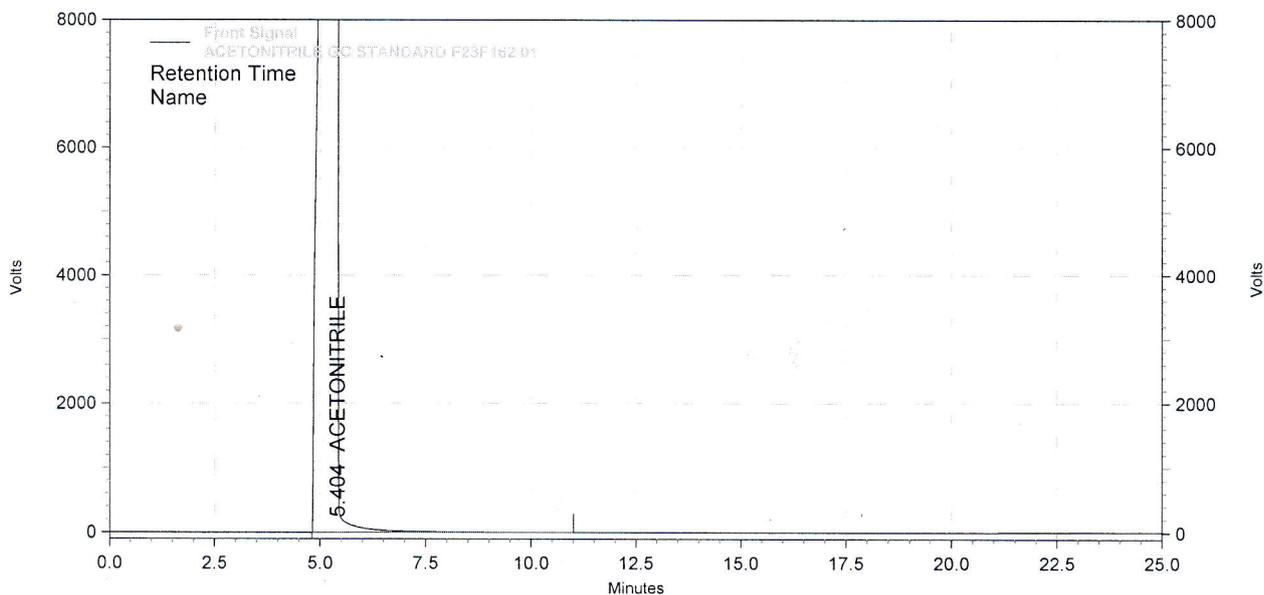
Retention Time	Area	Area %	Height	Height %
5.128	11134200	0.393	563247	0.47
14.773	2819902159	99.607	120217794	99.53
<b>Totals</b>	<b>2831036359</b>	<b>100.000</b>	<b>120781041</b>	<b>100.00</b>

ADVENT CHEMBIO PVT. LTD.  
 PC No:- 0899  
 Sign./Date:- *Pawq*  
 23/06/23



**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\Agilent 2021 data\Result\GC STANDARD 220623.rslt\ACETONITRILE GC STANDARD F23F162 01  
 Method: D:\advent data D\Agilent 2021 data\Method\ACS STANDARD ALS.met  
 Acquired: 06/22/23 17:07:51 (GMT +05:30)  
 Printed: 06/23/23 09:24:29 (GMT +05:30)



**Front Signal Results**

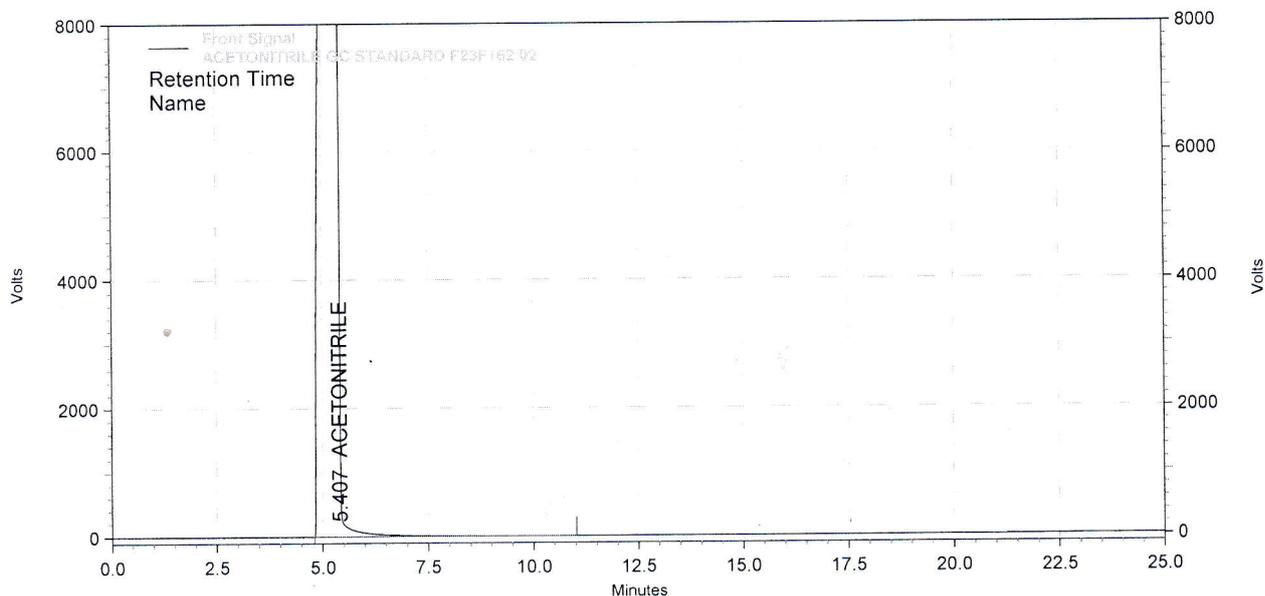
Retention Time	Area	Area %	Height	Height %
5.404	4196658565	100.000	199429308	100.00
Totals	4196658565	100.000	199429308	100.00



ADVENT CHEMBIO PVT. LTD.  
 PC No:- 0900  
 Sign./Date:- Pawg  
 23/06/23

**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\Agilent 2021 data\Result\GC STANDARD 220623.rsl\ACETONITRILE GC STANDARD F23F162 02  
 Method: D:\advent data D\Agilent 2021 data\Method\ACS STANDARD ALS.met  
 Acquired: 06/22/23 17:46:19 (GMT +05:30)  
 Printed: 06/23/23 09:24:41 (GMT +05:30)



**Front Signal  
Results**

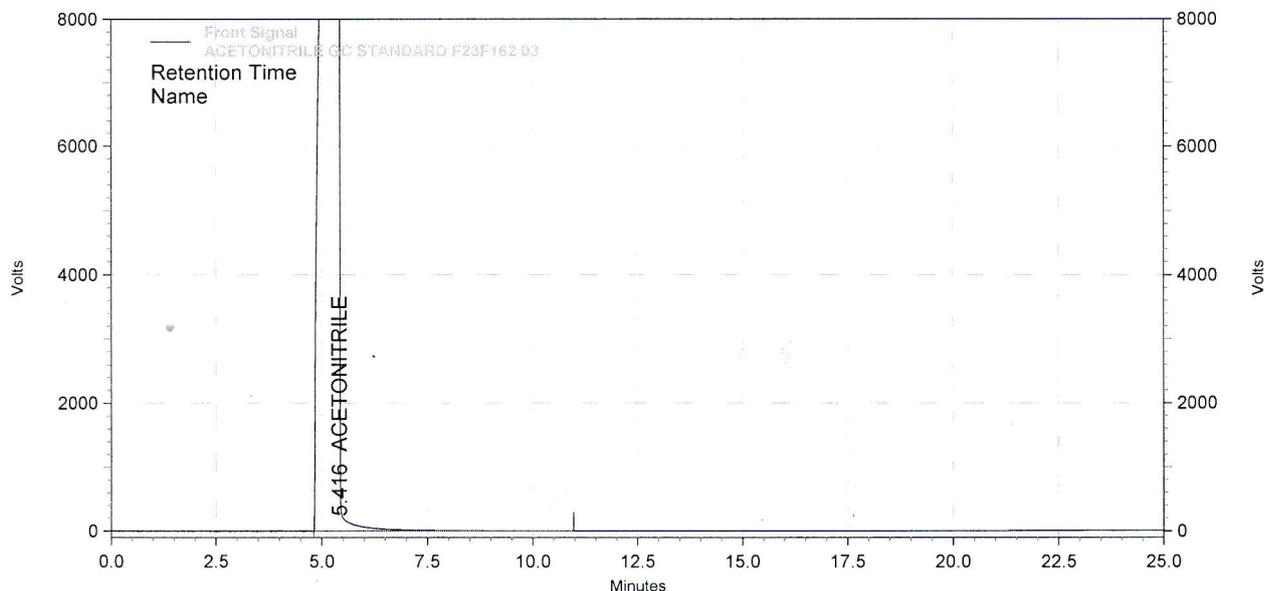
Retention Time	Area	Area %	Height	Height %
5.407	4079384934	100.000	198070404	100.00
<b>Totals</b>	4079384934	100.000	198070404	100.00



ADVENT CHEMBIO PVT. LTD.  
 PC No:- 0901  
 Sign./Date: Pawq  
 23/06/23

**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\Agilent 2021 data\Result\GC STANDARD 220623.rsl\ACETONITRILE GC STANDARD F23F162 03  
 Method: D:\advent data D\Agilent 2021 data\Method\ACS STANDARD ALS.met  
 Acquired: 06/22/23 18:24:34 (GMT +05:30)  
 Printed: 06/23/23 09:24:53 (GMT +05:30)



**Front Signal Results**

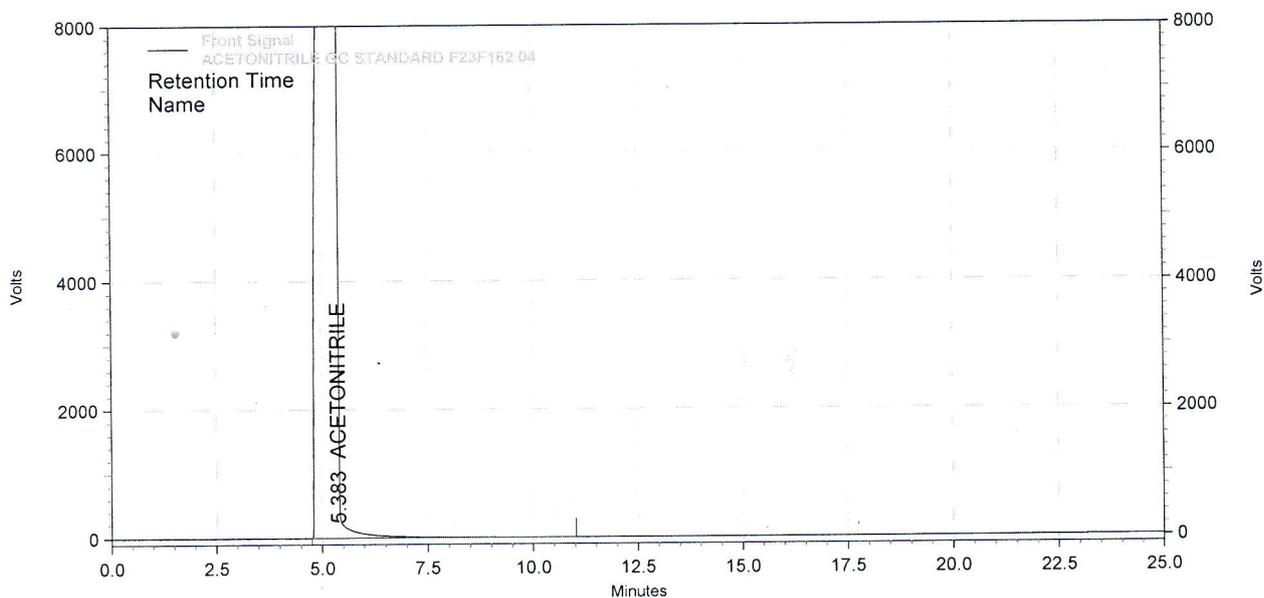
Retention Time	Area	Area %	Height	Height %
5.416	4237362476	100.000	202361549	100.00
Totals	4237362476	100.000	202361549	100.00

ADVENT CHEMBIO PVT. LTD.  
 PC No:- 0902  
 Sign./Date:- Pawar 23/06/23



**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\Agilent 2021 data\Result\GC STANDARD 220623.rsl\ACETONITRILE GC STANDARD F23F162 04  
 Method: D:\advent data D\Agilent 2021 data\Method\ACS STANDARD ALS.met  
 Acquired: 06/22/23 19:00:36 (GMT +05:30)  
 Printed: 06/23/23 09:25:02 (GMT +05:30)



**Front Signal  
Results**

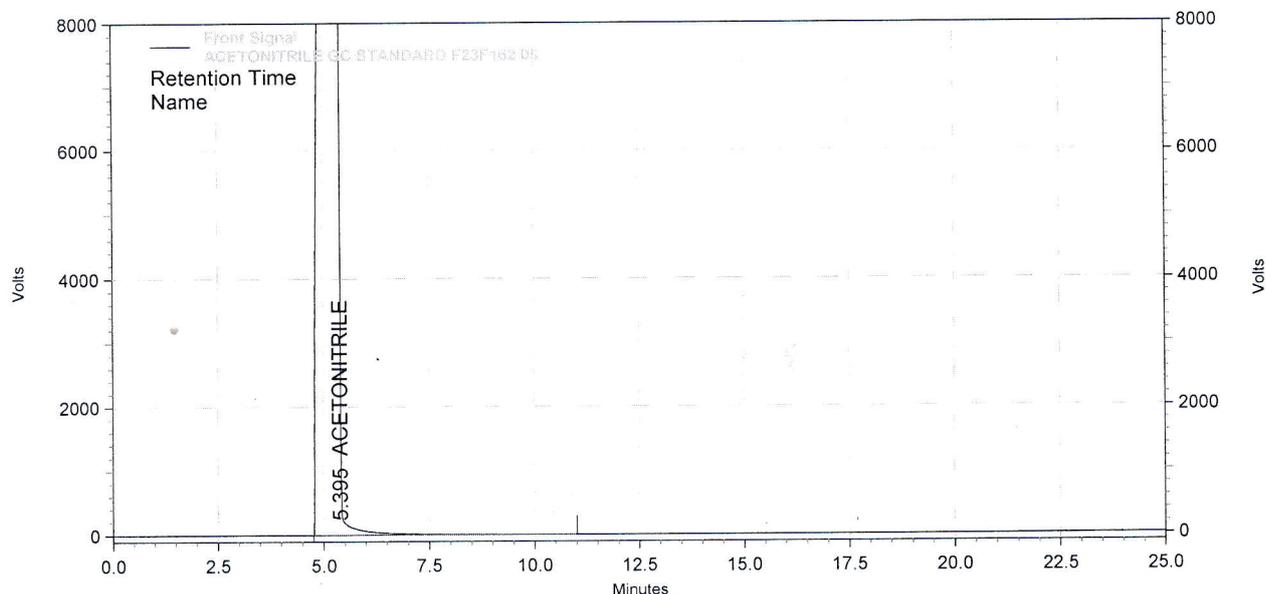
Retention Time	Area	Area %	Height	Height %
5.383	4388830320	100.000	207593232	100.00
<b>Totals</b>	<b>4388830320</b>	<b>100.000</b>	<b>207593232</b>	<b>100.00</b>

ADVENT CHEMBIO PVT. LTD.  
 PG No:- 09/03  
 Sign./Date:- *Pawar*  
 23/06/23



**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\Agilent 2021 data\Result\GC STANDARD 220623.rslt\ACETONITRILE GC STANDARD F23F162 05  
 Method: D:\advent data D\Agilent 2021 data\Method\ACS STANDARD ALS.met  
 Acquired: 06/22/23 19:36:40 (GMT +05:30)  
 Printed: 06/23/23 09:25:14 (GMT +05:30)



**Front Signal  
Results**

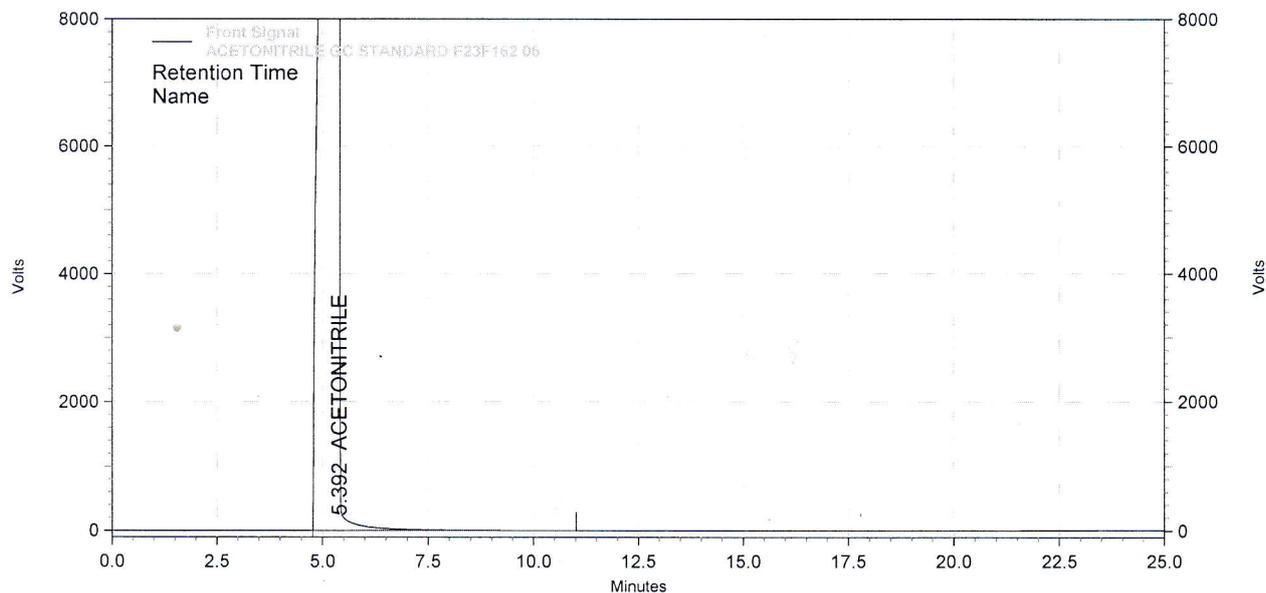
Retention Time	Area	Area %	Height	Height %
5.395	4648041228	100.000	217732039	100.00
<b>Totals</b>	<b>4648041228</b>	<b>100.000</b>	<b>217732039</b>	<b>100.00</b>

ADVENT CHEMBIO PVT. LTD.  
 PC No:- 0904  
 Sign./Date: Pawar 23/06/23



**ADVENT CHEMBIO PVT LTD  
W-288, MIDC, RABALE, NAVI MUMBAI.**

Data File: D:\advent data D\Agilent 2021 data\Result\GC STANDARD 220623.rslt\ACETONITRILE GC STANDARD F23F162 06  
 Method: D:\advent data D\Agilent 2021 data\Method\ACS STANDARD ALS.met  
 Acquired: 06/22/23 20:12:30 (GMT +05:30)  
 Printed: 06/23/23 09:25:25 (GMT +05:30)



**Front Signal  
Results**

Retention Time	Area	Area %	Height	Height %
5.392	4739962035	100.000	217624648	100.00
<b>Totals</b>	4739962035	100.000	217624648	100.00



ADVENT CHEMBIO PVT. LTD.  
 PC No:- 0905  
 Sign./Date: Pawig  
 23/06/23

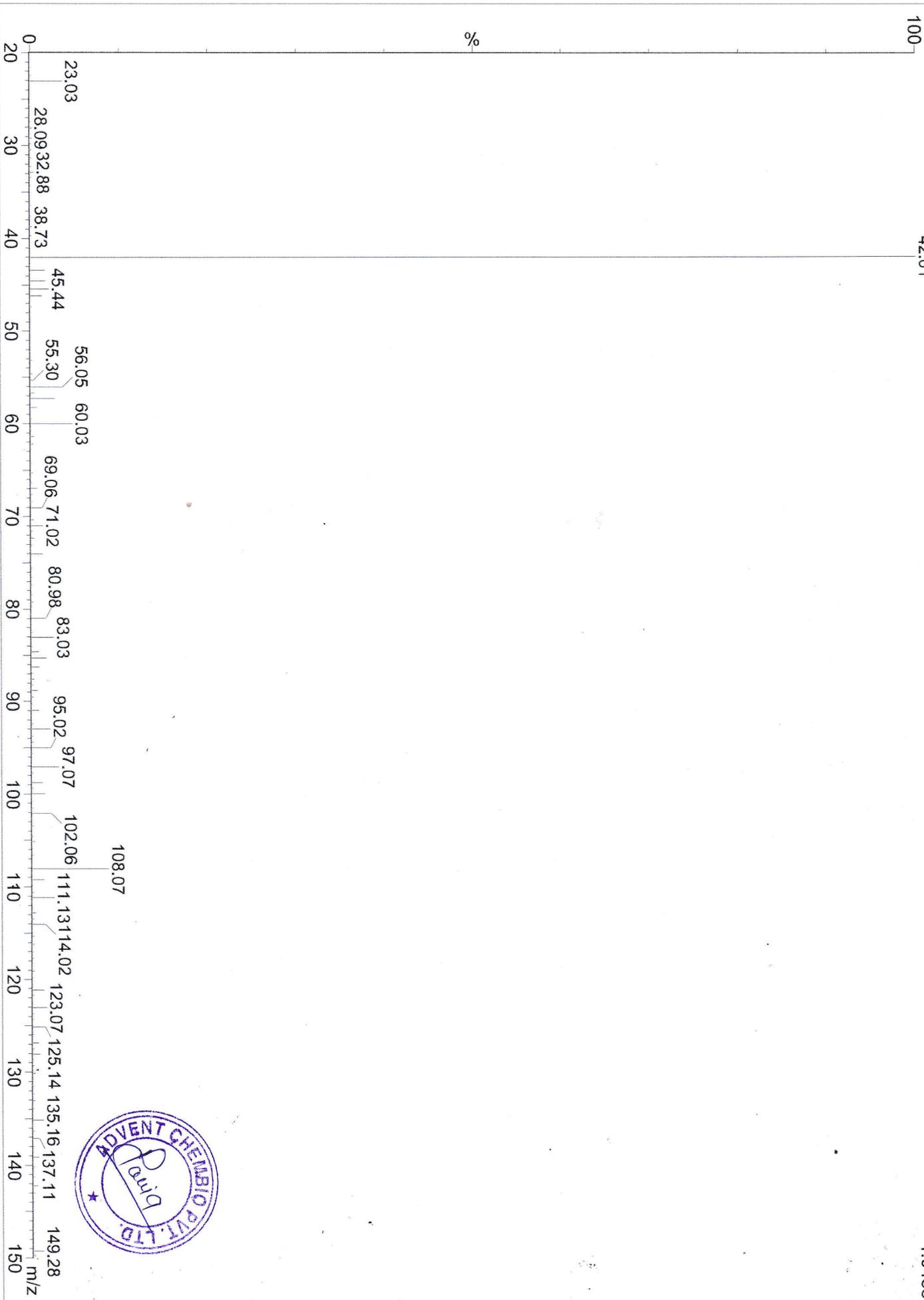
F23F162

27-06-2023\_88 12 (0.387) Cm (10:16)

42.01

27-Jun-2023 18:28:21

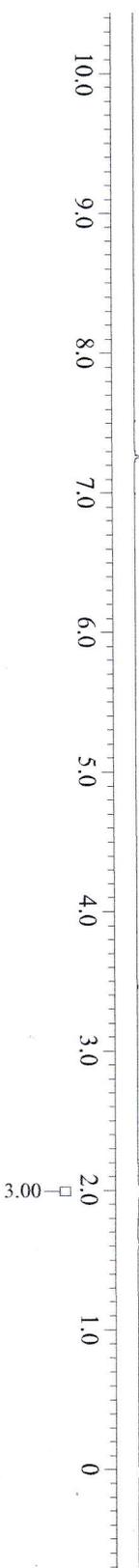
1: Scan ES+  
1.04e8





```
----- PROCESSING PARAMETERS -----  
sexp( 0.27483[Hz], 0.0[se] )  
trapzoid( 0[°], 0[°], 80[°], 100[°] )  
zerofill( 2, TRUE )  
fft( 1, TRUE, -TRUE )  
machinephase  
ppm  
auto_reference( 5[°], TRUE )  
reference( 7.27538[ppm], 7.26[ppm] )  
thresh( 0.67331[°], 1 )  
Derived from: F23F162_proton-1-1.jdf
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Creation_Time = 22-JUN-2023 18:22:36  
Instrument = NMR-400MHz (JEOL)  
Spectrometer = NM-70010S4L1  
Instrument_id = ABNL/QC/NMR-01  
Author = 1007  
Reviewed_by = BRM  
Solvent = CHLOROFORM-D  
Acquisition_Parameters  
Experiment = proton.jxp  
X_Offset = 7[ppm]  
X_Sweep = 9.00576369[kHz]  
Relaxation_Delay = 3[se]  
Scans = 16
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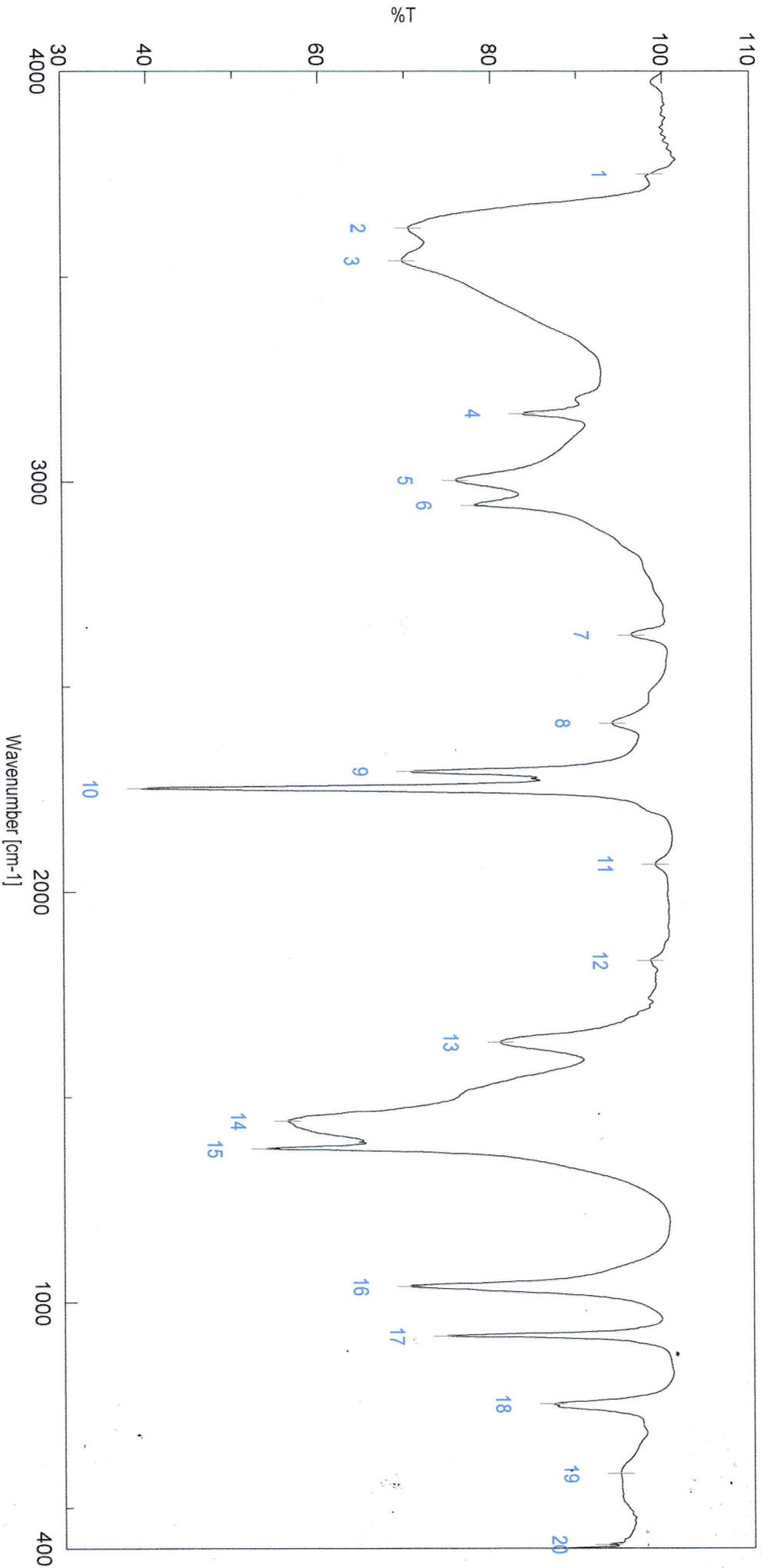
J-Coupling Analysis Report

Path = \\ABNTL-01\Share Folder\NMR Raw Data\Jun-2023\22-Jun-2023\F23F162\_proton-1-2.jdf

Position Integral Pattern J

1.99 [ppm] 3 s





[Detailed Information]

Creation date 22/Jun/23 19:02

Linear data array Wavenumber [cm-1]

%T Wavenumber [cm-1]

Start 399.193 cm-1

End 4000.6 cm-1

Data Interval 0.964233 cm-1

Data points 3736

[Comments]

Sample name

Comment

User

Workgroup

Division

Company

F23F162

011659

1007

QC

QC

Abani Labs Pvt. Ltd.



Results of Peak Find

No.	Position	Intensity	No.	Position	Intensity	No.	Position	Intensity
1	3748.94	98.5135	2	3618.77	70.3897	3	3538.74	69.6591
4	3164.61	83.6092	5	3003.59	75.75	6	2941.88	77.8836
7	2624.64	96.132	8	2410.58	93.8565	9	2293.91	70.3441
10	2253.41	38.9587	11	2067.32	98.7844	12	1833.97	98.1714
13	1634.38	80.6927	14	1442.49	56.0088	15	1375	53.3121
16	1039.44	70.1777	17	917.95	74.3656	18	752.102	86.6576
19	582.397	94.5318	20	409.799	93.0748			

