

Certificate of Analysis

Acetonitrile

PurTech Standard for GC

(Secondary Reference Standard)

Product Number	PSI041	CAS No.	75-05-8
Brand	PureSynth	Lot No.	LSAO02P
Molecular Formula	C ₂ H ₃ N	Date of Mfg.	Feb.2023
Molecular Weight	41.05 g/mol	Date of Exp.	Jan.2027

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (GC-FID)	≥ 99.5 %	99.87 %
Water (By KF)	NMT 0.0500 %	0.0324 %
Identification by ¹ H NMR	Conforms to structure	Conforms
Identification by GC-MS	Conforms to molecular mass	Conforms
Identification by IR	Conforms to structure	Conforms

***Traceable to USP Reference standard 1601340, Lot No: R046M0.**

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

Assay by GC-FID

METHOD: GC- FID conditions:

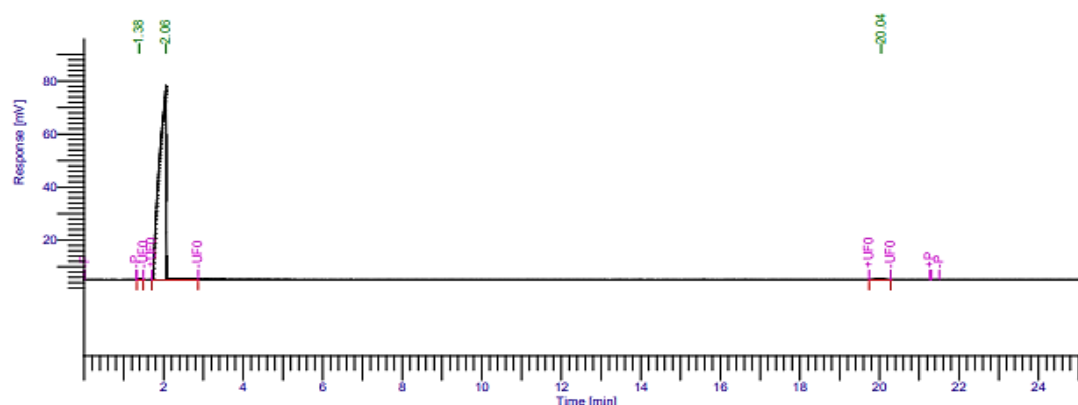
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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	: 08/05/2023 2.23.08 PM
Operator	: manager	Sample Name	: AR23000246-ACETONITRILE-LSAO0
Sample Number	: 1		: 2P
AutoSampler	: BUILT-IN	Study	: GC Purity
Instrument Name	: Clarus 680	Rack/Vial	: 0/5
Instrument Serial #	: None	Channel	: A
Delay Time	: 0.00 min	A/D mV Range	: 1000
Sampling Rate	: 12.5000 pts/s	End Time	: 25.27 min
Sample Volume	: 1.000000 ul		
Sample Amount	: 1.0000	Area Reject	: 0.000000
Data Acquisition Time	: 08/05/2023 1.32.49 PM	Dilution Factor	: 1.00
		Cycle	: 1



GC Reports

08/05/2023 2.23.08 PM Result:

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		1.381	511.93	305.52	0.06
2		2.061	879708.64	73205.20	99.87
3		20.040	656.36	55.53	0.07
		880876.94	73566.25	100.00	

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.87 %

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IDENTIFICATION TESTS

GC-MS Spectrum:

METHOD: GC-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

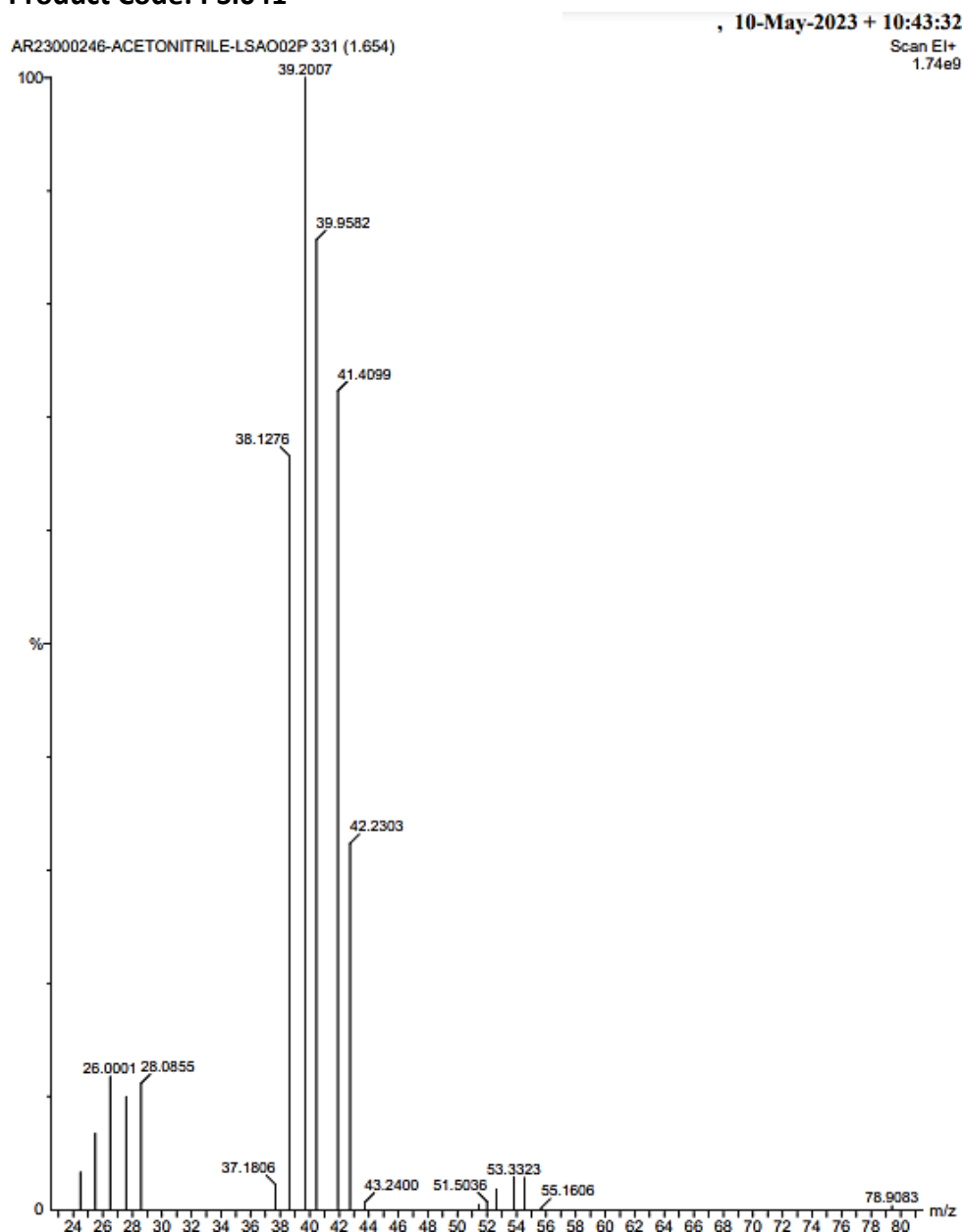
Inlet Temp.: 180°C, **Diluent:** Methanol

Source energy: 70eV

Mass by GC-MS:

Product Name: Acetonitrile

Product Code: PSI041



Identification by GC-MS: Conforms to molecular mass

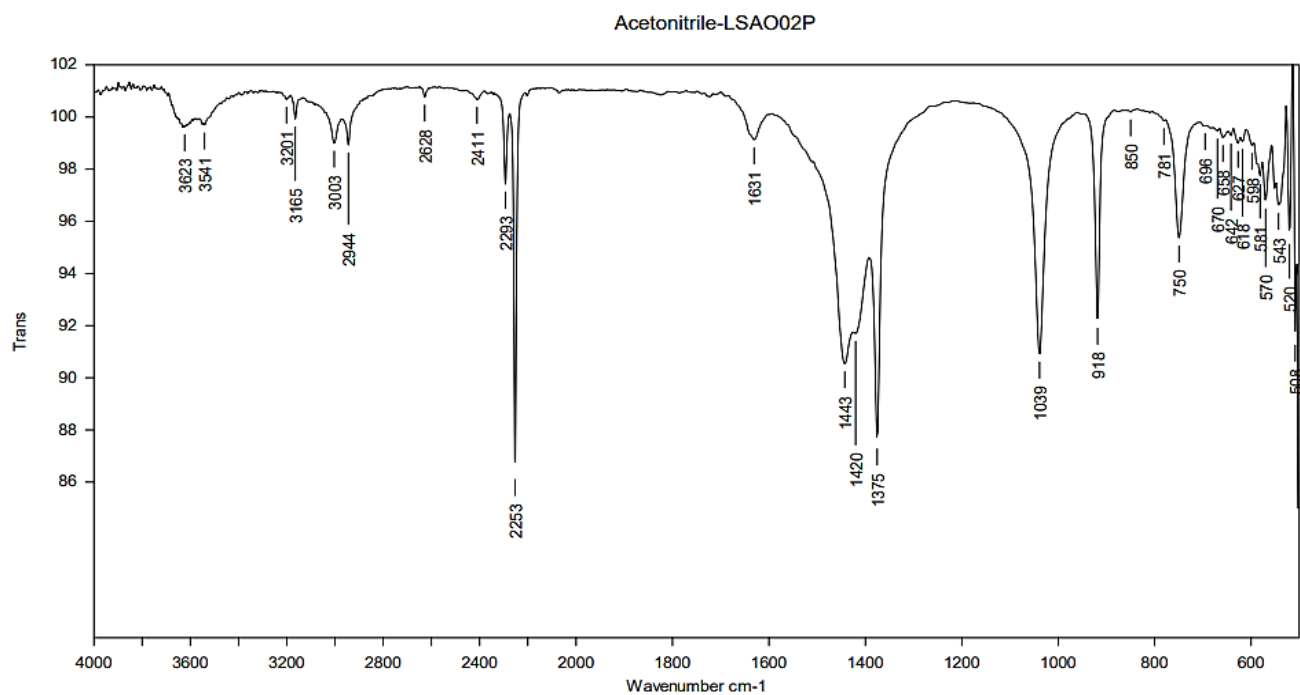
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Infrared spectrum:

Product Name: Acetonitrile

Product Code: PSI041



Experiment ATR_ZnSe1.XPM

Operator Name Admin

Instrument Type Alpha II

Resolution 4

Path of File C:\PRL

Date of Measurement 09-05-2023

Sample Form Liquid

Sample Scans 32

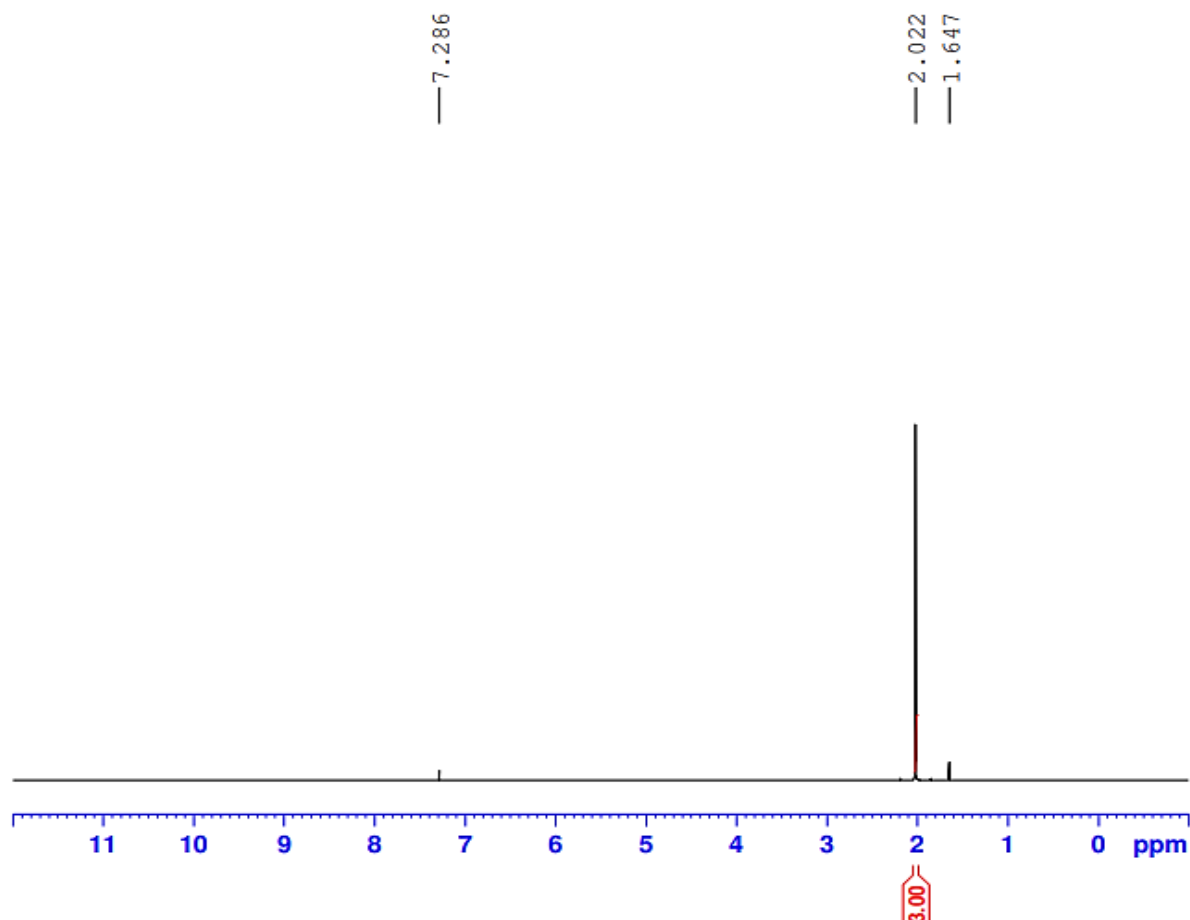
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: Acetonitrile

Product Code: PSI041

Acetonitrile
LSAO02P
1H-NMR IN CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI041) = **0.0324 %**

Approved By
Head - Technical

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