PureSynth Research Chemicals

Certificate of Analysis

Acetaldehyde

PurTech Standard for GC

(Secondary Reference Standard)

Product Number	PSI094	**CAS No.**	75-07-0
Brand	PureSynth	**Lot No.**	A28375P0
Molecular Formula	C_2H_4O	**Date of Mfg.**	February,2025
Molecular Weight	44.05 g/mol	**Date of Exp.**	January,2030

Test	Specification	Result
Description	Colorless liquid	Colorless liquid
Assay (By GC)	≥ 99.0 %	99.98 %
Water (By KF)	NMT 0.3 %	0.160 %
Density	0.75-0.80 g/cm^3	0.78 g/cm^3
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 1002811, Lot No: R12800**

Storage Condition: Store at 2 to 8°C.

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

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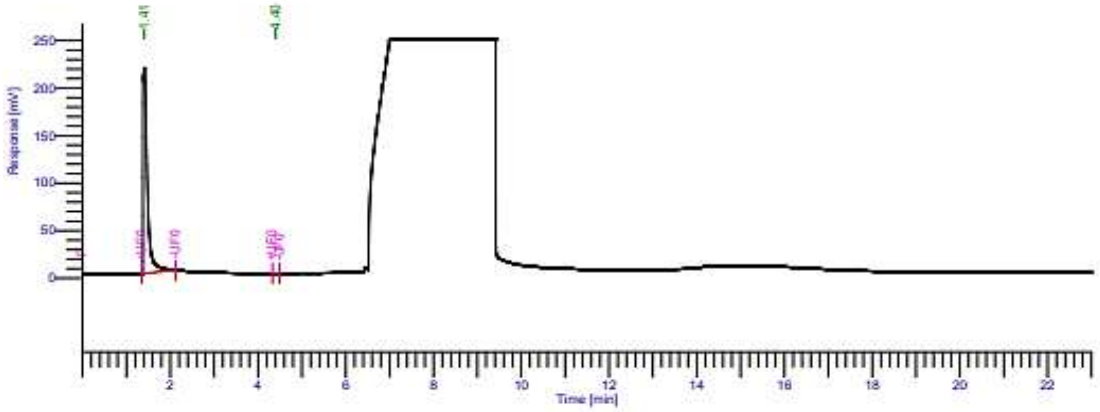
Assay by GC-FID

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	: 20-03-2025 11:23:59
Operator	: TCProcess	Sample Name	: ACETALDEHYDE
Sample Number	: 001	Study	:
AutoSampler	: BUILT-IN	Rack/Vial	: 0/27
Instrument Name	: Clarus 690	Channel	: A
Instrument Serial #	: None	A/D mV Range	: 1000
Delay Time	: 0.00 min	End Time	: 23.00 min
Sampling Rate	: 12.5000 pts/s		
Sample Volume	: 1.000000 ul	Area Reject	: 0.000000
Sample Amount	: 1.0000	Dilution Factor	: 1.00
Data Acquisition Time	: 20-03-2025 10:11:48	Cycle	: 1



GC Reports

Peak #	Component Name	Time [min]	Area [uV*sec]	Height [uV]	Area [%]
1		1.409	1476392.05	216120.07	99.98
2		4.403	262.07	67.99	0.02
			1476654.12	216188.06	100.00

Missing Component Report

Component	Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.98%

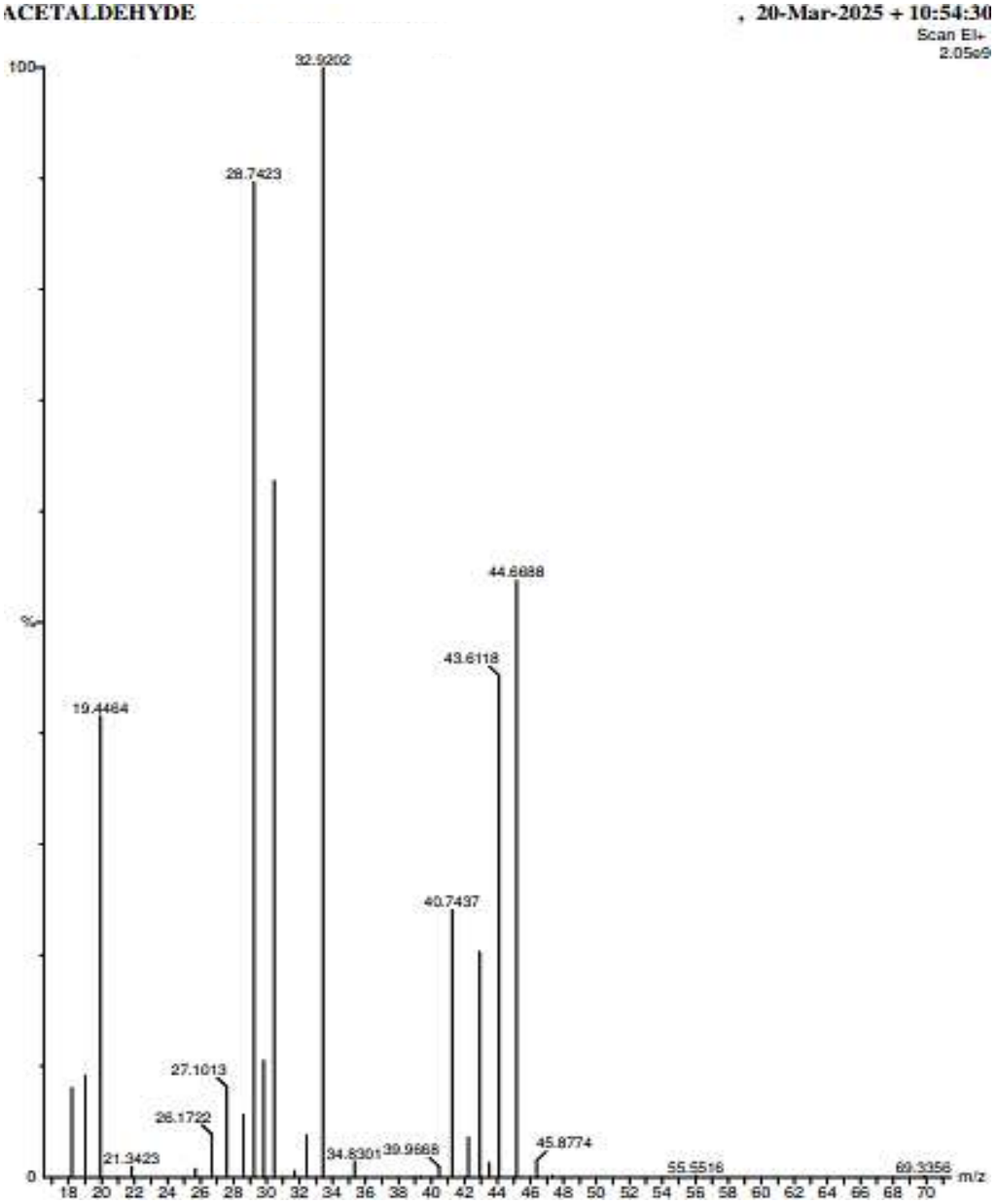
IDENTIFICATION TESTS

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: Butylated hydroxyanisole
Product Code: PSI094



Identification by GC-MS: Conforms to molecular mass

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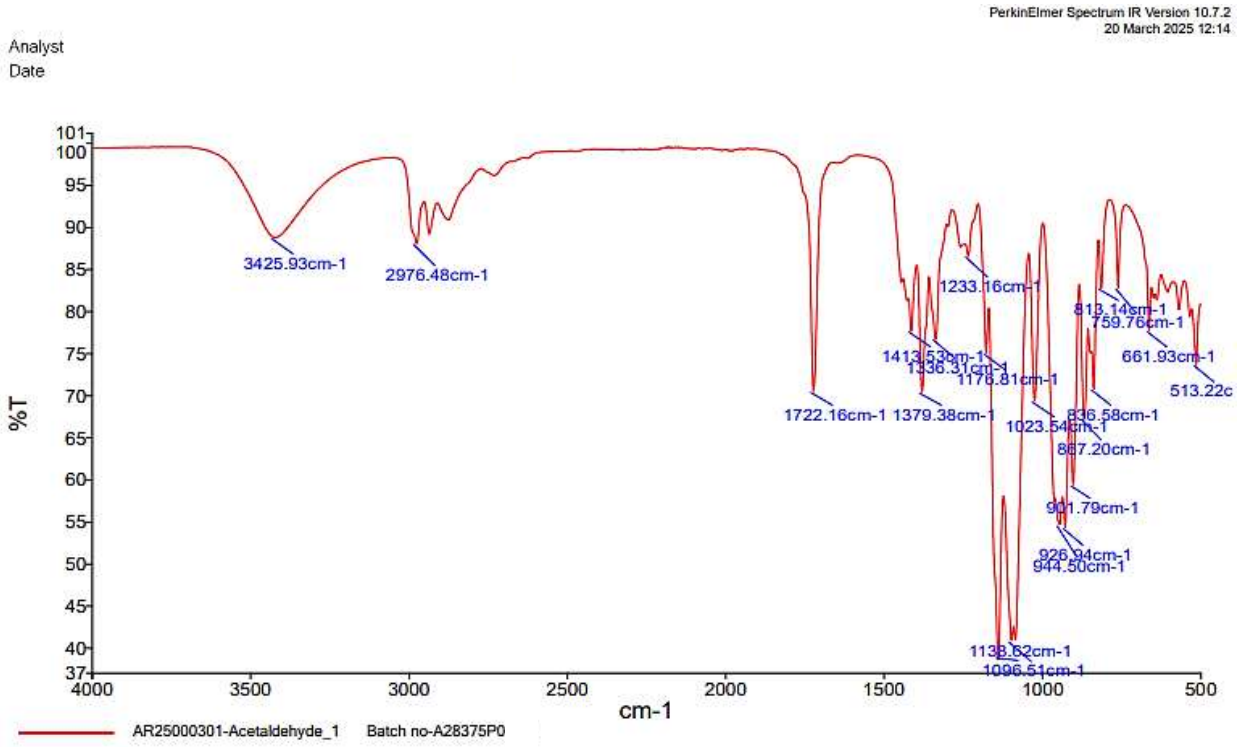
Infrared spectrum:

Product Name: Butylated hydroxyanisole
Product Code: PSI094



Source Spectra Results	
Spectrum Name	Number Of Peaks
AR25000301-Acetaldehyde_1	27

List of Peak Area/Height		
Peak Number	X (cm-1)	Y (%T)
1	3425.93	88.87
2	2976.48	88.14
3	2936.80	89.29
4	2876.76	90.98
5	1722.16	70.54
6	1413.53	77.76
7	1379.38	70.48
8	1336.31	76.81
9	1233.16	86.64
10	1176.81	75.12
11	1138.62	38.58
12	1096.51	40.88
13	1084.37	40.96
14	1023.54	69.43
15	944.50	54.65
16	926.94	54.40
17	901.79	59.45
18	867.20	67.33
19	836.58	70.85
20	813.14	82.83
21	759.76	82.88
22	661.93	77.81
23	637.06	81.44
24	603.44	82.37
25	567.42	80.26
26	533.02	79.43
27	513.22	73.75

Identification by IR: Conforms to structure

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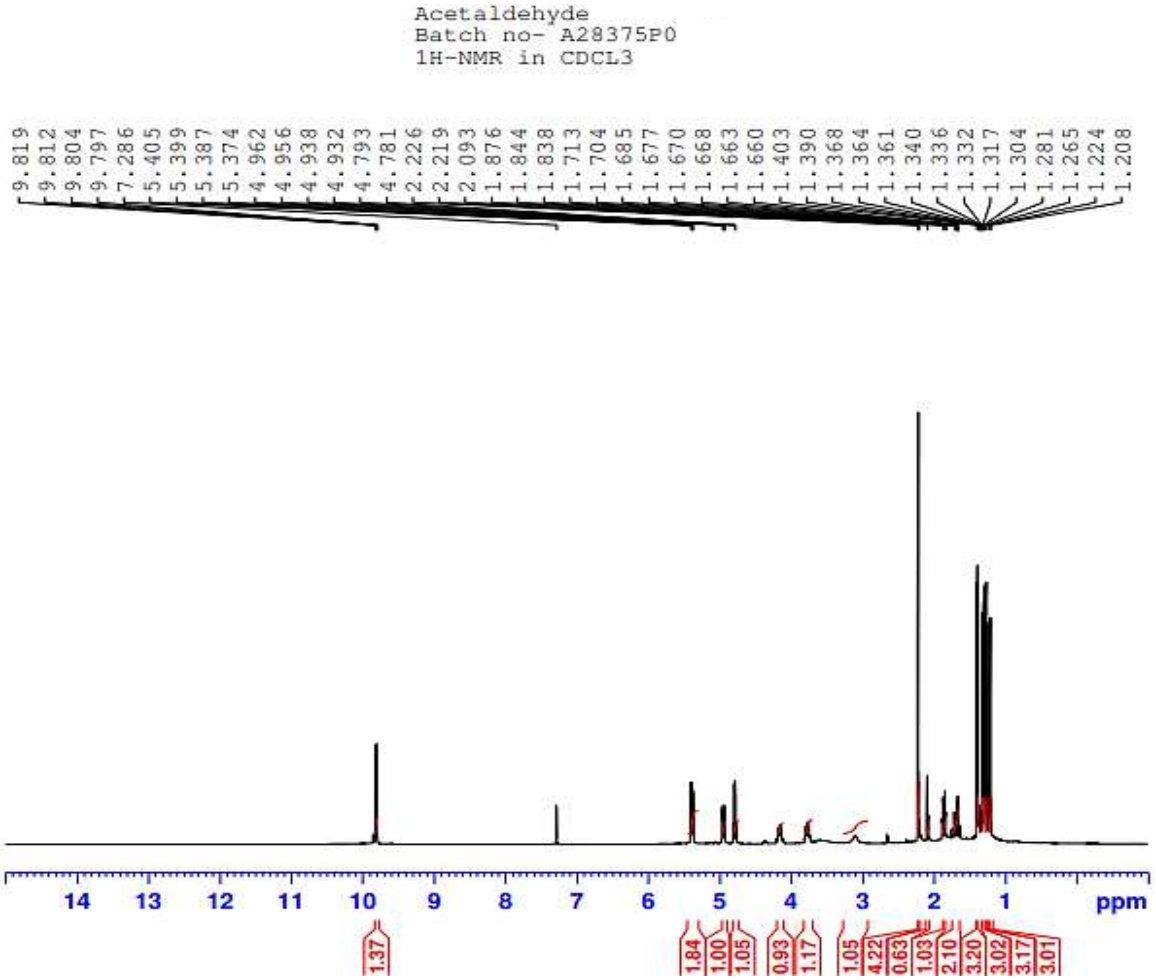
^{1}H NMR Spectrum:

Product Name: Butylated hydroxyanisole
Product Code: PSI094



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

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration
Water Content (PSI094) = **0.160%**

Approved By
Head - Technical

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

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