

Certificate of Analysis

Ethyl acetate

PurTech Standard for GC

(Secondary Reference Standard)

| | | | |
|--------------------------|--|---------------------|---------------|
| Product Number | PSI051 | CAS No. | 141-78-6 |
| Brand | PureSynth | Lot No. | E28297P |
| Molecular Formula | C ₄ H ₈ O ₂ | Date of Mfg. | March,2025 |
| Molecular Weight | 88.11 g/mol | Date of Exp. | February,2030 |

| Test | Specification | Result |
|--------------------------------------|-----------------------------|------------------------|
| Description | Colorless liquid | Colorless liquid |
| Clarity | Clear | Clear |
| Assay (GC-FID) | > 99.0 % | 99.99 % |
| Water (By KF) | NMT 0.5 % | 0.045 % |
| Density | 0.89-0.91 g/cm ³ | 0.90 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 1265402 Lot no. R09350**

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

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

Assay by GC-FID

METHOD: G.C- FID conditions:

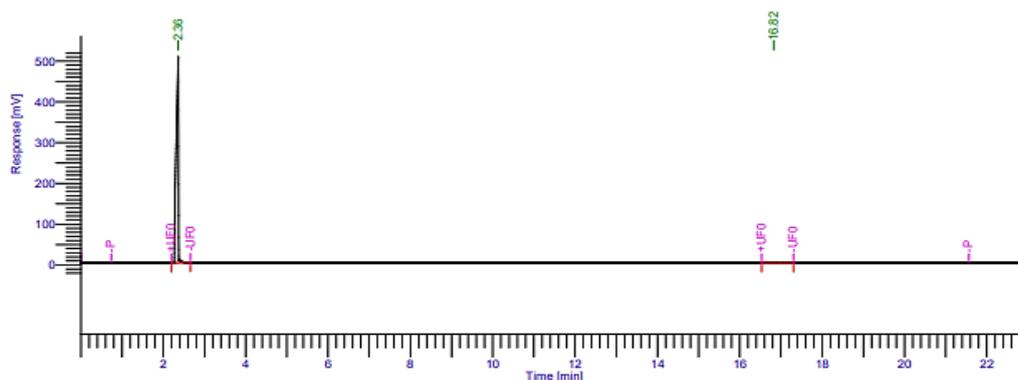
Column: Agilent Technologies DB-FFAP 30mx 0.530mm, 1.0micron

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 | : 09-04-2025 10:40:13 |
| Operator | : manager | Sample Name | : ETHYL ACETATE-E28297P |
| Sample Number | : 001 | Study | : |
| AutoSampler | : BUILT-IN | Rack/Vial | : 0/27 |
| Instrument Name | : Clarus 690 | Channel | : A |
| Instrument Serial # | : 690S23050206 | A/D mV Range | : 1000 |
| Delay Time | : 0.00 min | End Time | : 23.00 min |
| Sampling Rate | : 12.5000 pts/s | Area Reject | : 0.000000 |
| Sample Volume | : 1.000000 ul | Dilution Factor | : 1.00 |
| Sample Amount | : 1.0000 | Cycle | : 1 |
| Data Acquisition Time | : 09-04-2025 09:59:51 | | |



GC Reports

| Peak # | Component Name | Time [min] | Area [uV*sec] | Height [uV] | Area [%] |
|--------|----------------|------------|---------------|-------------|----------|
| 1 | | 2.364 | 2024279.73 | 505316.78 | 99.99 |
| 2 | | 16.821 | 178.84 | 8.46 | 0.01 |
| | | | 2024458.57 | 505325.24 | 100.00 |

Missing Component Report

Component Expected Retention (Calibration File)

All components were found

Purity by GC-FID: 99.99 %

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

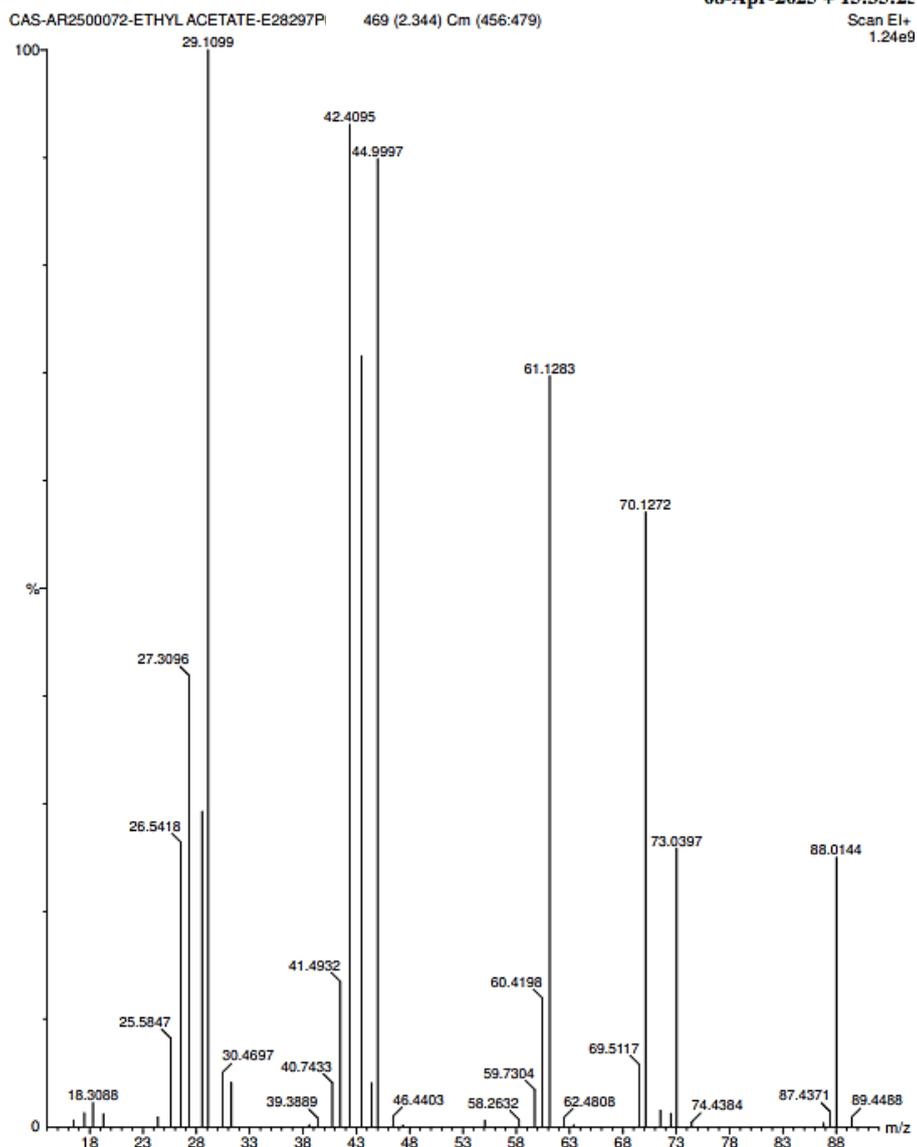
Source energy: 70eV

Mass by GC-MS:

Product Name: Ethyl acetate

Product Code: PSI051

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Identification by GC-MS: Conforms to molecular mass

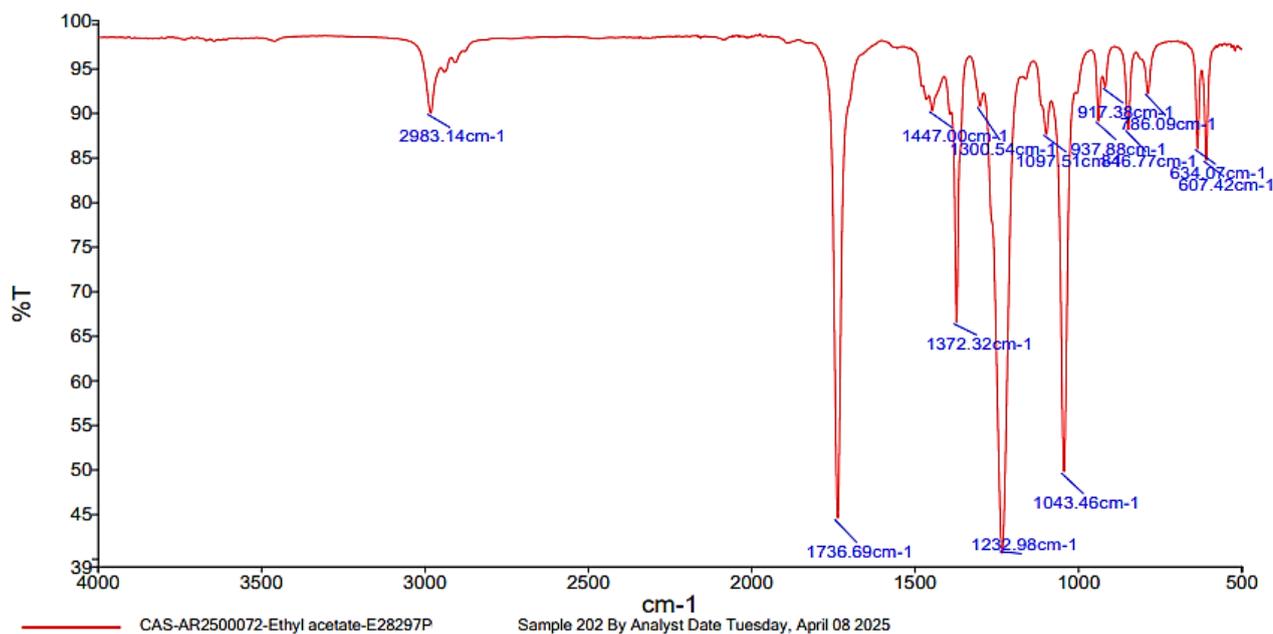
Infrared spectrum:

Product Name: Ethyl acetate

Product Code: PSI051

Analyst
Date

Analyst
08 April 2025 15:40



| Source Spectra Results | | |
|-------------------------------------|-----------------|--------|
| Spectrum Name | Number Of Peaks | |
| CAS-AR2500072-Ethyl acetate-E28297P | 14 | |
| List of Peak Area/Height | | |
| Peak Number | X (cm-1) | Y (%T) |
| 1 | 2983.14 | 90.08 |
| 2 | 1736.69 | 44.58 |
| 3 | 1447.00 | 90.36 |
| 4 | 1372.32 | 66.55 |
| 5 | 1300.54 | 90.87 |
| 6 | 1232.98 | 40.61 |
| 7 | 1097.51 | 87.71 |
| 8 | 1043.46 | 49.79 |
| 9 | 937.88 | 89.19 |
| 10 | 917.38 | 92.99 |
| 11 | 846.77 | 88.22 |
| 12 | 786.09 | 92.32 |
| 13 | 634.07 | 86.08 |
| 14 | 607.42 | 84.79 |

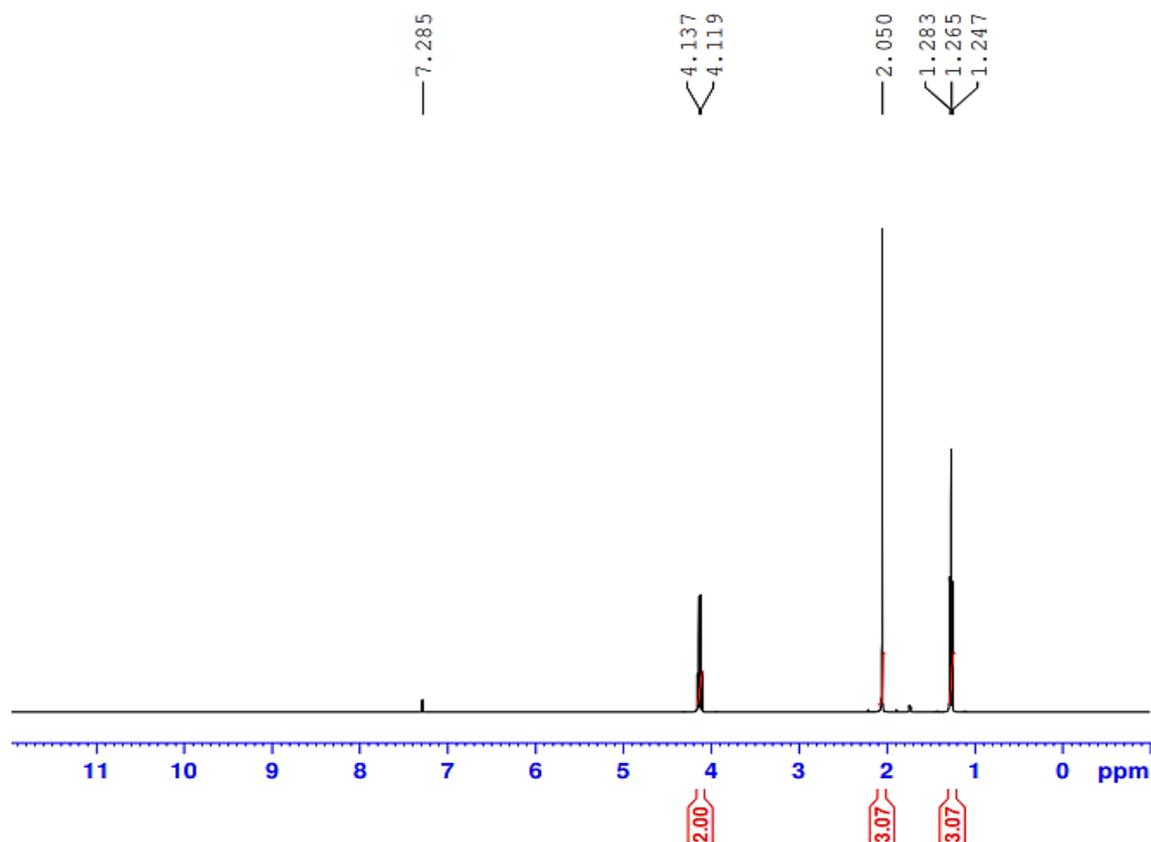
Identification by IR: Conforms to structure

¹H NMR Spectrum:

Product Name: Ethyl acetate

Product Code: PSI051

Ethyl acetate
Batch no- E28297P
1H-NMR in CDCL₃



Identification by ¹H NMR: Conforms to structure

Maximum limits of impurities

WATER DETERMINATION

Method: Karl Fisher titration

Water Content (PSI051) = **0.045 %**

Approved By
Head - Technical

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