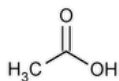


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Glacial Acetic Acid



$C_2H_4O_2$ 60.05
Acetic acid CAS RN®: 64-19-7.

DEFINITION

Glacial Acetic Acid contains NLT 99.5% and NMT 100.5%, by weight, of $C_2H_4O_2$.

IDENTIFICATION

- IDENTIFICATION TESTS—GENERAL (191), Acetate:** Meets the requirements
Sample solution (for test A): Glacial Acetic Acid and water (1:100)

ASSAY

PROCEDURE

Sample solution: Measure 2 mL of Glacial Acetic Acid into a glass-stoppered flask, previously tared while containing about 20 mL of water, and weigh again to obtain the weight of the substance under assay.

Analysis: Add 20 mL of water, then add phenolphthalein TS. Titrate with 1 N sodium hydroxide VS. Each mL of 1 N sodium hydroxide is equivalent to 60.05 mg of $C_2H_4O_2$.

Acceptance criteria: 99.5%–100.5%

IMPURITIES

INORGANIC IMPURITIES

- LIMIT OF NONVOLATILE RESIDUE:** Evaporate 20 mL in a tared dish, and dry at 105° for 1 h: the weight of the residue does not exceed 1.0 mg.
- CHLORIDE AND SULFATE, Chloride(221).**
Sample solution: Dilute 1.0 mL with 20 mL of water.
Analysis: Add 5 drops of silver nitrate TS.
Acceptance criteria: No opalescence is produced.
- CHLORIDE AND SULFATE, Sulfate(221).**
Sample solution: Dilute 1.0 mL with 10 mL of water.
Analysis: Add 1 mL of barium chloride TS.
Acceptance criteria: No turbidity is produced.

ORGANIC IMPURITIES

- PROCEDURE: READILY OXIDIZABLE SUBSTANCES**
Sample solution: Dilute 2.0 mL in a glass-stoppered vessel with 10 mL of water.
Analysis: Add 0.10 mL of 0.10 N potassium permanganate.
Acceptance criteria: The pink color is not changed to brown within 2 h.

SPECIFIC TESTS

- CONGEALING TEMPERATURE (651):** NLT 15.6°

ADDITIONAL REQUIREMENTS

- PACKAGING AND STORAGE:** Preserve in tight containers, and store at room temperature.

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
GLACIAL ACETIC ACID	Documentary Standards Support	SM32020 Small Molecules 3



Documents

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Chromatographic Database Information: [Chromatographic Database](#)

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