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Acetic Acid

Acetic acid;
Acetic acid
CAS RN®: 64-19-7.

DEFINITION

Acetic Acid is a solution containing NLT 36.0% and NMT 37.0%, by weight, of $C_2H_4O_2$.

IDENTIFICATION

• **A. Identification Tests—General, *Acetate* (191):** Meets the requirements

ASSAY

• **Procedure**

Analysis: Place 6 mL in a tared, glass-stoppered flask, and weigh. Add 40 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: 36.0%–37.0%

IMPURITIES

• **Nonvolatile Residue**

Analysis: Evaporate 20 mL in a tared porcelain dish on a steam bath, and dry at 105° for 1 h.

Acceptance criteria: The weight of the residue does not exceed 1.0 mg (0.005%).

• **Chloride**

Sample solution: Acetic acid (1 in 10) in water

Analysis: To 10 mL of the *Sample solution* add 5 drops of silver nitrate TS.

Acceptance criteria: No opalescence is produced.

• **Sulfate**

Sample solution: Acetic acid (1 in 10) in water

Analysis: To 10 mL of the *Sample solution* add 5 drops of barium chloride TS.

Acceptance criteria: No turbidity is produced.

• **Readily Oxidizable Substances**

Analysis: Dilute 4.0 mL in a glass-stoppered vessel with 20 mL of water, and add 0.30 mL of 0.10 N potassium permanganate.

Acceptance criteria: The pink color is not changed to brown at once, and the liquid does not become entirely brown or free from a pink tint in less than 30 s.

ADDITIONAL REQUIREMENTS

• **Packaging and Storage:** Preserve in tight containers.

Auxiliary Information - Please check for your question in the FAQs before contacting USP.

Topic/Question	Contact	Expert Committee
ACETIC ACID	Documentary Standards Support	SM32020 Small Molecules 3
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM32020 Small Molecules 3

Chromatographic Database Information: Chromatographic Database

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