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Diluted Acetic Acid

DEFINITION

Diluted Acetic Acid is a solution containing, in each 100 mL, NLT 5.7 g and NMT 6.3 g of acetic acid (C₂H₄O₂).
Prepare Diluted Acetic Acid as follows (see [Pharmaceutical Compounding—Nonsterile Preparations \(795\)](#)).

Acetic Acid	158 mL
Purified Water, a sufficient quantity to make	1000 mL

Mix the ingredients.

IDENTIFICATION

- **A. IDENTIFICATION TESTS—GENERAL, [Acetate \(191\)](#):** Meets the requirements

ASSAY

- **PROCEDURE**
Sample: 25 mL
Analysis: To the *Sample* add 15 mL of carbon dioxide-free water. Add phenolphthalein TS, and titrate with 1 N sodium hydroxide VS. Each mL of 1 N sodium hydroxide is equivalent to 60.05 mg of acetic acid (C₂H₄O₂).
Acceptance criteria: 5.7–6.3 g of acetic acid per 100 mL of Diluted Acetic Acid

IMPURITIES

- **LIMIT OF CHLORIDE**
Sample solution: A solution of Diluted Acetic Acid in water (6 in 10)
Analysis: Add 5 drops of silver nitrate TS to 10 mL of the *Sample solution*.
Acceptance criteria: No opalescence is found.
- **LIMIT OF SULFATE**
Sample solution: A solution of Diluted Acetic Acid in water (6 in 10)
Analysis: Add 5 drops of barium chloride TS to 10 mL of the *Sample solution*.
Acceptance criteria: No turbidity is produced.
- **LIMIT OF NONVOLATILE RESIDUE**
Sample: 20 mL
Analysis: Evaporate the *Sample* in a tared porcelain dish on a steam bath, and dry it at 105° for 1 h.
Acceptance criteria: The weight of the residue does not exceed 1.0 mg (NMT 0.005%).

SPECIFIC TESTS

- **READILY OXIDIZABLE SUBSTANCES**
Sample: 20 mL in a glass-stoppered flask
Analysis: Add 0.30 mL of 0.10 N potassium permanganate to the *Sample*.
Acceptance criteria: The pink color is not changed to brown immediately, 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
DILUTED ACETIC ACID	Brian Serumaga Science Program Manager	CMP2020 Compounding 2020

Chromatographic Database Information: [Chromatographic Database](#)

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