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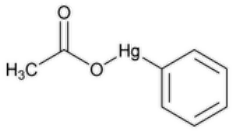
Phenylmercuric Acetate



$C_8H_8HgO_2$ 336.74

Mercury, (acetato-*O*)phenyl-;

(Acetato)phenylmercury CAS RN®: 62-38-4.

DEFINITION

Phenylmercuric Acetate contains NLT 98.0% and NMT 100.5% of phenylmercuric acetate ($C_8H_8HgO_2$).

IDENTIFICATION

- **A.**

  Sample: 0.1 g

  Analysis: To the *Sample* add 0.5 mL of nitric acid. Warm gently until a dark brown color is produced, and dilute with water to 10 mL.

  Acceptance criteria: The characteristic odor of nitrobenzene is evolved.

- **B.**

  Sample: 0.1 g

  Analysis: To the *Sample* add 0.5 mL of sulfuric acid and 1 mL of alcohol, and warm.

  Acceptance criteria: The characteristic odor of ethyl acetate is evolved.

- **C.**

  Sample solution: Saturated solution in water

  Analysis: To 5 mL of the *Sample solution* add a few drops of sodium sulfide TS.

  Acceptance criteria: A white precipitate is formed, which turns black when the mixture is boiled and then allowed to stand.

ASSAY

- **Procedure**

  Sample solution: Transfer 500 mg of Phenylmercuric Acetate to a 100-mL flask. Add 15 mL of water, 5 mL of formic acid, and 1 g of zinc dust, and reflux for 30 min. Cool, filter, and wash the filter paper and the amalgam with water until the washings are no longer acid to litmus. Dissolve the amalgam in 40 mL of 8 N nitric acid. Heat on a steam bath for 3 min, and then add 500 mg of urea and enough potassium permanganate TS to produce a permanent pink color. Cool, decolorize the solution with hydrogen peroxide TS, and add 1 mL of ferric ammonium sulfate TS.

  Titrimetric system

  (See *Titrimetry* ⟨541⟩.)

  Mode: Direct titration

  Titrant: 0.1 N ammonium thiocyanate VS

  Endpoint detection: Visual

  Analysis: Titrate with *Titrant*, and each mL of 0.1 N ammonium thiocyanate is equivalent to 16.84 mg of phenylmercuric acetate ($C_8H_8HgO_2$).

  Acceptance criteria: 98.0%–100.5%

IMPURITIES

- **Residue on Ignition** ⟨281⟩**:** NMT 0.2%
- **Polymercurated Benzene Compounds**

Sample solution: Shake 2.0 g of Phenylmercuric Acetate with 100 mL of acetone, and filter.

Analysis: Wash the residue with successive portions of acetone until a total of 50 mL is used, then dry the residue at 105° for 1 h. Weigh the residue.

Acceptance criteria: NMT 1.5%; the weight of residue is NMT 30 mg.

SPECIFIC TESTS

• **Melting Range or Temperature ⟨741⟩:** 149°–153°

ADDITIONAL REQUIREMENTS

• **Packaging and Storage:** Preserve in tight, light-resistant containers.

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

Topic/Question	Contact	Expert Committee
PHENYLMERCURIC ACETATE	Documentary Standards Support	SE2020 Simple Excipients
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SE2020 Simple Excipients

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
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