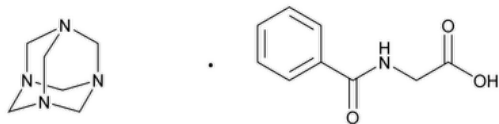


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# Methenamine Hippurate



$C_6H_{12}N_4 \cdot C_9H_9NO_3$

319.36

Glycine, *N*-benzoyl, compd. with 1,3,5,7-tetraazatricyclo[3.3.1.1<sup>3,7</sup>]decane (1:1);

Hexamethylenetetramine monohippurate CAS RN<sup>®</sup>: 5714-73-8; UNII: M329791L57.

## DEFINITION

Methenamine Hippurate, dried under vacuum at 60° for 1 h, contains NLT 95.5% and NMT 102.0% of methenamine hippurate ( $C_6H_{12}N_4 \cdot C_9H_9NO_3$ ), and contains NLT 54.0% and NMT 58.0% of hippuric acid ( $C_9H_9NO_3$ ).

## IDENTIFICATION

**Change to read:**

- A. [▲ SPECTROSCOPIC IDENTIFICATION TESTS \(197\), Infrared Spectroscopy: 197M ▲](#) (CN 1-MAY-2020)

## ASSAY

### PROCEDURE

**Sample solution:** Dissolve 700 mg of Methenamine Hippurate in 50 mL of glacial acetic acid.

#### Titrimetric system

**Mode:** Direct titration

**Titrant:** 0.1 N perchloric acid VS

**Endpoint detection:** Potentiometric

**Analysis:** Titrate with *Titrant*. Perform a blank determination, and make any necessary correction. Each mL of 0.1 N perchloric acid is equivalent to 31.94 mg of methenamine hippurate ( $C_6H_{12}N_4 \cdot C_9H_9NO_3$ ).

**Acceptance criteria:** 95.5%–102.0% on the previously dried basis

## OTHER COMPONENTS

### CONTENT OF HIPPURIC ACID

**Sample solution:** Transfer 1 g to a 250-mL conical flask, and add 50 mL of water. When the solution is complete, add phenolphthalein TS.

#### Titrimetric system

**Mode:** Direct titration

**Titrant:** 0.1 N sodium hydroxide VS

**Endpoint detection:** Visual

**Analysis:** Titrate with *Titrant*. Each mL of 0.1 N sodium hydroxide is equivalent to 17.92 mg of hippuric acid ( $C_9H_9NO_3$ ).

**Acceptance criteria:** 54.0%–58.0%

## IMPURITIES

- [RESIDUE ON IGNITION \(281\)](#): NMT 0.1%

### SULFATE

**Sample solution:** 200 mg in 10 mL of water

**Analysis:** Add 5 drops of 3 N hydrochloric acid and 5 drops of barium chloride TS.

**Acceptance criteria:** No turbidity appears within 1 min.

## SPECIFIC TESTS

- [LOSS ON DRYING \(731\)](#)

**Analysis:** Dry under vacuum at 60° for 1 h.

**Acceptance criteria:** NMT 1.0%

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in well-closed containers.
- **USP REFERENCE STANDARDS** (11).  
[USP Methenamine Hippurate RS](#)

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

| Topic/Question        | Contact                                       | Expert Committee          |
|-----------------------|-----------------------------------------------|---------------------------|
| METHENAMINE HIPPURATE | <a href="#">Documentary Standards Support</a> | SM12020 Small Molecules 1 |

Chromatographic Database Information: [Chromatographic Database](#)

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