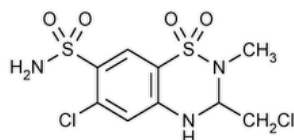


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Methyclothiazide



$C_9H_{11}Cl_2N_3O_4S_2$ 360.24

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-3-(chloromethyl)-3,4-dihydro-2-methyl-, 1,1-dioxide, (±)-.

(±)-6-Chloro-3-(chloromethyl)-3,4-dihydro-2-methyl-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide CAS RN®: 135-07-9; UNII: L3H46UAC61.

» Methyclothiazide contains not less than 97.0 percent and not more than 102.0 percent of $C_9H_{11}Cl_2N_3O_4S_2$, calculated on the dried basis.

Packaging and storage—Preserve in well-closed containers.

USP REFERENCE STANDARDS (11)—

[USP Methyclothiazide RS](#)

[USP Methyclothiazide Related Compound A RS](#)

4-Amino-6-chloro-N³-methyl-m-benzenedisulfonamide.

$C_7H_{10}ClN_3O_4S_2$ 299.76

Identification—

A: [Spectroscopic Identification Tests \(197\)](#), [Infrared Spectroscopy: 197K](#).

B: [Spectroscopic Identification Tests \(197\)](#), [Ultraviolet-Visible Spectroscopy: 197U](#)—

Solution: 20 µg per mL.

Medium: methanol.

C: Fuse about 100 mg of it with a pellet of sodium hydroxide: the ammonia fumes produced turn moistened red litmus paper blue. The fused mixture responds to the test for [Sulfite \(191\)](#).

LOSS ON DRYING (731)—Dry it at 105° for 4 hours: it loses not more than 0.5% of its weight.

RESIDUE ON IGNITION (281): not more than 0.2%.

CHLORIDE (221)—Shake 750 mg with 25 mL of water for 2 minutes, filter through a suitable membrane filter, and add 4 or 5 drops of 2 N nitric acid: the acidified filtrate shows no more chloride than corresponds to 0.20 mL of 0.020 N hydrochloric acid (0.02%).

Change to read:

▲ [SELENIUM \(291\), Procedures, Procedure 1](#) ▲ (CN 1-Jun-2023) : 0.003%.

Diazotizable substances—

Standard preparation—Transfer about 10 mg of [USP Methyclothiazide Related Compound A RS](#), accurately weighed, to a 50-mL volumetric flask, dilute with acetonitrile to volume, and mix. Pipet 25 mL of the solution into a 100-mL volumetric flask, dilute with acetonitrile to volume, and mix. Each mL of *Standard preparation* contains about 50 µg of the Reference Standard.

Test preparation—Transfer about 500 mg of Methyclothiazide, accurately weighed, to a 100-mL volumetric flask, dissolve in and dilute with acetonitrile to volume, and mix.

Procedure—Pipet 2 mL each of the *Standard preparation* and the *Test preparation* into separate 50-mL volumetric flasks. Pipet 2 mL of acetonitrile into a third 50-mL flask to provide the blank. To each flask add 4 mL of 0.1 N hydrochloric acid, and mix. Add 3.0 mL of sodium nitrite solution (1 in 200) to each flask, mix, and place the flasks in an ice bath for 5 minutes, shaking occasionally. Add to each flask 3.0 mL of ammonium sulfamate solution (1 in 50), mix, and allow the flasks to remain in the ice bath for 1 additional minute. Remove the flasks from the ice bath, add 1.0 mL of N-(1-naphthyl)ethylenediamine dihydrochloride solution (1 in 1000), and mix. Allow the flasks to stand at room temperature for 1 minute, then dilute with water to volume, and mix. Concomitantly determine the absorbances of the solutions obtained from the *Standard preparation* and the *Test preparation* in 1-cm cells at 525 nm, with a suitable spectrophotometer, using the reagent blank to set the instrument. The absorbance of the solution from the *Test preparation* does not exceed that of the solution from the *Standard preparation*, corresponding to not more than 1.0% of diazotizable substances.

Assay—Transfer about 350 mg of Methyclothiazide, accurately weighed, to a 250-mL conical flask, add 40 mL of a 1 in 20 solution of potassium hydroxide in methanol, and reflux at full boil for 1 hour. Cool, rinse the inner walls of the condenser with 20 mL of water and two 20-mL portions of methanol, add 10 mL of glacial acetic acid and 2 drops of eosin Y TS, and titrate with 0.1 N silver nitrate VS to the first appearance of a definite pink color. Each mL of 0.1 N silver nitrate is equivalent to 36.02 mg of $C_9H_{11}Cl_2N_3O_4S_2$.

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

Topic/Question	Contact	Expert Committee
METHYCLOTHIAZIDE	Documentary Standards Support	SM22020 Small Molecules 2
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM22020 Small Molecules 2

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

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