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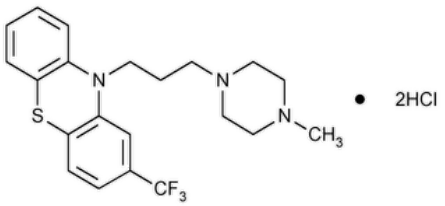
Trifluoperazine Hydrochloride



$C_{21}H_{24}F_3N_3S \cdot 2HCl$ 480.42

10*H*-Phenothiazine, 10-[3-(4-methyl-1-piperazinyl)propyl]-2-(trifluoromethyl)-, dihydrochloride.

10-[3-(4-Methyl-1-piperazinyl)propyl]-2-(trifluoromethyl)phenothiazine dihydrochloride CAS RN®: 440-17-5; UNII: 6P1Y2SNF5V.

» Trifluoperazine Hydrochloride, dried in vacuum at 60° for 4 hours, contains not less than 98.0 percent and not more than 101.0 percent of $C_{21}H_{24}F_3N_3S \cdot 2HCl$.

Packaging and storage—Preserve in tight, light-resistant containers. Store at 25°, excursions permitted between 15° and 30°.

USP Reference standards ⟨11⟩—

USP Trifluoperazine Hydrochloride RS

[Note—Throughout the following procedures, protect test or assay specimens, the Reference Standard, and solutions containing them, by conducting the procedures without delay, under subdued light, or by using low-actinic glassware.]

Identification—

Change to read:

A: ▲*Spectroscopic Identification Tests* ⟨197⟩*, Infrared Spectroscopy: 197M*▲ (CN 1-May-2020) ·

Change to read:

B: ▲*Spectroscopic Identification Tests* ⟨197⟩*, Ultraviolet-Visible Spectroscopy: 197U*▲ (CN 1-May-2020) —

Solution: 10 µg per mL.

Medium: 0.1 N hydrochloric acid.

Absorptivities at 255 nm, calculated on the dried basis, do not differ by more than 2.0%.

C: A solution (1 in 100) responds to the tests for *Chloride* ⟨191⟩.

D: Prepare a solution in methanol containing 1.2 mg per mL. Apply 5 µL each of this solution and a solution of USP Trifluoperazine Hydrochloride RS in methanol containing 1.2 mg per mL to a suitable thin-layer chromatographic plate (see *Chromatography* ⟨621⟩) coated with a 0.25-mm layer of chromatographic silica gel. Allow the spots to dry, and develop the chromatogram in a solvent system consisting of a mixture of acetone and ammonium hydroxide (200:1) until the solvent front has moved about three-fourths of the length of the plate. Remove the plate from the developing chamber, mark the solvent front, and allow the solvent to evaporate. Locate the spots on the plate by lightly spraying with a solution of iodoplatinic acid prepared by dissolving 100 mg of chloroplatinic acid in 1 mL of 1 N hydrochloric acid, adding 25 mL of potassium iodide solution (1 in 25), diluting with water to 100 mL, and then adding 0.5 mL of formic acid: the R_F value of the principal spot from the test solution corresponds to that from the Standard solution.

pH ⟨791⟩**:** between 1.7 and 2.6, in a solution (1 in 20).

Loss on drying ⟨731⟩—Dry it in vacuum at 60° for 4 hours: it loses not more than 1.5% of its weight.

Residue on ignition ⟨281⟩**:** not more than 0.1%.

Assay—Dissolve about 500 mg of Trifluoperazine Hydrochloride, previously dried and accurately weighed, in 50 mL of glacial acetic acid, and add crystal violet TS and 15 mL of mercuric acetate TS. Titrate with 0.1 N perchloric acid VS to a blue-green endpoint. Perform a blank determination, and make any necessary correction. Each mL of 0.1 N perchloric acid is equivalent to 24.02 mg of $C_{21}H_{24}F_3N_3S \cdot 2HCl$.

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

Topic/Question	Contact	Expert Committee
TRIFLUOPERAZINE HYDROCHLORIDE	Documentary Standards Support	SM42020 Small Molecules 4
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM42020 Small Molecules 4

Chromatographic Database Information: Chromatographic Database

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