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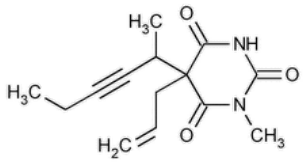
Methohexital



$C_{14}H_{18}N_2O_3$ 262.30

2,4,6(1*H*,3*H*,5*H*)-Pyrimidinetrione, 1-methyl-5-(1-methyl-2-pentynyl)-5-(2-propenyl)-, (±)-.

(±)-5-Allyl-1-methyl-5-(1-methyl-2-pentynyl)barbituric acid CAS RN®: 151-83-7; UNII: E5B8ND5IPE.

» Methohexital contains not less than 98.0 percent and not more than 101.0 percent of $C_{14}H_{18}N_2O_3$, calculated on the anhydrous basis.

Packaging and storage—Preserve in well-closed containers.

USP Reference standards ⟨11⟩—

USP Methohexital RS

Change to read:

▲**Spectroscopic Identification Tests** ⟨197⟩, *Infrared Spectroscopy*: **197S**▲ (CN 1-May-2020)—

Solution: 1 in 100.

Medium: chloroform.

Melting range ⟨741⟩: between 92° and 96°, but the range between beginning and end of melting does not exceed 3°.

Water Determination, *Method I* ⟨921⟩: not more than 2.0%.

Chloride ⟨221⟩—Dissolve 200 mg in a mixture of 75 mL of ether and 25 mL of water, agitate, and allow to separate: the water solution shows no more chloride than corresponds to 0.17 mL of 0.010 N hydrochloric acid (0.03%).

Ordinary impurities ⟨466⟩—

Test solution: methanol.

Standard solution: methanol.

Eluant: a mixture of chloroform and acetone (7:3).

Visualization—Expose the plate to chlorine gas for 1 minute, and air-dry the plate at room temperature for 2 minutes. Prepare a solution of 0.5 g of potassium iodide in 50 mL of water, and prepare a solution of 1.5 g of soluble starch in 50 mL of hot water. Mix 10 mL of each solution with 4 mL of alcohol to obtain the *Detection reagent*. [Note—The *Detection reagent* so obtained may be used for up to 3 or 4 days.] Spray the plate with the *Detection reagent*.

Assay—Dissolve about 100 mg of Methohexital, accurately weighed, in chloroform, and dilute quantitatively and stepwise with chloroform to obtain a solution having a concentration of about 10 mg per mL. Dissolve an accurately weighed quantity of USP Methohexital RS in chloroform, and dilute quantitatively and stepwise with chloroform to obtain a Standard solution having a known concentration of about 10 mg per mL. Concomitantly determine the absorbances of both solutions in 0.1-mm cells at the wavelength of maximum absorbance at about 5.93 µm, with a suitable spectrophotometer, using chloroform as the blank. Calculate the quantity, in mg, of $C_{14}H_{18}N_2O_3$ in the portion of Methohexital taken by the formula:

$$10C(A_U/A_S)$$

in which C is the concentration, in mg per mL, of USP Methohexital RS in the Standard solution; and A_U and A_S are the absorbances of the solution of Methohexital and the *Standard solution*, respectively.

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

Topic/Question	Contact	Expert Committee
METHOHEXITAL	Documentary Standards Support	SM52020 Small Molecules 5

Chromatographic Database Information: Chromatographic Database

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