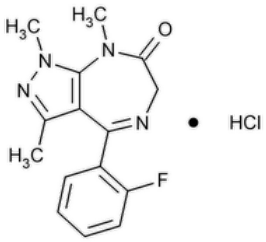
Status: Currently Official on 17-Feb-2025
Official Date: Official as of 01-May-2020
Document Type: USP Monographs
DocId: GUID-BADDA54C-20CA-43C7-BEE4-678E591C9814_4_en-US
DOI: https://doi.org/10.31003/USPNF_M89950_04_01
DOI Ref: yx2lq

Zolazepam Hydrochloride



$C_{15}H_{15}FN_4O \cdot HCl$ 322.77

Pyrazolo[3,4-*e*][1,4]diazepin-7(1*H*)-one, 4-(2-fluorophenyl)-6,8-dihydro-1,3,8-trimethyl-, monohydrochloride.

4-(*o*-Fluorophenyl)-6,8-dihydro-1,3,8-trimethylpyrazolo [3,4-*e*][1,4]diazepin-7(1*H*)-one monohydrochloride CAS RN®: 33754-49-3; UNII: 45SJ093Q1N.

» Zolazepam Hydrochloride contains not less than 97.0 percent and not more than 103.0 percent of $C_{15}H_{15}FN_4O \cdot HCl$.

Packaging and storage—Preserve in tight containers.

Labeling—Label it to indicate that it is for veterinary use only. Where it is intended for use in preparing injectable dosage forms, the label states that it is sterile or must be subjected to further processing during the preparation of injectable dosage forms.

USP Reference standards ⟨11⟩—

USP Zolazepam Hydrochloride RS

Clarity of solution—Dissolve 2.0 g of it in 10 mL of water: the solution is clear.

Identification—

Change to read:

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

Change to read:

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

Solution: 0.015 mg per mL.

Medium: 0.1 N hydrochloric acid.

Absorptivities at 223 nm do not differ by more than 3.0%.

C: It responds to the tests for *Chloride* ⟨191⟩.

Bacterial Endotoxins Test ⟨85⟩—Where the label states that Zolazepam Hydrochloride is sterile or must be subjected to further processing during the preparation of injectable dosage forms, it contains not more than 0.07 USP Endotoxin Unit per mg of zolazepam.

Sterility Tests ⟨71⟩—Where the label states that Zolazepam Hydrochloride is sterile, it meets the requirements when tested as directed for *Membrane Filtration* under *Test for Sterility of the Product to be Examined*.

pH ⟨791⟩**:** between 1.5 and 3.5, in a solution (1 in 10).

Loss on drying ⟨731⟩—Dry it at 105° for 4 hours: it loses not more than 1.0% of its weight.

Residue on ignition ⟨281⟩**:** not more than 0.5%.

Chromatographic purity—

Modified Dragendorff's reagent—Dissolve 1.7 g of bismuth subnitrate in 80 mL of water and 20 mL of glacial acetic acid, warming, if necessary. Cool, add 100 mL of potassium iodide solution (1 in 2), and mix. Refrigerate this stock solution for prolonged storage. For use, dilute 10 mL of this stock solution with water to 100 mL, add 10 mL of glacial acetic acid, and mix. Then add 120 mg of iodine crystals, and shake until the iodine has completely dissolved. Store refrigerated, and discard after 2 weeks.

Procedure—Prepare a test solution of Zolazepam Hydrochloride in methanol containing 100 mg per mL. Prepare a Standard solution in methanol containing 2.0 mg of USP Zolazepam Hydrochloride RS per mL. Prepare a thin-layer chromatographic plate (see *Chromatography*

(621)) coated with a 0.25-mm layer of chromatographic silica gel mixture. Separately apply 5 µL of the test solution and the Standard solution to the plate, and allow the spots to dry. Place the plate in a saturated chamber containing a solvent system consisting of a mixture of toluene, acetone, and ammonium hydroxide (75:18:7), and lined with filter paper. Develop the chromatogram until the solvent front has moved about three-fourths of the length of the plate. Remove the plate from the chamber, mark the solvent front, allow the plate to air-dry. Spray the plate with *Modified Dragendorff's reagent*, and examine the plate: no individual secondary spot observed in the chromatogram obtained from the test solution is greater in size or intensity than the principal spot observed in the chromatogram obtained from the Standard solution, corresponding to 2%, and the total of any such spots observed does not exceed 3%.

Chloride content—Transfer about 400 mg of it, accurately weighed, to a conical flask, add 5 mL of water, 5 mL of glacial acetic acid, and 50 mL of methanol, and swirl to dissolve. Add 1 drop of eosin Y TS, and titrate with 0.1 N silver nitrate VS to the endpoint when the granular precipitate first turns to a permanent pink color. Each mL of 0.1 N silver nitrate is equivalent to 3.545 mg of chloride: between 10.5% and 11.5% is found.

Assay—Transfer about 480 mg of Zolazepam Hydrochloride, accurately weighed, to a conical flask, add 70 mL of glacial acetic acid, 10 mL of mercuric acetate TS, and swirl to dissolve. Titrate with 0.1 N perchloric acid VS, determining the endpoint potentiometrically. Perform a blank determination, and make any necessary correction (see *Titrimetry* ⟨541⟩). Each mL of 0.1 N perchloric acid is equivalent to 32.28 mg of $C_{15}H_{15}FN_4O \cdot HCl$.

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

Topic/Question	Contact	Expert Committee
ZOLAZEPAM HYDROCHLORIDE	Documentary Standards Support	SM32020 Small Molecules 3
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM32020 Small Molecules 3

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
Pharmacopeial Forum: Volume No. Information currently unavailable

Current DocID: GUID-BADDA54C-20CA-43C7-BEE4-678E591C9814_4_en-US
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