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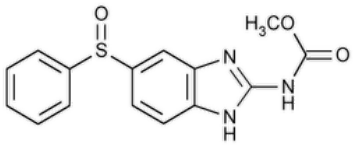
Oxfendazole



$C_{15}H_{13}N_3O_3S$ 315.35

Carbamic acid, 5-(phenylsulfinyl)-1*H*-benzimidazol-2-yl-, methyl ester.

Methyl 5-(phenylsulfinyl)-2-benzimidazolecarbamate CAS RN®: 53716-50-0; UNII: OMP2H17F9E.

» Oxfendazole contains not less than 98.0 percent and not more than 100.5 percent of $C_{15}H_{13}N_3O_3S$, calculated on the dried basis.

Packaging and storage—Preserve in well-closed, light-resistant containers.

Labeling—Label it to indicate that it is for veterinary use only.

USP Reference standards ⟨11⟩—

USP Fenbendazole RS
USP Oxfendazole RS

Identification—

Change to read:

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

B: The appearance of the principal spot in the chromatogram of the *Test solution* corresponds to that in the chromatogram of *Standard solution 1*, as obtained in the test for *Related compounds*.

Loss on drying ⟨731⟩—Dry it in vacuum at a pressure not exceeding 5 mm of mercury at 105° for 2 hours: it loses not more than 1.0% of its weight.

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

Related compounds—

Diluent—Prepare a mixture of ethyl acetate and glacial acetic acid (4:1).

Standard solution 1—Dissolve a quantity of USP Oxfendazole RS in *Diluent* to obtain a solution having a concentration of 0.1 mg per mL.

Standard solution 2—Dissolve a quantity of USP Fenbendazole RS in *Diluent* to obtain a solution having a concentration of 0.05 mg per mL.

Standard solution 3—Prepare a mixture of *Standard solution 1* and *Standard solution 2* (1:2).

Test solution—Dissolve 25 mg of Oxfendazole in *Diluent*, dilute with *Diluent* to 5 mL, and mix.

Procedure—Separately apply 20 µL portions of *Standard solution 1*, *Standard solution 2*, *Standard solution 3*, and the *Test solution* to a thin-layer chromatographic plate (see *Chromatography* ⟨621⟩) coated with a 0.25-mm layer of chromatographic silica gel mixture. Develop the chromatograms in a solvent system consisting of a mixture of ethyl acetate and glacial acetic acid (95:5) until the solvent front has moved about three-fourths of the length of the plate. Remove the plate from the chromatographic chamber, and allow to air-dry. Examine the plate under short-wavelength UV light: the chromatogram obtained from *Standard solution 3* shows two clearly separated principal spots. In the chromatogram obtained from the *Test solution*, no spot corresponding to fenbendazole is more intense than the spot in the chromatogram obtained from *Standard solution 2* (1%), and no spot other than the principal spot and no spot corresponding to fenbendazole is more intense than the spot in the chromatogram obtained from *Standard solution 1* (2%).

Assay—Dissolve about 300 mg of Oxfendazole, accurately weighed, in 3 mL of anhydrous formic acid. Add 40 mL of acetic anhydride, and titrate with 0.1 N perchloric acid VS, determining the endpoint potentiometrically. Each mL of 0.1 N perchloric acid is equivalent to 31.54 mg of $C_{15}H_{13}N_3O_3S$.

Topic/Question	Contact	Expert Committee
OXFENDAZOLE	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

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