Government of Nepal
Ministry of Health and Population
Department of Drug Administration
National Medicines Laboratory
Quality and Method Validation Section

Metronidazole & Furazolidone Bolus (vet)

Analytical Profile No.: Metr Fur 076/077/AP 078

Metronidazole & Furazolidone Bolus (vet) contain not less than 90.0% and not more than 110.0% of the stated amount of Metronidazole and not less than 90.0% and not more than 110.0% of the stated amount of Furazolidone.

1. Identification:

1.1. Metronidazole:

In the assay, the peak maxima in the spectrum obtained with the test solution should correspond to the peak maxima in the spectrum obtained with the reference solution of Metronidazole.

1.2. Furazolidone:

In the assay, the peak maxima in the spectrum obtained with the test solution should correspond to the peak maxima in the spectrum obtained with the reference solution of Furazolidone.

2. Assay: *Determine by UV-Vis spectrophotometer*

2.1 Metronidazole:

2.1.1 Test solution: Weigh 20 tablets individually and powder the tablet. Weigh accurately the powdered sample equivalent to 50 mg of the metronidazole and transfer into 100 ml volumetric flask. Add about 70 ml of 0.1M HCl, and sonicate for about 10-15 minutes, cool at room temperature and make up the volume to 100 ml with same solvent. Dilute 1 ml of the resulting solution to 100 ml with same solvent.

2.1.2 Reference solution: Weigh accurately about 50 mg of Metronidazole WS and transfer into 100 ml volumetric flask. Dissolve with 0.1M HCl and make up the volume to 100 ml with same solvent. Dilute 1 ml of the resulting solution to 100 ml with same solvent.

2.1.3 Procedure: Measure the absorbance of the standard and sample solution at the maximum at 276 nm using 0.1M HCl as blank.

Calculate the content of metronidazole in the tablet.

2.2 Furazolidone

2.2.1 Test solution: Weigh 20 tablets individually and powder the tablet. Weigh accurately the powdered sample equivalent to 50 mg of Furazolidone and transfer into 50 ml volumetric flask. Add 25ml of DMF, heat on water bath for 30min, cool and make up the volume to 50 ml with DMF. Dilute 1 ml of the resulting solution to 25 ml with same solvent. Follow the color development procedure.

2.2.2 Reference solution: Weigh accurately about 50 mg of Furazolidone WS and transfer into 50 ml volumetric flask. Add 25ml of DMF, heat on water bath for 30min, cool and make up the volume to 50 ml with DMF. Dilute 1 ml of the resulting solution to 25 ml with same solvent. Follow the color development procedure.

2.2.3 Procedure: To 1ml each of standard and sample solution, add 5ml of DMF and 0.2ml of 0.1M methanolic potassium hydroxide. Immediately measure the absorbance of both standard and sample solutions at 550nm against solvent blank.

Calculate the content of Furazolidone in the tablet.

3. Other tests: As per pharmacopoeial requirements.