

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

## **Analytical profile of Fenbendazole Boluses**

**Analytical Profile No.:** Fenben B 080/81/AP 158

Fenbendazole Boluses contains not less than 90.0% and not more than 110.0% of the stated amount of Fenbendazole.

Usual Strength: 1500 mg

### **1. Identification:**

In the Assay, the principle peak in the chromatogram obtained with the test solution corresponds to the

### **2. Assay:** *Determine by liquid chromatography*

**2.1 Test solution:** Weigh 20 boluses and calculate average weight. Weigh accurately the powder equivalent to 100 mg of Fenbendazole in 100 ml of dry volumetric flask, add 50 ml of 0.1M methanolic hydrochloric acid and sonicate for 30 minute. Make up the volume with methanol (65%) and filter. Dilute 5 ml of the solution to 50 ml with 0.1M hydrochloric acid in methanol (85%).

**2.2 Reference solution:** Weigh accurately 100 mg of Fenbendazole WS and transfer in 100 ml completely dried volumetric flask. Add 50 ml of 0.1M methanolic Hydrochloric acid, sonicate for 30 minutes to dissolve. Make up the volume with methanol (65%). Dilute 5 ml of the solution to 50 ml with 0.1M hydrochloric acid in methanol (85%).

### **2.3 Chromatographic system:**

**Column:** C18 (4.6mmX 250-mm, 5 $\mu$ )

**Flow rate:** 1.0 ml/min

**Wavelength:** 280 nm

**Injection volume:** 20  $\mu$ l

**Column Temperature:** 30°C

**Mobile Phase:** 350 volumes of 0.5% w/v solution of sodium dihydrogen orthophosphate and 650 volumes of methanol containing 1.88 gm. of sodium hexane sulfonate. Adjust pH 3.5 with orthophosphoric acid.

**2.4 Procedure:** Inject the reference solution five times and sample solutions. The test is not valid unless the column efficiency is not less than 2000 theoretical plates, tailing factor is not more than 2.0, and the

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relative standard deviation for replicate injections is not more than 2.0%. Measure the peak responses.

Calculate the content of Fenbendazole in Fenbendazole Boluses.

**3. Other tests:** As per Pharmacopoeial requirements.

*Subject to approval from DAC*