# FRUVET

## (Furosemide IP 50 mg Injection Veterinary Use)

### 📝 Description

Furosemide IP is a potent loop diuretic used in veterinary medicine to promote diuresis by inhibiting the reabsorption of sodium and chloride in the kidneys, primarily in the ascending loop of Henle. This results in increased urine production and reduction of fluid retention in animals. Benzyl Alcohol IP at 1% v/v serves as a preservative to maintain the sterility and stability of the injectable solution.

### 📊 Specification

- Appearance: Clear, colourless sterile injectable solution
- Furosemide concentration: 50 mg/mL
- Benzyl Alcohol concentration: 1% v/v (preservative)
- pH: 8.0 – 9.5
- Sterility: Complies with pharmacopeial sterile injection requirements
- Free from particulate matter
- Shelf life: Typically 2 years under recommended storage conditions

### 🐄 Composition

- Furosemide IP: 50 mg per mL
- Benzyl Alcohol IP (Preservative): 1% v/v
- Water for Injection: q.s.

### 🧴 Excipients

- Water for Injection
- Benzyl Alcohol IP 1% v/v (preservative)
- pH adjusters such as Sodium hydroxide or Hydrochloric acid as required

### 🏷️ Category

Loop diuretic, veterinary injectable.

## Indications

- Treatment of enema associated with congestive heart failure, liver cirrhosis, and renal diseases in animals
- Management of fluid retention and hypertension
- Used in veterinary cardiology and nephrology to reduce fluid overload
- Adjunct therapy for respiratory distress caused by pulmonary enema

## Dosage

- Cattle, horses, buffaloes: 10–20 mL (equivalent to 500–1000 mg Furosemide)
- Sheep, goats: 2–5 mL
- Dogs, cats: 1–5 mL
- Administer once or twice daily based on veterinary prescription

## Route of Administration

- Intravenous (IV) injection (preferred for rapid effect)
- Intramuscular (IM) or Subcutaneous (SC) injection if IV is not possible

## Product Form

- Sterile injectable solution
- Available in 10 mL vial

## Usage

Used in veterinary practice to manage conditions causing fluid accumulation and enema, improve urine output, and reduce hypertension in animals.

## Advantages

- Potent diuretic effect
- Rapid onset when administered IV
- Helps relieve symptoms associated with fluid overload
- Stable formulation with preservative
- Suitable for multiple veterinary species

## ⚠ Adverse Effects

- Excessive diuresis leading to dehydration and electrolyte imbalances
- Hypokalaemia (low potassium levels)
- Injection site pain or irritation
- Possible ototoxicity at high doses (rare in veterinary use)
- Hypotension and weakness in overdose cases

## Schedule

Non-controlled veterinary pharmaceutical; prescription-based availability depending on region.

## ⚠ Precautions

- Use aseptic technique for injection
- Monitor hydration status and electrolyte balance during therapy
- Avoid use in animals with anuria or severe renal impairment
- Use caution in pregnant or lactating animals under veterinary supervision
- Do not exceed recommended dosage to prevent adverse effects

## Withdrawal Period

- Meat: Typically 7 days withdrawal period recommended
- Milk: 48 hours withdrawal period advised (may vary by local regulations)

## Storage

- Store below 30°C in a cool, dry place
- Protect from light and freezing
- Keep container tightly closed

## Handling

- Use sterile needles and syringes
- Follow manufacturer's guidelines on vial punctures
- Dispose of unused product and containers per local regulations

## 📦 HS and HSN Codes

- **HS Code:** 3004909099
- **HSN Code:** 3004 (Medicaments for therapeutic or prophylactic uses)

## 🛠️ Special Instructions

- Administer IV slowly to prevent ototoxicity and hypotension
- Do not mix with other injectable drugs unless compatibility confirmed
- Use under strict veterinary supervision

## 👩‍⚕️ Human and Veterinary Application

- For veterinary use only
- Not intended for human administration

## ❓ Frequently Asked Questions (FAQs)

**Q1: What is Furosemide used for in animals?**
Furosemide is used as a diuretic to reduce fluid retention in conditions like heart failure and kidney disease.

**Q2: Why is Benzyl Alcohol included in this formulation?**
Benzyl Alcohol acts as a preservative to maintain sterility and prevent microbial contamination.

**Q3: What is the recommended dose for cattle?**
Usually 10–20 mL intramuscularly or intravenously depending on condition and veterinary advice.

**Q4: What are common side effects?**
Dehydration, electrolyte imbalances, injection site irritation, and in rare cases ototoxicity.

**Q5: Can it be given intravenously?**
Yes, IV is the preferred route for rapid action.

**Q6: Is a withdrawal period required?**
Yes, typically 7 days for meat and 48 hours for milk, but check local regulations.

**Q7: Can this injection be used in pregnant animals?**
Only with veterinary supervision due to potential risks.