# **CLOFENAC** Injection

For Veterinary Use Only

#### COMPOSITION:

Each ml contains:

Aceclofenac as Sodium (MS) eq.to Aceclofenac .... 25mg

CLOFENAC Injection is indicated for the treatment of pyrexia, traumatic fever, post-operative therapy, rheumatic fever, FMD, metritis and other ailments associated with pain and inflammation in domestic animals

#### PHARMACOLOGY:

#### MODE OF ACTION:

Through COX-2 inhibition, Aceclofenac downregulates the production of various inflammatory mediators including prostaglandin E2 (PGE2), IL-1  $\beta$  , and TNF from the arachidonic acid (AA) pathway. Inhibition of IL-6 is thought to be mediated by diclofenac converted from Aceclofenac. Suppressed action of inflammatory cytokines decreases the production of reactive oxygen

#### PHARMACODYNAMICS:

Aceclofenac is a NSAID that inhibits both isoforms of COX enzyme, a key enzyme involved in the inflammatory cascade. COX-1 enzyme is a constitutive enzyme involved in prostacyclin production and protective functions of gastric mucosa whereas COX-2 is an inducible enzyme involved in the production of inflammatory mediators in response to inflammatory stimuli. Aceclofenac displays more selectivity towards COX-2 (IC50 of 0.77uM) than COX-1 (IC50 of >100uM), which promotes its gastric tolerance compared to other

### PHARMACOKINETICS:

Aceclofenac is rapidly and completely absorbed from the gastrointestinal tract and circulates mainly as unchanged drug following oral administration. Peak plasma concentrations are reached around 1.25 to 3 hours post-ingestion, and the drug penetrates into the synovial fluid where the concentration may reach up to 60% of that in the plasma. There is no accumulation in regular dosing, with similar maximum plasma concentration (Cmax) and time to reach peak plasma concentration (Tmax) after single and multiple doses

The volume of distribution is approximately 25 L. It is reported to be highly protein-bound (>99%). 4'-hydroxyaceclofenac is the main metabolite detected in plasma however other minor metabolites include diclofenac, 5-hydroxyaceclofenac, 5-hydroxydiclofenac, and 4'-hydroxydiclofenac. It is probable that the metabolism of aceclofenac is mediated by CYP2C9.

The main route of elimination is via the urine where the elimination accounts for 70-80% of clearance of the drug. Approximately two thirds of the administered dose is excreted via the urine, mainly as glucuronidated and hydroxylated forms of aceclofenac. About 20% of the dose is excreted into feces

# DOSAGE AND ADMINISTRTION:

Administer the following dose by deep intramuscular injection. **Horses & Camels:** 25-30 per Kg bodyweight.

Cattle & Buffalo: 20-25ml per 300Kg body weight. Goat & sheep: 3-5ml per 50 Kg bodyweight. Dogs & Cats: 0.5-1ml per 5 Kg bodyweight.

Adverse Effects: Some common adverse effects include

- Gastro-intestinal disorders (dyspepsia, abdominal pain, nausea
- Urticarial
  - Symptoms of enuresis
- Headache
- Dizziness
- Drowsiness

#### CONTRAINDICATIONS:

Aceclofenac injection is contraindicated in patients who have previously shown hypersensitivity reactions.

DRUG INTERACTIONS: No data regarding the interactions of Aceclofenac was found

## WITHDRAWALTIME:

Meat: 28 days Milk: 07 days

#### PRECAUTIONS:

- It should not be combined with other drugs in the same syringe.
- Consult the veterinarian before use.
- Store between 15-25°C at cool and dry place.
- Keep out of the reach of children.

#### Innovator's Specs





