Clomisol
Drench

For Veterinary Use Only

COMPOSITION:
Each ml contains
Levamisole HCl …..... 100mg
Closantel……..... 100mg

PHARMACOLOGY:
Levamisole acts as an acetylcholinesterase (also known as AchE) mimetic. AchE is an enzyme that hydrolyzes acetylcholine (Ach). Ach is a molecule involved in the transmission of nervous signals from nerves to muscles (so-called neuromuscular junctions). Levamisole causes a depolarisation of the ganglions and nervous cells of the worms. It also interferes with the metabolism of carbohydrates (sugars) in the worm. Within are expe n. Within 1 to 3 hours after administration the worms are paralyzed and die or are expelled.
Levamisole Hydrochloride is an antihelminthic and immunomodulator belonging to a class of synthetic imidazothiazole derivatives. Levamisole is readily absorbed from the gastrointestinal tract and metabolized in the liver. It's time to peak plasma concentration is 1.5-2 hours. The plasma elimination half-life is fairly quick at 3-4 hours which can contribute to not detecting Levamisole intoxication. The metabolite half-life is 16 hours. Levamisole's excretion is primarily through the kidneys, with about 70% being excreted over 3 days. Only about 5% is excreted as unchanged levamisole.
The molecular mode of action of salicylanilides, including closantel, is not completely elucidated. They all are uncouplers of the oxidative phosphorylation in the cell mitochondria, which disturbs the production of ATP, the cellular "fuel". This seems to occur through suppression of the activity of succinate dehydrogenase and fumarate reductase, two enzymes involved in this process. This impairs the parasites motility and probably other processes as well. It seems that closantel also disturbs the liquid and ion transport mechanisms in the parasites membranes.
After oral administration, closantel is readily absorbed into the bloodstream. Four days after treatment up to 30% of the closantel is absorbed to blood. In the blood, unchanged closantel binds strongly and almost completely (>99%) to plasma albumins. Peak plasma levels are reached 10 to 48 hours after oral administration Half-life in plasma is 3 to 4 weeks.
Due to the strong binding to plasma albumins, closantel residues in the tissues are rather low, the highest ones were found in the lungs and the kidneys. Closantel is poorly metabolized. About 80% of the administered dose is excreted through the feces, >98% in the form of the parent molecule. Excretion 48 hours after oral administration reached ~45% of the administered dose. Excretion half life in the organism is 2 to 3 weeks. In dairy cows about 1% of the administered dose is excreted unchanged through the milk.

ADVERSE DRUG REACTIONS:
Most frequent adverse drug reactions are vomit and diarrhea, particularly in dogs, cats and swine. Other side effects reported for livestock, dogs and cats include drooling, foam at the mouth, lung edema, difficult breathing, bronchospasms, trembling, uncoordinated movements, hyperestesia, weakness, collapse and convulsions. Such adverse drug reaction resolve usually 1 to 2 hours after administration.
In cattle cases of photosensitization have been reported after administration of levamisole.Weak or sick animals must not be treated with levamisole Levamisole should not be administered
Most frequent symptoms of closantel intoxication are,Loss of appetite Ataxia (uncoordinated movements), Weakness, Visual disturbance, Blindness.

INDICATIONS:
Clomisol Drench is a broad spectrum anthelmintic having high efficacy against immature and adult fasciola, nasal bots, stomach and bowel worms, including ostertagia, nematodirus and lung worms causing husk and hoose in cattle, sheep and goats. Wise safety margin makes it suitable for all ages including pregnant and lactating animals.

DOSAGE & ADMINISTRATION:
Administer the following dose orally:

Sheep/Goat		Cattle	
Body weight	Dose	Body weight	Dose
10kg	1ml	50kg	1ml
20kg	2ml	100kg	2ml
30kg	3ml	150kg	3ml
40kg	4ml	200kg	4ml
50kg	5ml	250kg	5ml
Above 50-100 kg	10ml	Above 500 kg	10ml

TOXICOLOGY:
LD50 acute, rats 180 mg/kg for levamisole LD50 acute, rats 262 to 342 mg/kg and LD50 acute, mice,331 mg/kg for closantel. In caffe, doses 24 to 40 mg/kg (usual therapeutic dose -8 mg/kg) can cause hypersalivation (drooling). For calves with kidney damage, levamisole is more toxic.
In **goats**, oral doses of 35 mg/kg (usual therapeutic dose -8 mg/kg) cause transient signs of intoxication already 30 minutes after administration: lacrimation, miosis (constriction of the pupil), hiccups and hyperactivity
In **cattle** fatalities can occur already after single doses of 82.5 mg/kg (usual therapeutic doses: 10 mg/kg.). In sheep single oral doses of ~100 mg/kg can cause heavy intoxication symptoms for closantel.
In rats and mice the gross effects observed in the lethal dose range were hypotonia, ataxia, diarrhoea and dyspnoea. In sheep and cattle clinical signs of toxicity were anorhexia, labored breathing, recumbency, general weakness and decreased vision, or blindness, appearing approximately one week after dosing. At the lethal dose, anorrhexia, hypotonia, and quadriplegia preceded death.

WARNINGS:
There is **no specific antidote** for levamisole and closantel. After oral intoxication gastric and intestinal lavage are highly recommended, as well as administration of active charcoal. Treatment consists in supportive and symptomatic measures.

PRECAUTIONS:
Shake well before use.
Store between 15-25°C in cool and dry place.
Keep out of the reach of children.
Consult the veterinarian before use.

WITHDRAWAL TIME:
Meat: 03 days Mik: 01 day

Innovator's Specs

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ISO CERTIFIED COMPANY