COMPOSITION:
Levamisole hydrochloride 800 mg – Excipients up to 1 g.

PHARMACOLOGICAL PROPERTIES:
Levamisole is a broad spectrum anthelmintic of the imidothiazole group. It causes irreversible paralysis and passive elimination of nematodes. At recommended doses, it is effective against mature and immature stages of a wide range of gastro-intestinal and lung nematodes:

→ Pigs: gastro-intestinal worms (Ascaris suum, Strongyloides ransomi, Trichuris suis, Hysteroglyculus rubidus, Oesophagostomum spp.), lungworms (Metastrongylus apri) and adult kidneyworms associated with the urinary tract (Stephanurus dentatus).


→ Cattle, sheep, goats: gastro-intestinal worms (Haemonchus spp., Trichostrongylus spp., Ostertagia spp., Cooperia spp., Nematodirus spp., Oesophagostomum spp., Chabertia ovina, Trichuris spp., Bunostomum spp.) and lungworms (Dictiocaulus spp.). It is also active against inhibited Ostertagia spp. and Haemonchus contortus larvae in sheep, but not against inhibited Ostertagia-larvae (Ostertagiosis II) in cattle.

TARGET SPECIES:
Pigs, poultry, cattle, sheep, goats.

INDICATIONS:
For treatment and control of nematodal infections.

CONTRA-INDICATIONS:
Simultaneous use with anthelmintics with a similar cholinomimetic mechanism of action (e.g. pyrantel, morantel, methyridine and diethylcarbamazine) may enhance the toxicity of levamisole and should be avoided.

DOSAGE AND METHOD OF ADMINISTRATION:
Levamikel 80% is administered orally with the drinking water or feed. The recommended dose in cattle, sheep, goats and pigs is 8 mg levamisole hydrochloride per kg b.w. or 10 mg Levamikel 80% powder per kg b.w. Carefully estimate body weight and calculate the total dose per animal.
In ruminants, the drug can be administered as a drench or in a reduced portion of drinking water. Pigs can be treated individually or in group. The entire dose can be added to a portion of drinking water that will be normally consumed within 8 to 12 hours or to an amount of feed equal to 1 % of body weight (e.g. 1 kg of medicated feed for a pig of 100 kg). To stimulate medicated water or feed intake, regular water and feed can be withheld overnight before medication is started in the morning. Withholding water is not recommended during hot weather. Give pigs free access to regular water or feed as soon as the medicated water or feed is completely consumed.

The recommended dose in poultry is 30 mg levamisole hydrochloride per kg b.w. or 37.5 mg Levamikel 80% powder per kg b.w. (or 37.5 grams of powder for a total body weight of 1000 kg). The total dose and water consumption for 24 h for the group to be treated is calculated. Birds are preferably deprived of water overnight. The calculated dose is then given in one third of the 24-hour water consumption. Regular water is provided after total consumption of medicated water.

<table>
<thead>
<tr>
<th>Body weight</th>
<th>Prevention</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poultry</td>
<td>-</td>
<td>100 g in 800 litres drinking water for 1 day</td>
</tr>
<tr>
<td>Cattle, sheep, goat</td>
<td>-</td>
<td>0.5 g / 50 kg b.w.</td>
</tr>
<tr>
<td>Pig</td>
<td>-</td>
<td>100 g in 1000 litres of drinking water for 1 day</td>
</tr>
</tbody>
</table>

**UNDESIRABLE EFFECTS, OVERDOSAGE:**
Undesirable effects are unlikely to occur at recommended doses. If pigs are infected with lungworms, intermittent coughing and vomiting may be observed soon after medication with recommended doses. This reaction is due to the expulsion of worms from the lungs and will be over in one to several hours.

At overdoses, nervous and gastro-intestinal disturbances may be observed (Ruminants: head shaking, hypersalivation and lip licking, muscle tremor, hyperactivity, tenesmus, colic and diarrhea, mictio and frequent defaecation, ataxia, convulsions, dyspnoea and lung oedema, recumbancy; Pigs: salivation, vomiting, tremor, tachypnoea, recumbancy). The incidence and intensity of symptoms increase with increasing doses. For accurate dosing and to avoid overdose-linked side effects, body weights should be estimated accurately. There is no real antidote for levamisole toxicity. Severe affected animals should be treated symptomatically with supportive therapy (e.g. atropine sulphate injections). When intoxication is mild, animals preferably should be left untreated, since most of the symptoms of toxicity disappear within a few hours without treatment.

**PACK SIZE:**
100 g, 1 kg.