

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Elivec 5 mg/ml pour-on solution for cattle, sheep and goats

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substance:

Eprinomectin 5.00 mg

Excipients:

Qualitative composition of excipients and other constituents	Quantitative composition if that information is essential for proper administration of the veterinary medicinal product
Butylhydroxytoluene (E 321)	0.10 mg
All-rac-alpha-tocopherol (E 307)	0.06 mg
Propylene glycol dicaprylocaprate	

Pale yellow to yellow clear pour-on solution.

3. CLINICAL INFORMATION

3.1 Target species

Cattle, sheep and goats.

3.2 Indications for use for each target species

Treatment of infestations by the following parasites:

Cattle:

PARASITE	ADULT	L4	Inhibited L4
Gastrointestinal roundworms			
<i>Ostertagia</i> spp.	X	X	
<i>Ostertagia ostertagi</i>	X	X	X
<i>Ostertagia lyrata</i>	X		
<i>Haemonchus placei</i>	X	X	
<i>Trichostrongylus</i> spp.	X	X	
<i>Trichostrongylus axei</i>	X	X	
<i>Trichostrongylus colubriformis</i>	X	X	
<i>Cooperia</i> spp.	X	X	X
<i>Cooperia oncophora</i>	X	X	
<i>Cooperia punctata</i>	X	X	
<i>Cooperia pectinata</i>	X	X	
<i>Cooperia surnabada</i>	X	X	
<i>Bunostomum phlebotomum</i>	X	X	
<i>Nematodirus helvetianus</i>	X	X	
<i>Oesophagostomum</i> spp.	X		
<i>Oesophagostomum radiatum</i>	X	X	
<i>Trichuris</i> spp.	X		

Lungworms

Dictyocaulus viviparus X X

- Warbles (parasitic stages):

Hypoderma bovis

Hypoderma lineatum

- Mange mites:

Chorioptes bovis

Sarcoptes scabiei var. *bovis*

- Sucking lice:

Linognathus vituli

Haematopinus eurysternus

Solenopotes capillatus

- Biting lice:

Bovicola (Damalinia) bovis

- Horn flies:

Haematobia irritans

The veterinary medicinal product protects the animals against reinfestations with:

- *Nematodirus helvetianus* for 14 days.

- *Trichostrongylus axei*, *Trichostrongylus colubriformis* and *Haemonchus placei* for 21 days.

- *Dictyocaulus viviparus*, , *Cooperia oncophora*, *Cooperia punctata*, *Cooperia surnabada*,
Oesophagostomum radiatum and *Ostertagia ostertagi* for 28 days.

The duration of persistent efficacy can be variable for *Cooperia* spp and *H. placei* 14 days after treatment in particular in young and lean animals at the time of treatment.

Sheep:

Gastrointestinal roundworms (adults)

Teladorsagia circumcincta (pinnata/trifurcata)

Haemonchus contortus

Trichostrongylus axei

Trichostrongylus colubriformis

Nematodirus battus

Cooperia curticei

Chabertia ovina

Oesophagostomum venulosum

Lungworm (adult)

Dictyocaulus filaria

Nasal Bots (L1, L2, L3)

Oestrus ovis

Goats:

Gastrointestinal roundworms (adult)

Teladorsagia circumcincta (pinnata/trifurcata)

Haemonchus contortus

Trichostrongylus axei

Trichostrongylus colubriformis

Nematodirus battus
Cooperia curticei
Oesophagostomum venulosum

Lungworm (adult)

Dictyocaulus filaria

Nasal Bots (L1, L2, L3)

Oestrus ovis

Warbles (L1, L2, L3)

Przhevalskiana silenus

For the best results the veterinary medicinal product should be part of a programme to control both internal and external parasites of cattle, sheep and goats based on the epidemiology of these parasites.

3.3 Contraindications

Do not use in other animal species. Avermectins may not be well tolerated in non-target species (including dogs, cats and horses). Cases of mortality are reported in dogs, especially Collies, bobtail and related breeds and crosses, and also in turtles/tortoises.

Do not administer orally or by injection.

Do not use in cases of hypersensitivity to the active substance or to any of the excipients.

3.4 Special warnings

For effective use, the veterinary medicinal product should not be applied to areas of the backline covered with mud or manure.

In cattle, rainfall before, during or after the application of the veterinary medicinal product, has been shown to have no impact on its efficacy. It also has been demonstrated that haircoat length has no impact on the veterinary medicinal product's efficacy. The effect of rainfall and haircoat length on efficacy has not been evaluated in sheep and goats.

In order to limit cross-transfer of eprinomectin, treated animals should preferably be separated from untreated animals. Non-compliance with this recommendation may lead to residue violations in untreated animals and development of resistance to eprinomectin.

Unnecessary use of antiparasitics or use deviating from the instructions given in the SPC may increase the resistance selection pressure and lead to reduced efficacy. The decision to use the veterinary medicinal product should be based on confirmation of the parasitic species and burden, or of the risk of infestation based on its epidemiological features, for each herd.

Repeated use for an extended period, particularly when using the same class of substances, increases the risk of resistance development. Within a herd, maintenance of susceptible refugia is essential to reduce that risk. Systematically applied interval-based treatment and treatment of a whole herd should be avoided. Instead, if feasible, only selected individual animals or subgroups should be treated (targeted selective treatment). This should be combined with appropriate husbandry and pasture management measures. Guidance for each specific herd should be sought from the responsible veterinarian.

If there is a risk for re-infection, the advice of a veterinarian should be sought regarding the need for and frequency of repeat administration.

Suspected clinical cases of resistance to anthelmintics should be further investigated using appropriate tests (e.g. Faecal Egg Count Reduction Test). Where the results of the test(s) strongly suggest resistance

to a particular anthelmintic, an anthelmintic belonging to another pharmacological class and having a different mode of action should be used.

To date no resistance to eprinomectin (a macrocyclic lactone) has been reported in cattle while resistance to eprinomectin has been reported in goats and sheep within the EU. However, resistance to other macrocyclic lactones has been reported in nematode populations in cattle, sheep and goats within the EU, which may be associated with side-resistance to eprinomectin.

Therefore, use of this veterinary medicinal product should be based on local (regional, farm) epidemiological information about susceptibility of nematodes and recommendations on how to limit further selection for resistance to anthelmintics.

Confirmed resistance should be reported to the marketing authorisation holder or to the competent authorities.

While mite and louse numbers decline rapidly following treatment, due to the feeding habits of some mites, in some cases several weeks may be required for complete eradication.

3.5 Special precautions for use

Special precautions for safe use in the target species:

For external use only.

The veterinary medicinal product should be applied only on healthy skin.

To avoid secondary reactions due to the death of *Hypoderma* larvae in the oesophagus or backbone, it is recommended to administer the veterinary medicinal product after the end of warble fly activity and before the larvae reach their resting sites in the body; consult a veterinary surgeon to know the appropriate treatment period.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:

People with known hypersensitivity to the active substance or to any of the excipients should avoid contact with the veterinary medicinal product.

Eprinomectin can be transferred to breast milk. Therefore, breast-feeding users should handle the veterinary medicinal product with great care.

This veterinary medicinal product may be irritating to the skin and eyes. Avoid contact with the skin and eyes during treatment and when handling recently treated animals.

Personal protective equipment consisting of rubber gloves, boots and a waterproof coat should be worn when handling the veterinary medicinal product. Should clothing become contaminated, remove as soon as possible and launder before re-use.

If accidental skin contact occurs, wash the affected area immediately with soap and water.

If accidental eye exposure occurs, flush the eyes immediately with water. Should irritation persist, seek medical advice.

This veterinary medicinal product may affect the central nervous system if accidentally ingested. Avoid accidental ingestion of the veterinary medicinal product, including by hand to mouth contact. If ingestion does occur, wash the mouth out with water and seek medical advice.

Do not smoke, eat or drink while handling the veterinary medicinal product.

Wash hands after use.

Special precautions for the protection of the environment:

Eprinomectin is very toxic to aquatic organisms, is persistent in soils and may accumulate in sediments. Faeces containing eprinomectin excreted onto pasture by treated animals may temporarily reduce the abundance of dung feeding organisms. Following treatment of cattle with the veterinary medicinal product, levels of eprinomectin that are potentially toxic to dung fly species may be excreted over a period of more than 4 weeks and may decrease dung fly abundance during that period.

In case of repeated treatments with eprinomectin (as with products of the same anthelmintic class) it is advisable not to treat animals every time on the same pasture to allow dung fauna populations to recover. Eprinomectin is inherently toxic to aquatic organisms. The veterinary medicinal product should be used only according to the label instructions. Based on the excretion profile of eprinomectin when administered as the pour-on formulation, treated animals should not have access to watercourses during the first 7 days after treatment.

3.6 Adverse events

Cattle, sheep and goats:

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Licking, pruritus, alopecia Tremor
---	---------------------------------------

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See the package leaflet for respective contact details.

3.7 Use during pregnancy, lactation or lay

Pregnancy and lactation:

Laboratory studies in rat and rabbit have not produced any evidence of teratogenic or foetotoxic effects due to the use of eprinomectin at therapeutic doses.

Cattle:

Laboratory studies in cattle have not produced any evidence of teratogenic or foetotoxic effects at the recommended therapeutic dose.

The veterinary medicinal product can be used in dairy cattle during pregnancy and lactation.

Sheep and goats:

The safety of the veterinary medicinal product has not been established during pregnancy and lactation for sheep and goats.

Use only according to the benefit-risk assessment of the responsible veterinarian.

3.8 Interaction with other medicinal products and other forms of interaction

Since eprinomectin binds strongly to plasma proteins, this should be taken into account if it is used in association with other molecules having the same characteristics.

3.9 Administration routes and dosage

Pour-on use. For single application only.

Underdosing could result in ineffective use and may favour resistance development.

To ensure a correct dosage, body weight should be determined as accurately as possible. If animals are to be treated collectively, reasonably homogeneous groups should be set up, and all animals of a group should be dosed at the rate corresponding to the heaviest one. Accuracy of the dosing device should be thoroughly checked. All the animals belonging to the same group should be treated at the same time.

The veterinary medicinal product should be applied topically by pouring along the backline in a narrow strip extending from the withers to the tailhead.

Cattle:

Administer by topical application at the dose rate of 0.5 mg eprinomectin per kg bodyweight equivalent to 1 ml per 10 kg bodyweight.

Sheep and goats:

Administer by topical application at the dose rate of 1.0 mg eprinomectin per kg bodyweight, corresponding to the recommended dose rate of 2 ml per 10 kg bodyweight.

When administering the veterinary medicinal product along the backline, part the fleece/coat and place applicator nozzle or bottle spout against the skin.

Method of Administration:

For the 1 litre presentation:

The bottle is equipped with an integrating dosing system, and has two openings. One opening is connected to the body of the container and the other one to the dispensing chamber (dosing system).

Unscrew the cap and remove the seal of the dispensing chamber (integrated dosing system graduated each 10 ml up to 50 ml).

Squeeze the bottle to fill the dispensing chamber with the required volume of the veterinary medicinal product.

For the 2.5 L and 5 L presentations:

To be used with an appropriate dosing system such as a dosing gun and coupling vented cap.

Unscrew the polypropylene (PP) simple cap. Remove the protective seal from the bottle. Screw the coupling vented cap on the bottle and make sure it is tightened. Connect the other side to a dosing gun. Follow the gun manufacturer's instructions for adjusting the dose and proper use and maintenance of the dosing gun.

After use, coupling vented caps should be removed and replaced by PP simple cap. Vented caps should be placed for a later use in the box.

3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

No signs of toxicity were observed when 8-week old calves were treated at up to 5 times the therapeutic dose (2.5 mg eprinomectin/kg bodyweight.) 3 times at 7-day intervals.

One calf treated once at 10 times the therapeutic dose (5 mg/kg bodyweight.) in the tolerance study showed transient mydriasis. There were no other adverse reactions to the treatment.

No signs of toxicity were observed when 17-week old sheep were treated at doses up to 5 times the therapeutic dose (5 mg eprinomectin/kg bodyweight) 3 times at 14-day intervals.

No antidote has been identified.

3.11 Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

Not applicable.

3.12 Withdrawal periods

Cattle:

Meat and offal: 15 days.

Milk: Zero hours.

Sheep:

Meat and offal: 2 days.

Milk: Zero hours.

Goats:

Meat and offal: 1 day.

Milk: Zero hours.

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code : QP54AA04.

4.2 Pharmacodynamics

Eprinomectin is a molecule with an endectocidal activity belonging to the macrocyclic lactone class. Compounds of the class bind with high affinity to glutamate-gated chloride ion channels which occur in invertebrate nerve or muscle cells. These compounds bind selectively to these channels, which leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite.

Compounds of this class may also interact with other ligand-gated chloride channels, such as those gated by the neurotransmitter GABA (gamma-aminobutyric acid).

4.3 Pharmacokinetics

The bioavailability of topically applied eprinomectin in cattle is about 30% with most absorption occurring by about 10 days after treatment. Eprinomectin is strongly linked to plasma proteins (99%). Eprinomectin is not extensively metabolized in cattle following topical administration.

Faeces are the major route of elimination.

Environmental properties

See section 3.5 (Special precautions for the protection of the environment).

Like other macrocyclic lactones, eprinomectin has the potential to adversely affect non-target organisms.

5. PHARMACEUTICAL PARTICULARS

5.1 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 2 years.

Shelf life after first opening the immediate packaging: 18 months and before expiry date.

5.3 Special precautions for storage

1 L: Keep the bottle in the outer carton in order to protect from light.

2.5 L and 5 L: This veterinary medicinal product does not require any special storage conditions.

5.4 Nature and composition of immediate packaging

- Squeeze-measure pour-on system:

1 L natural high-density polyethylene (HDPE) bottle with integrated measuring chamber graduated each 10 ml up to 50 ml, removable aluminium/PE seals and HDPE screw cap included in a cardboard box.

- Backpack:

2.5 L and 5 L white HDPE bottles with a removable (ethylene-methacrylic acid) zinc co-polymer seal, a polypropylene (PP) screw cap and a PP coupling vented cap included in a cardboard box.

Box of 1L bottle

Box of 2.5L bottle

Box of 5L bottle

Not all pack sizes may be marketed.

5.5 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products

Medicines should not be disposed of via wastewater or household waste.

The veterinary medicinal product should not enter water courses as Eprinomectin may be dangerous for fish and other aquatic organisms. Do not contaminate surface waters or ditches with the veterinary medicinal product or used container.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned

6. NAME OF THE MARKETING AUTHORISATION HOLDER

LIVISTO Int'l, S.L.

7. MARKETING AUTHORISATION NUMBER(S)

VPA10425/005/001

8. DATE OF FIRST AUTHORISATION

25 May 2018

9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

19 March 2025

10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database (<https://medicines.health.europa.eu/veterinary>).