

ZEROMEC™ ANTIPARASITIC INJECTION FOR CATTLE

ACTIVE CONSTITUENT: 10mg/mL IVERMECTIN

ZERO out worms in your herd

For the treatment and control of ivermectin sensitive internal and external parasites of cattle.

- Broad spectrum control of internal and external parasites
- Low volume injection
- Persistent protection against reinfection of important worm species
- Wide safety margin



	ZEROMEC™ Injection	IVOMEC® Injection
Active Constituent	10mg/mL IVERMECTIN	10mg/mL IVERMECTIN
Species	Cattle	Cattle
Dose Rate	1mL/50kg	1mL/50kg
Route of Administration	Subcutaneous Injection	Subcutaneous Injection
Withholding periods		
Meat	28 days	28 days
Milk	28 days	28 days
ESI	42 days	42 days

ZEROMEC™ is a trademark of Abbey Laboratories Pty Ltd

IVOMEC® is a registered trademark of Boehringer Ingelheim Vetmedica GmbH

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For the treatment and control of ivermectin sensitive internal and external parasites of cattle.

INDICATIONS
ZEROMEC™ Injection contains Ivermectin, a member of the macrocyclic lactone family of chemicals. It is effective against sensitive strains of the following internal and external parasites:

Gastrointestinal Roundworms
Adults and Immature
Ostertagia ostertagi - Small Brown Stomach Worm - Adults and L_4 and L_3 immature stages (including inhibited fourth stage larvae)
O. lyrata - Brown Stomach Worm - Adults and L_4 immature stage
Haemonchus placei - Barber's Pole Worm - Adults and L_4 and L_3 immature stages
Trichostrongylus axei - Stomach Hair Worm - Adults and L_4 immature stages
T. colubriformis - Intestinal Hair Worm - Adults and L_4 immature stages
Cooperia spp.- Small Intestinal Worm - Adults and L_4 and L_3 immature stages
Bunostomum phlebotomum - Hookworm- Adults and L_4 and L_3 immature stages
Oesophagostomum radiatum - Nodule Worm - Adults and L_4 and L_3 immature stages

Adults of
Nematodirus spathiger - Thin Necked Intestinal Worm
Nematodirus helvetianus - Thin Necked Intestinal Worm
Strongyloides papillosus - Intestinal Thread Worm
Toxocara vitulorum - Large Roundworm
Trichuris spp. - Whipworm

Lungworm
Adult and immature Dictyocaulus viviparus (including inhibited stages)

Eyeworms
Adult *Thelazia* spp.

Sucking Lice
Linognathus vituli, Haematopinus eurysternus and *Solenopotes capillatus*
Does not provide full control of the cattle biting louse, *Bovicola (Damalinia) bovis*.

Screw Worm Fly
Parasitic larval stages *Chrysomya bezziana* (Not reported in Australia - but in Papua New Guinea)

Mites
Sarcoptes scabiei var. *bovis*

Cattle Tick
Rhipicephalus (Boophilus) microplus including organophosphate synthetic pyrethroid and amidine resistant strains.

Maximum efficacy is reached 4-5 days after treatment. Engorged female ticks that drop from cattle in the initial days after treatment may lay viable eggs. This should be taken into account when planning a strategic tick control program. ZEROMEC™ Injection should be alternated with conventional dips or pour-ons when the program requires repeat treatments. ZEROMEC™ Injection can be used at 28-day intervals in strategic tick control programs.

PERSISTENT ACTIVITY
At the recommended dose rate, ZEROMEC™ Injection effectively controls infection with Ostertagia spp. and Cooperia spp. acquired up to at least 7 days after treatment, and Dictyocaulus viviparus and Chrysomya bezziana acquired up to at least 14 days after treatment. When used as directed for control of internal parasites of cattle, ZEROMEC™ Injection concurrently aids in control of:

Mites
Chorioptes bovis

Resistance may develop to any chemical.

DIRECTIONS FOR USE
Restraint
Re-treatment interval: DO NOT re-treat animals for 28 days after last treatment.

DOSAGE AND ADMINISTRATION
ZEROMEC™ injection is to be given subcutaneously only. The recommended dose is 1mL/50kg bodyweight (equivalent to 0.2mg ivermectin per kg bodyweight).

Inject under loose skin high on the neck, behind the ear in an area away from the more valuable carcass muscle. Loose skin on the neck in front of the shoulder is also a suitable site. This product is not to be used intravenously or intramuscularly..

Bodyweight (kg)	Dose volume (mL)	Treatments per Pack	
		500mL	1L
Up to 100	2	250	500
101-150	3	166	333
151-200	4	125	250
201-250	5	100	200
251-300	6	83	166
301-350	7	71	142
351-400	8	62	125
401-450	9	55	111
451-500	10	50	100
501-550	11	45	90
551-600	12	41	83
601-650	13	38	76

Cattle heavier than 650kg should be dosed at 1mL per 50kg. A representative sample of animals should be weighed before treatment either with scales or a weighband. Dose rate to be based on heaviest cattle in each group (bulls, cows, steers, calves, etc.). Do not underdose. Where there is a large variation in size within the group, draft into two or more lines based on body weight, to avoid excessive overdosing.

General Directions
INTRODUCTION
ZEROMEC™ Injection is an injectable parasiticide for cattle. One low-volume dose effectively kills internal and external parasites that impair the health and productivity of cattle. The convenience and broad-spectrum efficacy of ZEROMEC™ Injection make it an ideal product for effective parasite control.

PRODUCT DESCRIPTION
ZEROMEC™ is a ready-to-use, sterile solution of ivermectin. Ivermectin is derived from the avermectins, a family of potent broadspectrum antiparasitic agents which are isolated from fermentation of the naturally occurring soil-organism *Streptomyces avermitilis*. ZEROMEC™ Injection is formulated to deliver the recommended dosage level of 0.2mg ivermectin per kg body weight when given subcutaneously at the rate of 1mL/50kg body weight.

MODES OF ACTION
Ivermectin is a member of the macrocyclic lactone class of endectocides which have a unique mode of action. Compounds of the class bind selectively and with high affinity to glutamate-gated chloride ion channels which occur in invertebrate nerve and muscle cells. This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarisation 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 gamma-aminobutyric acid (GABA).

NOTES TO USERS
Transitory discomfort has been observed in some cattle following subcutaneous administration. Soft tissue swelling at the injection site has also been observed. These reactions have disappeared without treatment.

PRODUCT ADVANTAGES
Low-volume injection

- The low-volume dosage level of ZEROMEC™ Injection makes it convenient for use with most syringes or automatic injectors. ZEROMEC™ Injection reduces the need for separate drenching, dipping and spraying operations common in the past.

Broad Spectrum

- ZEROMEC™ Injection provides broad-spectrum efficacy against roundworms, lungworm, eyeworm, sucking lice, mites and cattle tick.

Safety

- Studies have demonstrated a wide margin of safety. Pregnant and breeding cattle may be treated provided normal care is taken in handling.

WITHHOLDING PERIODS
MEAT: DO NOT USE less than 28 days before slaughter for human consumption.
MILK: DO NOT USE in cows within 28 days prior to calving where milk may be used or processed for human consumption.

TRADE ADVICE
EXPORT SLAUGHTER INTERVAL (ESI): DO NOT USE less than 42 days before slaughter for export. The ESI on this label was correct at the time of label approval. Before using this product, confirm the current ESI from Abbey Animal Health Pty Ltd on 02 8088 0720 or the APVMA website (www.apvma.gov. au/residues).

SAFETY DIRECTIONS
Poisonous if swallowed. Avoid contact with eyes and skin and clothing.

FIRST AID
If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. For further information, refer to Safety Data Sheet.

ENVIRONMENTAL PROTECTION
Ivermectin is extremely toxic to aquatic species. Do not contaminate dams, rivers, streams or other waterways with the chemical or used container.

DISPOSAL
Dispose of empty container by wrapping with paper and putting in garbage.

STORAGE
Store below 30°C (Room Temperature). Store bottle in carton to protect from light.

APVMA Approval Number: 86233/115068

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