**Ectoparasite Treatment**

**FORRAY 65® INJECTION**

FOR ANIMAL USE ONLY

 **INDICATIONS
Forray 65® Injection** kills redwater (babesiosis) and tick-borne gallsickness (anaplasmosis) organisms in cattle. It also prevents Asiatic redwater for up to 4 weeks and African redwater for up to 8 weeks in cattle. **Forray 65® Injection** is also indicated for treatment of canine and equine babesiosis.

**COMPOSITION**Contains: lmidocarb dipropionate 12 % *m/v*

**POISONOUS**

**STORAGE**

* Store between 2 °C and 25 °C.
* Protect from light.

**WARNINGS**

* **Withdrawal period**: Animals should not be slaughtered for human consumption within 213 days of therapy.
Do not use milk from treated cows for human consumption for 6 days after treatment.
* Not to be used prophylactically in cattle where milk is intended for human consumption.
* The remedy is not recommended for use after expiry date as it may be ineffective and may even be harmful to the animal.
* A swelling may occur at the site of injection in some animals. These disappear without forming abscesses. There might be slight salivation after treatment.
* In the field it is possible, under certain circumstances, e.g. high challenge that outbreaks of *B. bovis* could occur as early as 18 days after prophylactic administration of **Forray 65® Injection**.
* The dose of 2 mℓ/100 kg (2,4 mg/kg) live weight may not be exceeded in donkeys and mules.
* Dispose of any unused vaccine as well as all vaccine containers and vaccination equipment according to local waste disposal regulations.
* KEEP OUT OF REACH OF CHILDREN, UNINFORMED PERSONS AND ANIMALS.
* Although this remedy has been extensively tested under a large variety of conditions, failure thereof may ensue as a result of a wide range of reasons. If this is suspected, seek veterinary advice and notify the registration holder.

**VACCINE WARNING**After treatment with **Forray 65® Injection** (2,5 mℓ/100kg live weight) cattle cannot be effectively vaccinated against Asiatic redwater for 8 weeks and against African redwater for 16 weeks.

**NOTE TO DOCTOR**This product in animal studies has been shown to be nephrotoxic and this should be borne in mind in the treatment of humans following accidental injection.

**PRECAUTIONS**Sterilise all injection apparatus and use a separate clean sharp needle for each animal.
Swab the rubber seal of the bottle with methylated spirits immediately before puncturing with a needle. The dose must be administered strictly according to body mass and must not be exceeded. Take care to avoid accidental injection of operators.

**KNOWN SYMPTOMS OF OVERDOSAGE**Overdose may cause salivation, restlessness, tachycardia or muscular tremors. No specific antidote exists. Atropine sulphate has proved of value as well as intravenous administration of calcium borogluconate to cattle. Atropine and 5 % dextrose has proved of value to horses. Antihistamines, corticosteroids and vitamin B complex may be considered.

**DIRECTIONS FOR USE -** USE ONLY AS DIRECTED

**ROUTE**Cattle: Subcutaneous or intramuscular injection (neck region or area of least value)
Horses: Intramuscular injection.
Dogs: Subcutaneous injection.

**DOSAGE**

* **Therapy of babesiosis and anaplasmosis:** One treatment is normally sufficient.
* **Bovine babesiosis:** 1 mℓ/100 kg (1,2 mg/kg) live weight.
* **Anaplasmosis:** 2,5 mℓ/100 kg (3,0 mg/kg) live weight.
* **Equine babesiosis -***B. caballi*: 2 mℓ/100 kg (2,4 mg/kg) live weight.
*B. equi*: 2 mℓ/100 kg (2,4 mg/kg) live weight. Two treatments at an interval of 24 hours may be required.
* **Canine babesiosis:** 0,5 mℓ/10 kg (6,0 mg/kg) live weight.
* **Chemoprophylaxis of bovine babesiosis:** 2,5 mℓ/100 kg (3,0 mg/kg) live weight.

The prophylactic period for *B. bovis* is up to 4 weeks and for *B. bigemina,* up to 2 months. In the field it is possible under certain circumstances e.g. high challenge, that outbreaks of *B. bovis* could occur as early as 18 days after prophylactic administration of **Forray 65® Injection**. Immunity develops if treated animals are subjected to a challenge during the prophylactic period.
**DO NOT REPEAT THE DOSE WITHIN 4 WEEKS**

**EXAMPLES OF USE FOR THE PREVENTION OF REDWATER.
N.B.** Only on the advice and recommendation of a veterinarian for each set of circumstances.

1. **Outbreak of redwater in a herd:** Treat all the cattle with **Forray 65® Injection** at 2,5 mℓ/100 kg live weight.
2. **Movement of susceptible cattle into blue tick areas:** Treat at 2,5 mℓ/100 kg live weight before moving cattle or on arrival at property. Vaccinate as advised under “VACCINE WARNING".
3. **Protection of heavily pregnant females from redwater where there is a risk that redwater vaccination may cause abortion:** Treat at 2,5 mℓ/100 kg live weight, followed by regular weekly treatment for tick control.
4. **Movement of susceptible animals through a redwater area:** Dip animals and treat with **Forray 65® Injection** at 2,5 mℓ/100 kg.
5. **To protect uninfected, susceptible cattle in tick-free areas of redwater after tick infested cattle have been moved to the area:** Dip all cattle.
6. **Purchase of cattle of unknown origin, i.e. susceptible or carrier cattle from the market:** Treat all cattle at 2,5 mℓ/100 kg live weight to ensure prophylaxis or elimination of redwater followed by prophylaxis.
7. **The protection of clean susceptible cattle sold at yards and transported to areas of redwater challenge:** Treat at 2,5 mℓ/100 kg live weight before transporting. Vaccinate as advised under “VACCINE WARNINGS”.
8. **Animals taken to shows or sales where there is risk of redwater:** Dose at 2,5 mℓ/100kg live weight. The injection of **Forray 65® Injection** can be delayed providing it is administered within 7 days of first exposure to risk. Advise auctioneer that the animal is protected from redwater by **Forray 65® Injection**.
9. **To reduce the losses from redwater following the introduction of cattle into feedlots:** Dose at
2,5 mℓ/100 kg live weight should be on the same line. Dip all cattle.

**Doramec® L.A. / Doramax L.A.**

**Injectable Solution**

Long-acting endectocide



**Formulation**

Doramectin 10 mg, slow release vehicle q.s.ad. 1 mL.

**Indications**

Treatment and control of internal parasitosis (gastrointestinal and pulmonary nematodes), ticks and mange (and other ectoparasites). Its spectrum includes: Haemonchus spp., Ostertagia spp., Trichostrongylus spp, Cooperia spp., Oesophagostomum spp., Dyctiocaulus viviparus, Dermatobia hominis, Boophilus microplus, Psoroptes bovis, among many other internal and external parasites. Its oleous carrier confers to Doramec® L.A. a slow and prolonged liberation, extending its action up to 42 days.

**Dosage and Administration**

Apply through intramuscular or subcutaneous route.

Cattle, camelids, sheep and goats: 1 mL/50 kg of b.w.; Pigs: 1 mL/33 kg of b.w.

**Withdrawal time;** Meat 50 days

**Contra indications/ Precautions:**

Do not administer to dairy cows or to pregnant cows within 50 days before parturition.

Keep in a cool, dry place, protect form light, among 8°C and 30°C, out of the reach of children and domestic animals.

**Endoparasite Treatment**

**Vetrimec 1% Injection for Cattle & Swine**

This treatment applies to the following species:

* [**Beef Cattle**](https://www.drugs.com/vet/beef-cattle-a.html)
* [**Bison**](https://www.drugs.com/vet/bison.html)
* [**Dairy Cattle**](https://www.drugs.com/vet/dairy-cattle-a.html)
* [**Reindeer**](https://www.drugs.com/vet/reindeer.html)
* [**Swine**](https://www.drugs.com/vet/swine-a.html)

Manufacturer: VetOne

(Ivermectin)

For Cattle & Swine

1% Sterile Solution

A Parasiticide for the Treatment and Control of Internal and External Parasites of Cattle and Swine

**Introduction**

Vetrimec™ 1% (ivermectin) is an injectable parasiticide for cattle and swine. One low-volume dose effectively treats and controls the following internal and external parasites that may impair the health of cattle and swine: gastrointestinal roundworms (including inhibited *Ostertagia ostertagi* in cattle), lungworms, grubs, sucking lice, and mange mites of cattle; and gastrointestinal roundworms, lungworms, lice, and mange mites of swine.

**Product Description**

Ivermectin is derived from the avermectins, a family of potent, broad-spectrum antiparasitic agents isolated from fermentation of *Streptomyces avermitilis*.

Vetrimec™ 1% Injection is a clear, ready-to-use, sterile solution containing 1% ivermectin, 40% glycerol formal, and propylene glycol, q.s. ad 100%. Vetrimec™ 1% Injection is formulated to deliver the recommended dose level of 200 mcg ivermectin/kilogram of body weight in cattle when given subcutaneously at the rate of 1 mL/110 lb (50 kg). In Swine, Vetrimec™ 1% Injection is formulated to deliver the recommended dose level of 300 mcg ivermectin/kilogram body weight when given subcutaneously in the neck at the rate of 1 mL per 75 lb (33 kg).

**Mode 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 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 gamma-aminobutyric acid (GABA).

The margin of safety for compounds of this class is attributable to the fact that mammals do not have glutamate-gated chloride channels, the macrocyclic lactones have a low affinity for other mammalian ligand-gated chloride channels and they do not readily cross the blood-brain barrier.

**Vetrimec 1% Injection for Cattle & Swine Indications**

**Cattle:** Vetrimec™ 1% Injection is indicated for the effective treatment and control of the following harmful species of gastrointestinal roundworms, lungworms, grubs, sucking lice, and mange mites in cattle:

**Gastrointestinal Roundworms** (adults and fourth-stage larvae):

*Ostertagia ostertagi* (including inhibited *O. ostertagi)*

*O. lyrata*

*Haemonchus placei*

*Trichostrongylus axei*

*T. colubriformis*

*Cooperia oncophora*

*C. punctata*

*C. pectinata*

*Oesophagostomum radiatum*

*Bunostomum phlebotomum*

*Nematodirus helvetianus* (adults only)

*N. spathiger* (adults only)

**Lungworms** (adults and fourth-stage larvae):

*Dictyocaulus viviparus*

**Cattle Grubs** (parasitic stages):

*Hypoderma bovis*

*H. lineatum*

**Sucking Lice**:

*Linognathus vituli*

*Haematopinus eurysternus*

*Solenopotes capillatus*

**Mites** (scabies):

*Psoroptes ovis* (syn. *P. communis* var. *bovis)*

*Sarcoptes scabiei* var. *bovis*

**Persistent Activity**

Ivermectin Injection has been proved to effectively control infections and to protect cattle from reinfection with *Dictyocaulus viviparus* and *Oesophagostomum radiatum* for 28 days after treatment; *Ostertagia ostertagi, Trichostrongylus axei* and *Cooperia punctata* for 21 days after treatment; *Haemonchus placei* and *Cooperia oncophora* for 14 days after treatment.

**Swine:** Vetrimec™ 1% Injection is indicated for the effective treatment and control of the following harmful species of gastrointestinal roundworms, lungworms, lice, and mange mites in swine:

**Gastrointestinal Roundworms:**

Large roundworm, *Ascaris suum* (adults and fourth-stage larvae)

Red stomach worm, *Hyostrongylus rubidus* (adults and fourth-stage larvae)

Nodular worm, *Oesophagostomum* spp. (adults and fourth-stage larvae)

Threadworm, *Strongyloides ransomi* (adults)

**Somatic Roundworm Larvae:**

Threadworm, *Strongyloides ransomi* (somatic larvae)

Sows must be treated at least seven days before farrowing to prevent infection in piglets.

**Lungworms:**

*Metastrongylus* spp. (adults)

**Lice:**

*Haematopinus suis*

**Mange Mites:**

*Sarcoptes scabiei* var. *suis*

**Dosage**

**Cattle:** Vetrimec™ 1% Injection should be given only by subcutaneous injection under the loose skin in front of or behind the shoulder at the recommended dose level of 200 mcg of ivermectin per kilogram of body weight. Each mL of Vetrimec™ 1% Injection contains 10 mg of ivermectin, sufficient to treat 110 lb (50 kg) of body weight (maximum 10 mL per injection site).

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| --- | --- |
| **Body Weight (lb)** | **Dose Volume (mL)** |
| **220** | **2** |
| **330** | **3** |
| **440** | **4** |
| **550** | **5** |
| **660** | **6** |
| **770** | **7** |
| **880** | **8** |
| **990** | **9** |
| **1100** | **10** |

**Swine:** Vetrimec™ 1% Injection should be given only by subcutaneous injection in the neck of swine at the recommended dose level of 300 mcg of ivermectin per kilogram (2.2 lb) of body weight. Each mL of Vetrimec™ 1% Injection contains 10 mg of ivermectin, sufficient to treat 75 lb of body weight.

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| --- | --- | --- |
|   | **Body Weight (lb)** | **Dose Volume (mL)** |
| **Growing Pigs** | **19** | **1/4** |
| **38** | **1/2** |
| **75** | **1** |
| **150** | **2** |
| **Breeding Animals****(Sows, Gilts, and Boars)** | **225** | **3** |
| **300** | **4** |
| **375** | **5** |
| **450** | **6** |

**Administration**

**Cattle:** **Vetrimec™ 1% Injection is to be given subcutaneously only, to reduce risk of potentially fatal clostridial infection of the injection site.** Animals should be appropriately restrained to achieve the proper route of administration. Use of a 16-gauge, 1/2 to 3/4” needle is suggested. Inject under the loose skin in front of or behind the shoulder (see illustration).



When using the 50 mL, 500 mL or 1000 mL package size, use only automatic syringe equipment. Use sterile equipment and sanitize the injection site by applying a suitable disinfectant.

Clean, properly disinfected needles should be used to reduce the potential for injection site infections.

No special handling or protective clothing is necessary.

**Swine:** Vetrimec™ 1% (ivermectin) Injection is to be given subcutaneously in the neck. Animals should be appropriately restrained to achieve the proper route of administration. Use of a 16- or 18- gauge needle is suggested for sows and boars, while an 18- or 20-gauge needle may be appropriate for young animals. Inject under the skin, immediately behind the ear (see illustration).



When using the 50 mL, 500 mL or 1000 mL package size, use only automatic syringe equipment. As with any injection, sterile equipment should be used. The injection site should be cleaned and disinfected with alcohol before injection. The rubber stopper should also be disinfected with alcohol to prevent contamination of the contents. Mild and transient pain reactions may be seen in some swine following subcutaneous administration.

**Recommended Treatment Program**

**Swine:** At the time of initiating any parasite control program, it is important to treat all breeding animals in the herd. After the initial treatment, use Vetrimec™ 1% Injection regularly as follows:

**BREEDING ANIMALS**

**Sows:** Treat prior to farrowing, preferably 7-14 days before, to minimize infection of piglets.

**Gilts:** Treat 7-14 days prior to breeding.

Treat 7-14 days prior to farrowing.

**Boars:** Frequency and need for treatments are dependent upon exposure. Treat at least two times a year.

**Feeder Pigs**

**(weaners/growers/finishers)**

All weaner/feeder pigs should be treated before placement in clean quarters.

Pigs exposed to contaminated soil or pasture may need retreatment if reinfection occurs.

**NOTE:**

(1) Vetrimec™ 1% Injection has a persistent drug level sufficient to control mite infestations throughout the egg to adult life cycle. However, since the ivermectin effect is not immediate, care must be taken to prevent reinfestation from exposure to untreated animals or contaminated facilities. Generally, pigs should not be moved to clean quarters or exposed to uninfested pigs for approximately one week after treatment. Sows should be treated at least one week before farrowing to minimize transfer of mites to newborn baby pigs.

(2) Louse eggs are unaffected by Vetrimec™ 1% Injection and may require up to three weeks to hatch. Louse infestations developing from hatching eggs may require retreatment.

(3) Consult a veterinarian for aid in the diagnosis and control of internal and external parasites of swine.

**Special Minor Use**

**Reindeer:** For the treatment and control of warbles *(Oedemagena tarandi)* in reindeer, inject 200 micrograms ivermectin per kilogram of body weight, subcutaneously. Follow use directions for cattle as described under **ADMINISTRATION**.

**American Bison:** For the treatment and control of grubs *(Hypoderma bovis)* in American bison, inject 200 micrograms ivermectin per kilogram of body weight, subcutaneously. Follow use directions for cattle as described under **ADMINISTRATION**.

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| https://www.drugs.com/vet/images/1315024_arrow_left_02.png | **RESIDUE WARNING:** Do not treat reindeer or American bison within 8 weeks (56 days) of slaughter. | https://www.drugs.com/vet/images/1315024_arrow_right_02.png |

**WARNING - NOT FOR USE IN HUMANS.**

**Keep this and all drugs out of the reach of children.**

The Safety Data Sheet (SDS) contains more detailed occupational safety information. To report adverse effects, obtain an SDS or for assistance, contact Bimeda, Inc. at 1-630-928-0361.

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| https://www.drugs.com/vet/images/1315024_arrow_left_04.png | **RESIDUE WARNING:** Do not treat cattle within 35 days of slaughter. Because a withdrawal time in milk has not been established, do not use in female dairy cattle of breeding age. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal. Do not treat swine within 18 days of slaughter. | https://www.drugs.com/vet/images/1315024_arrow_right_04.png |

**Precautions**

Transitory discomfort has been observed in some cattle following subcutaneous administration. A low incidence of soft tissue swelling at the injection site has been observed. These reactions have disappeared without treatment. For cattle, divide doses greater than 10 mL between two injection sites to reduce occasional discomfort or site reaction.

Use sterile equipment and sanitize the injection site by applying a suitable disinfectant. Clean, properly disinfected needles should be used to reduce the potential for injection site infections.

Observe cattle for injection site reactions. Reactions may be due to clostridial infection and should be aggressively treated with appropriate antibiotics. If injection site infections are suspected, consult your veterinarian.

This product is not for intravenous or intramuscular use.

Protect product from light.

Vetrimec™ 1% Injection for Cattle and Swine has been developed specifically for use in cattle, swine, reindeer, and American bison **only**. This product should not be used in other animal species as severe adverse reactions, including fatalities in dogs, may result.

Restricted Drug (California) - Use Only as Directed.

**When To Treat Cattle With Grubs**

Vetrimec™ 1% Injection effectively controls all stages of cattle grubs. However, proper timing of treatment is important. For most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble fly) season. Destruction of *Hypoderma* larvae (cattle grubs) at the period when these grubs are in vital areas may cause undesirable host-parasite reactions including the possibility of fatalities. Killing *Hypoderma lineatum* when it is in the tissue surrounding the esophagus (gullet) may cause salivation and bloat; killing *H. bovis* when it is in the vertebral canal may cause staggering or paralysis. These reactions are not specific to treatment with Vetrimec™ 1% Injection, but can occur with any successful treatment of grubs. Cattle should be treated either before or after these stages of grub development. Consult your veterinarian concerning the proper time for treatment. Cattle treated with Vetrimec™ 1% Injection after the end of the heel fly season may be retreated with Vetrimec™ 1% Injection during the winter for internal parasites, mange mites, or sucking lice without danger of grub-related reactions. A planned parasite control program is recommended.

**Environmental Safety**

Studies indicate that when ivermectin comes in contact with soil, it readily and tightly binds to the soil and becomes inactive over time. Free ivermectin may adversely affect fish and certain aquatic organisms on which they feed. Do not permit water runoff from feedlots or production sites to enter lakes, streams or ponds. Do not contaminate water by direct application or by the improper disposal of drug containers. Dispose of containers in an approved landfill or by incineration.

As with other avermectins, Ivermectin is excreted in the dung of treated animals and can inhibit the reproduction and growth of pest and beneficial insects that use dung as a source of food and for reproduction. The magnitude and duration of such effects are species and life-cycle specific. When used according to label directions, the product is not expected to have an adverse impact on populations of dung-dependant insects.

**HOW SUPPLIED**

Vetrimec™ 1% Injection for Cattle and Swine is available in three ready-to-use sizes:

The 50 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solution to treat 10 head of 550 lb (250 kg) cattle or 100 head of 38 lb (17.3 kg) swine.

The 500 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solution to treat 100 head of 550 lb (250 kg) cattle or 1000 head of 38 lb (17.3 kg) swine.

The 1000 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solution to treat 200 head of 550 lb (250 kg) cattle or 2000 head of 38 lb (17.3 kg) swine.

**Storage**

Store at 20°C to 25°C (68°F to 77°F). Protect from light.

**References**

1. <https://www.msd-animal-health.co.za/products/forray/020_product_details.aspx>
2. <https://www.agrovetmarket.com/en/veterinary-drugs/doramec-la-doramax-la-doramectina-antiparasitario-endectocida-larga-accion>
3. <https://www.drugs.com/vet/vetrimec-1-injection-for-cattle-swine.html>