**Miscellaneous Drugs**

**Universal Animal Antidote Gel : NICH UAA GEL**

**Active Ingredients;**

Activated Hardwood Charcoal 1020mg/ml

Kaolin 60mg/ml

In a base containing Magnesium, Aluminium Silicate, Preservatives , Water Q.S.

**INDICATIONS:**

For Oral Dosing As An Aid In Emergency Treatment Of Poisoning By Most Organic Chemicals Such As Pesticides In Large And Small Animals Including Cattle, Horses, Goats, Dogs and Cats.

**DOSEAGE:**

Recommend doseage is given if animal is concious and able to swallow which is 1to 3 ml/kg (2.2lbs) and can be repeated after 1 to 4 hours or until symptoms subside. For catle and horses, dosage is 10 Ounces or 300 ml and can be repated at 8 hour intervals.Proper supportive therapies such as parental fluids and injectable antidotes are advised as well as dosing of a comatose patient by a dose syringe or stomach tube.

**CONTRADICTIONS:**

This gel may not be effective aganist poisoning by mercury, other heavy metals, or inorganic arsenic.

For veterinay use only

Shake well before using

Keep out of the reach of children

Protect from freezing

Avoid excess heat over 104 oF or 40 oC

Store at room temperature 69 to 67 oF (20 to 25 oC)

**Theriogenology Drugs**

**Lutalyse Injection (dinoprost injection)**

**INDICATIONS:**

Prostaglandin F2 alpha for intramuscular use in cattle,swine and mares.

**In Cattle:** used for estrus synchronization in beef cattle and non-lactating diary heifers; for unobserved (silent) estrus in lactating dairy cows with a corpus leutum; for treatment of pyometra (chronic endometritis); for abortion of feedlot and other non-lactating cattle; for use with FACTREL (gonadorelin injection) Injection to synchronize estrous cycles to allow fixed-time artificial insemination (FTAI) in lactating diary cows; for use in estrus synchronization with EAZI-Breed CIDR in lactating diary cows and in suckled beef cows and replacement beef and dairy heifers, advancement of first postpartum estrus in suckled beef cows and advancement of first pubertal estrus in beef heifers.

**In Swine:** for parturition induction

**In Mares:** for controlling the timing of estrus in estrous cycling mares and clinically anestrous mares that have a corpus luteum and for difficult to breed mares.

**DOSEAGE:**

**Cattle:**

1. For Estrus Synchronization in Beef Cows, Beef Heifers and Replacement Dairy Heifers.

LUTALYSE Injection is used to control the timing of estrus and ovulation in estrous cycling cattle that have a corpus luteum. Inject a dose of 5 mL LUTALYSE Injection (25 mg dinoprost) intramuscularly either once or twice at a 10 to 12 day interval. With the single injection, cattle should be bred at the usual time relative to estrus. With the two injections cattle can be bred after the second injection either at the usual time relative to detected estrus or at about 80 hours after the second injection of LUTALYSE Injection. Estrus is expected to occur 1 to 5 days after injection if a corpus luteum was present. Cattle that do not become pregnant to breeding at estrus on days 1 to 5 after injection will be expected to return to estrus in about 18 to 24 days.

2. For Unobserved (Silent) Estrus in Lactating Dairy Cows with a Corpus Luteum. Inject a dose of 5 mL LUTALYSE Injection (25 mg dinoprost) intramuscularly. Breed cows as they are detected in estrus. If estrus has not been observed by 80 hours after injection, breed at 80 hours. If the cow returns to estrus, breed at the usual time relative to estrus.

3. For Treatment of Pyometra (chronic endometritis) in Cattle. Inject a dose of 5 mL LUTALYSE Injection (25 mg dinoprost) intramuscularly.

4. For Abortion in Beef Cows, Beef Heifers and Replacement Dairy Heifers. LUTALYSE Injection is indicated for its abortifacient effect in beef cows, beef heifers and replacement dairy heifers during the first 100 days of gestation. Inject a dose of 25 mg dinoprost (5 mL) intramuscularly. Cattle that abort will abort within 35 days of injection.

5. For use with FACTREL® (gonadorelin injection) Injection to synchronize estrous cycles to allow fixed-time artificial insemination (FTAI) in lactating dairy cows: Administer 2 to 4 mL FACTREL Injection (100-200 mcg gonadorelin) per cow as an intramuscular injection in a treatment regimen with the following framework:

• Administer the first dose of FACTREL Injection (2-4 mL) at Day 0

• Administer LUTALYSE (25 mg dinoprost, as dinoprost tromethamine) Injection by intramuscular injection 6-8 days after the first dose of FACTREL Injection.

• Administer a second dose of FACTREL Injection (2-4 mL) 30 to 72 hours after the LUTALYSE injection.

• Perform FTAI 0 to 24 hours after the second dose of FACTREL Injection, or inseminate cows on detected estrus using standard herd practices.

6. For use with EAZI-BREED™ CIDR® (progesterone intravaginal insert) Cattle Insert for Synchronization of Estrus in Lactating Dairy Cows:

• Administer one EAZI-BREED CIDR Cattle Insert per animal and remove 7 days later (for example if administered on a Monday remove the following Monday).

• Administer 5 mL LUTALYSE Injection at the time of removal of the EAZI-BREED CIDR Cattle Insert.

• Observe animals for signs of estrus on Days 2 to 5 after removal of the EAZI-BREED CIDR Cattle Insert and inseminate animals found in estrus following normal herd practices.

7. For use with EAZI-BREED™ CIDR® (progesterone intravaginal insert) Cattle Insert for synchronization of estrus in suckled beef cows and replacement beef and dairy heifers, advancement of first postpartum estrus in suckled beef cows, and advancement of first pubertal estrus in beef heifers:

• Administer one EAZI-BREED CIDR Cattle Insert per animal for 7 days (for example, if administered on a Monday remove on the following Monday).

• Inject 5 mL LUTALYSE Injection (equivalent to 5 mg/mL dinoprost) 1 day prior to EAZI-BREED CIDR Cattle Insert removal, on Day 6 of the 7 day administration period.

• Observe animals for signs of estrus on Days 1 to 3 after removal of the EAZI-BREED CIDR Cattle Insert and inseminate animals about 12 hours after onset of estrus.

**Swine:**

For Parturition Induction in Swine: For intramuscular use for parturition induction in swine.

LUTALYSE Injection is indicated for parturition induction in swine when injected within 3 days of normal predicted farrowing. The response to treatment varies by individual animals with a mean interval from administration of 2 mL LUTALYSE Injection (10 mg dinoprost) to parturition of approximately 30 hours.

**Mares:** LUTALYSE Injection is indicated for its luteolytic effect in mares. Administer a single intramuscular injection of 1 mg per 100 lbs (45.5 kg) body weight which is usually 1 mL to 2 mL LUTALYSE Injection. This luteolytic effect can be utilized to control the timing of estrus in estrous cycling and clinically anestrous mares that have a corpus luteum in the following circumstances:

**CONTRADICTIONS:**

For animal use only

Drug must only be used by or on order of a licensed veterinarian.

Store at controlled room temperature 20o to 250C

Protect from freezing.

Keep ot of reach of children. Pregnant women, asthmatics or persons with bronchial and other respiratory problems should avoid contact with dinoprost tromethamine.

Spills of LUTALYSE Injection on the skin should be immediately washed off with soap and water.

**Fertiline**

Manufacturer: Vetoquinol

Gonadorelin Acetate Sterile Injectable Solution (50 μg/mL).

Synthetic Hypothalamic Luteinizing Hormone-Releasing Hormone (LHRH)

**INDICATIONS:**

Fertiline is highly effective in bovine estrous synchronization programs. Fertiline fits perfectly with Bioestrovet for better management of the estrous cycle and breeding.

• Convenient 20 mL and 50 mL formats
• Fertiline is approved for IM injection in cattle.
• Room-temperature storage
• Zero milk withholding
• CQM approved

**DOSEAGE:**

The recommended intramuscular dose of FERTILINE is 100 µg per cow (2 mL of a solution containing 50 µg/mL) but can be administered intramuscularly to cows at doses up to 400 µg per cow.

**Storage**

Store at controlled room temperature (15°C - 25°C), in the dark.

**CONTRADICTIONS:**

No meat withdrawal period and no milk withholding time are required when used according to the label. Keep out of reach of children.

Treated animals should not be slaughtered for use in food for at least 7 days after treatment with this drug.

**Anti Gas Drugs**

**Anti Gaz Emulsion**

Manufacturer: Vetoquinol

|  |  |  |
| --- | --- | --- |
|  Active Ingredients : Dioctyl sodium sulfosuccinate | 2 mg | per mL |
| **INDICATIONS:** |  |  |

As an aid in the treatment of tympanism and frothy bloat in cattle, sheep and goats. It is also useful in the treatment of constipation in the above mentioned species.

**Dosage:**

Adult cattle: 300 mL, administered by a stomach tube, in the feed or as a drench, as recommended by a veterinarian.

Young cattle, sheep and goats: 150 mL, administered by stomach tube, in the feed or as a drench, as recommended by a veterinarian.

**STORAGE:** Store between 15°C and 25°C.

**CONTRADICTIONS:**

Veterinary Use Only

KEEP OUT OF REACH OF CHILDREN.

**Sedative, Anaesthetic and Euthanizing Drugs**

**KETAMIN 10% INJECTION**

Contains per ml:
Ketamine (as HCl) 100  mg

**DESCRIPTION:**

Ketamine belongs to the group of general dissociative anaesthetics and causes unconsciousness and analgesia after parenteral administration. The duration of anaesthesia is about 15 to 20 minutes and recovery takes about 30 to 60 minutes. It can be used for parental administration in dogs, cats, horses, cattle, goats and swine.

**INDICATIONS:**

Ketamine 10% Inj. is effective as a restraint agent during procedures like diagnostic and X-ray examination, minor and brief surgical procedures that do not require skeletal muscle relaxation and for transport. In combination with a sedative or an opioid, Ketamine 10% Inj. can be used as a general anaesthetic to perform surgical procedures as for example ovarectomy, castration, caesarean section and tooth extractions.

**CONTRA-INDICATIONS:**

Do not use in animals with heart decompensation or hypertension. Do not administer to animals with an impaired liver or kidney function. Do not administer to animals with glaucoma. Do not use during intracranial operations. Because ketamine does not provide a good muscle relaxation, it is contra-indicated to use as a sole agent in major surgery. Do not use in animals with pre-existing seizure disorders.

**SIDE EFFECTS:**

Induction of catalepsy, deep analgesia and amnesia. Temporary increase of blood pressure and heart frequency. During the induction phase, a slight respiratory depression occurs. Recovery may be accompanied with excitation, tremors and muscular cramps. Disturbances in respiratory rhythm and increased salivation can occur.

**INCOMPATIBILITY WITH OTHER DRUGS:**

Simultaneous use with organic phosphate compounds should be avoided.

**DOSAGE AND ADMINISTRATION:**

For intravenous (dog) or intramuscular (dog, cat) injection. During anaesthesia, reflexes will still appear, except for the eyelid reflex: eyes of cats and dogs remain open and should therefore be protected with eye-ointment during the procedure to avoid excessive drying of the cornea.
Ketamine 10% Inj. should only be used by veterinarians.

Dogs:

* intramuscular : 0.05 – 0.15 ml per kg bodyweight (this is equivalent 5 – 15 mg ketamine per kg bodyweight).
* intravenous : 0.01 – 0.1 ml per kg bodyweight (this is equivalent to 1- 10 mg ketamine per kg bodyweight).

Cats:

* intramuscular : 0.15 ml per kg bodyweight (this is equivalent to 15 mg ketamine per kg bodyweight).

Combined therapy:

Dogs:

* intramuscular : 0.08 – 0.20 ml per kg bodyweight (this is equivalent to 8 – 20 mg ketamine per kg bodyweight).
* recommended dosages for xylazine 1 – 2 mg per kg bodyweight intramuscularly.

Cats:

* intramuscular : 0.1 – 0.2 ml per kg bodyweight (this is equivalent to 10 – 20 mg ketamine per kg bodyweight).
* recommended dosages for xylazine 0.5 – 1 mg per kg bodyweight intramuscularly.

**WITHDRAWAL PERIOD:**

None.

**STORAGE:**

Store in a dry, dark place between 15 °C and 25 °C.
Keep medicine away from children.

**Xylazine 2% injection**

**Description**

Xylazine has sedative, analgesic and muscle-relaxing properties.

**Indications**

All cases where sedation is needed, e.g. during transport, parturition, hoof treatment, small operations (e.g. dehorning), and as a pre-anaesthetic for larger operations (caesarian section).

**Contra indications**

Administration during gestation or to animals with pulmonary and/or cardiac diseases.
Administration to animals with pyometra, since these animals are often hypersensitive to xylazine preparations.

**Side effects**

Decreased heart and respiratory rate.
Hypersalivation and vomiting.

**Dosage**

**Cattle :** for intramuscular administration.
dose 1 : 0.25 ml per 100 kg body weight; sedation, small operations.
dose 2 : 0.5 ml per 100 kg body weight; small operations. Animals usually remain standing.
dose 3 : 1 ml per 100 kg body weight; larger operations. Animals lie down.
dose 4 : 1.5 ml per 100 kg body weight; very extensive operations.

Animals have to fast for a couple of hours before administration.

**Horses:**4 ml per 100 kg body weight for intravenous administration, or 10 ml per 100 kg body weight for intramuscular administration. With larger operations preferably in combination with other preparations, e.g. intravenous 4 ml per 100 kg body weight and halothane or fluothane as intubation narcosis.

**Sheep:**0.15 ml per 10 kg body weight for intramuscular administration.

**Dogs:**0.15 ml per kg body weight for intramuscular or intravenous administration. In combination with ketamine: 0.1 ml per kg body weight and 6 - 10 mg ketamine per kg body weight.

**Cats:**0.15 ml per kg body weight for intramuscular or subcutaneous administration. In combination with ketamine: 0.1 ml per kg body weight and 6 - 10 mg ketamine per kg body weight.

**Withdrawal times**

- For meat : 5 days.
- For milk : 4 days.

**STORAGE:**

Store below 25°C.

Do not freeze.

**Lidocaine 2%**

**Description:**

Sterile ready to use local anesthetic for infiltration anesthesia or nervous block, epidural anesthesia and surface anesthesia.

**Formula**

Every 100 ml, it contains:
\* Lidocaine hydrochloride 2 g
\* Formulation Agents e.q.

**Animal species to which it is destined:**

\* Horses,
\* cattle,
\* sheep,
\* dogs
\* cats.

**Administration:**

By subcutaneous, intramuscular or Epidural injection.

**Dosage:**

Infiltration anesthesia or nervous block: 2-50 ml depending on the sizeof the surface to be treated and the desired response.
Epidural anesthesia:
\* Large Animals: posterior: 3-20 ml according to size.
\* Large Animals: anterior: 20-120 ml according to size.
\* Small Animals: 1 ml every 2.5 kg live weight.
These doses must be adjusted by the professional according to the individual response.
It must be administered with precaution and under professional supervision to avoid prolonged bone-narrow injuries or positions.

Contradictions;

Hypersensitivity to the drug. Serious hepatic or cardiac damage.

Do not slaughter treated animals for consumption or use their milk for consumption or industry within 36 hours from last treatment.

Inject slowly controlling individual response

Do not apply on infected areas

Intravenous and subarachnoid administration should be avoided. In case of accidental intravenous or intra-arterial administration, excitation, anxiety, cardiovascular collapse may be produce. In those cases, it is advisable to administer barbiturates urgently by intravenous route. Do not use together with neuromuscular block drugs (muscle relaxant)

Keep out of the reach of children and /or unauthorized people.

Store at temperature between 5°C and 30°C.

**Secondary effects:**

Slight local inflammation maybe produced when relatively high doses are administered.

**Natrium Pentobarbital 20%**

Manufactured by Kela

Composition: Pentobaritalum natrium 200mg per 100ml. excipients up to 1ml

Indications:

Posologie: In dogs the i.v. injection time of the total dose is at least 5 minutes. One third up to half of the calculated dose is injected moderately fast (i.e. within 20 seconds), until the depressive effect of the anesthetic (hypnosis) becomes clear. The reaming pentobarbital is administered fractional until surgical anesthesia is reached.

Therapeutic indications: induction of anesthesia ( followed by inhalation anesthesia) and general anesthesia in dogs. Pentobarbital is a suitable anesthetic in case of convulsions in dogs, e.g. strychnine-intoxication.

Instructions for dosing: Anesthesia and induction of anesthesia in dogs( without premedicaion): 30mg/kg b.w. i.v. or i.p. or 1ml/6.5 kg b.w. (surgical anesthesia for 1 hour). To prolong the narcosis in dogs inject every hour 5mg/kg b.w. When premedicated ( e.g. with a sedative, Xylazine) this dose may be reduced with up to 50% or even more.

Euthanasia: Dogs: 6ml/10 kg b.w. fast i.v. or intracardialy

 Cats: 3ml intraperitoneally or intracardialy

Contradictions:

For veterinary use only.

Store below 25°C.

**Combistress**

Manufactured by Kela

Formula; Acepromazini maleas 20mg

Natrii methylis parahydroxybenzoas 1.14 mg

Natrii metabisulfis Aqua ad injectabila q.s. ad 1 mL

**Indications:**

Tranquilization during shipment. Sedation of nervous or aggressive animals. Vomiting associated with motion sickness. Premedication in general or local anesthesia

Withdrawal times: Slaughter: 5 days

Milk delivery: 2 days

**Doseage and administration:**

Horse, cattle -I.V. 0.25 ml (2mg) per100 kg b.w. I.M. ; 0.025-0.50ml

(5-10 ml) per 100 kg b.w.

Pig, sheep, goat: I.V. 0.1(2mg) per 10kg b.w. I.M.: 0.1-0.2ml (2-4mg) per 10 kg b.w.

Dog: I.V. .02ml (4mg) per 10 kg b.w. I.M. 0.2-0.5 ml (4-10 mg) per 10kg b.w.

**Store in a cool dry place and protect from light.**

**Atropine Sulfate Injection**

Distributed by Vedco .inc

Federal law restricts this drug to use by or on the order of a licensed veterinarian.

**Atropine Sulfate Injection** is used as a preanesthetic adjuvant or to reduce salivation, bronchial secretion or internal peristalis associated with colic or diarrhea.

**Active Ingredients:**
Each mL contains:
Atropine sulfate 0.54 mg
Sodium chloride 9 mg
Benzyl alcohol (preservative) 1.5%
Water for injection q.s.

**Doseage and administration:**

For intravenous, intramuscular or subcutaneous use.

Dogs and Cats - Inject 1 mL for each 20 lbs. of body weight.

As an antidote for parasymphathomimetic drugs, 1 mL for each 7.5 lbs. of body weight. It is suggested that 1/4 of the dosage be injected I.V. and remainder I.M. or S.C.

**Packaged**

100 mL Sterile Multiple Dose Vials

**Contradictions:**

**Poisonous alkaloid. Keep out of reach of children.** Antidotes: warmth, emetics, cholinergics.

**Thiopental (Pentothal®) for Dogs and Cats**

Thiopental, commonly known as Pentothal®, is a rapidly acting, ultra-short duration, intravenous [anesthetic](https://www.petplace.com/article/drug-library/drug-library/library/thiopental-pentothal-for-dogs-and-cats/void%280%29) for dogs and cats that is used for induction of anesthesia prior to inhalation maintenance or as sole agent for minor procedures.

Thiopental is approved by the Food and Drug Administration (FDA) for use in humans and many species of domestic animals.

Due to potential for abuse and misuse, thiopental is a [controlled substance](https://www.petplace.com/article/drug-library/drug-library/library/thiopental-pentothal-for-dogs-and-cats/void%280%29).

Thiopental is a [prescription drug](https://www.petplace.com/article/drug-library/drug-library/library/thiopental-pentothal-for-dogs-and-cats/void%280%29) should only be administered by a veterinarian in a veterinary setting.

**Precautions and Side Effects**

While generally safe and effective when administered by a veterinarian, thiopental causes some unwanted side effects.

Thiopental should not be used in animals with known hypersensitivity or [allergy](https://www.petplace.com/article/drug-library/drug-library/library/thiopental-pentothal-for-dogs-and-cats/void%280%29) to the drug.

Thiopental should not be used in animals with severe cardiovascular compromise, such as shock, head trauma, intracranial space-occupying lesions, or liver disease.

Thiopental should be used with caution in animals with kidney disease.

Thiopental should not be used to induce or maintain anesthesia in sight hounds because of their reduced ability to metabolize the drug (prolonged recovery and associated complications).

Thiopental may interact with other medications. Consult with your veterinarian to determine if other drugs your pet is receiving might interact with thiopental. Such drugs include Ringer's solution, Lactated Ringers, amikacin, atropine, benzylquinamide, cephapyrin, chlorpromazine, codeine, dimenhydrinate, diphenhydramine, ephedrine, glycopyrrolate, hydromorphone, insulin, levorphanol, meperidine, metaraminol, morphine, norepinephrine, penicillin G, prochlorperazine, promazine, promethazine, succinylcholine, and tetracycline. In general, drugs with an acidic pH should not be mixed with (alkaline) thiopental solutions

If inadvertently injected perivascularly (outside of the vein); thiopental may cause a skin slough due to the solution's high alkalinity.

**Dosage of Thiopental for Dogs and Cats**

Dogs: Range; 13.0 to 26.0 mg per kg of body weight.

*For anaesthesia of short duration (8-10 minutes)* which may be sufficient for X-ray, physical examination and minor surgery, 13.0 to 16.5 mg/kg.

*For anaesthesia of intermediate duration (10-15 minutes)* such as might be used for dentistry or reduction of fractures, 16.5 to 22.0 mg/kg.

*For major surgery* requiring anaesthesia of longer duration (longer than 15 minutes) induce anaesthesia with 22 to 26 mg/kg of body weight; about half of the dose is given rapidly and the balance more slowly, administered over approximately 15 seconds. Depth of anaesthesia may be determined by the loss of pedal and eye reflexes. The first stage of anaesthesia following the administration of thiopental sodium is commonly evidenced by a deep yawn followed very shortly by loss of reflexes. Although the initial dose may be sufficient for an entire operation, the surgeon should be prepared to administer additional drug as needed. Some clinicians prefer to leave the needle in the vein. Any additional drug should be administered a little more slowly. As much as a third or more of the original dose may be required to produce the desired depth of anaesthesia. Injections should not be at closer than 30 to 60 second intervals.

*With preanaesthetic agents:* Preanaesthetic agents (such as morphine or a tranquilizer) decrease the dosage requirements of thiopental sodium, provide for smoother induction and recovery, and may prolong the recovery period. Following morphine as a preanaesthetic agent, the dose of this drug may be reduced as much as 40 to 50 percent, following a tranquilizer, 10 to 25 percent.

*The urinary bladder* should be emptied immediately after anaesthesia is induced, particularly when prolonged anaesthesia is anticipated.

Cats

**THIOTAL 1 g** (thiopental sodium for injection, USP) use and limitations for cats is similar to that detailed for dogs. The usual dose range is 17.5 to 26.0 mg/kg intravenously.

Equines

For best results, the intravenous administration of a phenothiazine tranquilizer is recommended 10 to 20 minutes prior to the administration of thiopental sodium. Rapid injection of thiopental sodium is then recommended and the doses given are for this type of administration. Slower or repeated administration should be avoided. In the rare event that the animal fails to respond to the drug, the procedure should not be repeated in less than 24 hours.

*With preanaesthetic* **tranquilization,** 6 to 13 mg thiopental sodium per kg of body weight. An average of 8.25 mg per kg of body weight is recommended. No or minimal restraint is necessary for the recovery period.

*Without preanaesthetic* **tranquilization,** 9 to 15.5 mg per kg of body weight. For an average horse (400 to 500 kg) the recommended dose is 10 to 11 mg/kg. The largest dose level is recommended for smaller animals such as ponies. The smallest dose level is recommended for the larger draft horses and older debilitated animals. Restraint is strongly recommended to reduce or eliminate struggling during recovery.

**THIOTAL** is an effective and quick acting short term general anaesthetic for equines. However, it is desirable either to apply restraint before the recovery period or to use a tranquilizer or sedative with this anaesthetic agent to allow smooth recovery.

Ten to twenty minutes after the intravenous administration of a tranquilizer, the rapid intravenous injection of thiopental sodium will induce anaesthesia easily and rapidly. Surgical anaesthesia ranges from 3 to 14 minutes, righting time from 15 to 120 minutes, and “restraint was not required and recovery was rapid and occurred without emergence excitement or struggling”.

Animals should not be stimulated to rise.

**THIOTAL** is particularly recommended for general anaesthesia of short duration such as may be required for castration, point firing, dentistry, and minor surgery.

**THIOTAL 1 g** (thiopental sodium for injection, USP) is the induction anaesthetic of choice in preparation for a volatile anaesthetic in prolonged operations required for major surgery.

Bovine

In addition to individual variation in response to the anaesthetic, which cannot be always anticipated, there is a consistent difference in the response of nursing calves and of older animals, as pointed out below.

**A. Animals 136 Kg Or Over**

The recommended dose is 8.2 to 15.4 mg per kg of body weight, depending on the depth of anaesthesia required, administered rapidly. Rapid administration is defined as injecting the entire specified dose with a hypodermic syringe in a one motion thrust.

*To deliver 11 mg/kg of body weight, using a 2.5% solution would require 20 mL for each 45.45 kg of body weight.*

Should additional drug be required (as in lighter weight animals) it should be injected more slowly, particularly in the obese animal, and the total amount should not exceed 22 mg per kg of body weight.

*When a phenothiazine tranquilizer* is administered intravenously 10 to 15 minutes prior to the injection of thiopental sodium, the lower dose of this drug (8.2 to 10 mg/kg) should be used. The anaesthesia following the tranquilizer is more profound and the righting time is prolonged slightly.

**B. Unweaned Calves**

For unweaned calves, from which food has been withheld 6 to 12 hours prior to anaesthesia, no more than 6.6. mg of **THIOTAL 1 g** (thiopental sodium for injection, USP) per kg is required for deep surgical anaesthesia.

*If a phenothiazine tranquilizer* is administered to such calves 10 to 20 minutes prior to anaesthesia, the dose of thiopental sodium is reduced to 4.4 mg per kg of body weight.

The drug is an effective, quick-acting, short-term general anaesthetic for the bovine. It is not necessary to provide restraint for the recovery period for the bovine. *There is, however, a marked tendency for the bovine to regurgitate with resulting inhalation pneumonia and suffocation. Accordingly, the surgeon should be prepared to keep the trachea open.* Lowering the head and endotracheal intubation are suggested means to help avoid mechanical suffocation. The response to this rapid intravenous drug is almost immediate. Within a few seconds the standing animal will fall and is ready for surgery. Surgical anaesthesia usually lasts for 5 to 10 minutes. During this period, respiration will appear shallow. There may be a slight reflex response to corneal and anal stimulation but no resistance to passive movement of the limbs. Righting time is usually 2 to 3 hours and uneventful.

This drug is particularly useful for operations of short duration such as laparotomies in calves, dehorning, hernial repair, other minor surgery, and induction anaesthesia preceding the use of a volatile anaesthetics.

When recovery is sufficiently apparent, it is helpful to roll the bovine up to the rest on its sternum so that rumination and chewing of the cud may be resumed.

Ovine

This preparation has been used successfully for experimental surgery in lambs weighing about 16 kg each, at the rate of 10 to 14.9 mg/kg depending on the depth of anaesthesia desired.

Induction was rapid and without excitement, recovery was smooth and uneventful. About half of the maximum dose was injected rapidly in the jugular vein and thereafter continued more slowly - over a 30 to 60 second period - until the desired depth of anaesthesia was achieved. For deep surgical anaesthesia, administration was continued until apnea was evident for about 15 seconds (the practicing veterinary surgeon probably would not want to push anaesthesia to this depth). Apnea was followed by shallow but regular respiration, the absence of corneal reflex, and complete muscle relaxation. Increased salivation and ruminal regurgitation in sheep, as in cattle, is a problem with general anaesthesia and must be handled as in cattle.

Swine

This preparation has been found to be a superior anaesthetic for swine because of the ease of administration, rapid induction, and short smooth recovery period. As in other species, there is an inverse ration between the dose level and the weight of the animal. The minimum anaesthetic dose for healthy animals is shown in the following table:

|  |  |
| --- | --- |
| kg of body weight | mg/kg |
| 4.5 - 23 | 11.0 |
| 23 - 45 | 9.9 |
| 45 - 90 | 8.8 |
| 90 - 136 | 7.7 |
| 136 - 181 | 6.6 |
| 181 - 272 | 5.5 |

Slightly over the dose, calculated from the above table, should be drawn into the syringe because an occasional animal may require slightly more. One half of the calculated dose is injected rapidly and the remainder more slowly until the desired anaesthesia is obtained; caution should be used with unthrifty animals which may not require, and thus should not receive, the full calculated dose. Only a rare robust animal will require slightly more than the minimum calculated dose. Respiration should be watched, an occasional animal may require artificial respiration.

For large animals thiopental sodium is best administered through a small gauge needle into the ear vein while the animal is restrained with a regular swine holder or with a rope in the mouth.

Piglets and small swine may be placed conveniently in a trough in a supine position and injection made directly into the anterior vena cava.

This drug is a particularly useful anaesthetic agent for such operations on swine as hernial repair, tumor « scirrhous cord » removal, tusk removal and similar oral surgery, castration, splenectomies and lancing abscesses.

**Anti-inflammatory Drugs**

**Phenylbutazone 20% injection**

1 mL contains: Phenylbutazone 200mg.

**Indications:**

Control of inflammation and associated pain of the musculoskeletal system (e.g. artritis,tendinitis, muscular strains, myositis, etc.) and (soft tissues e.g. wounds, fractures, bruising).

**Contra indications**

The therapeutic index of phenylbutazone is low. Do not exceed the stated dose or the duration of treatment.
Do not administer with other NSAIDs concurrently or within 24 hours of each other.
Do not use in animals suffering from cardiac, hepatic or renal disease; where there is the possibility of gastrointestinal ulceration or bleeding; where there is evidence of blood dyscrasias or hypersensitivity to the product.
Use during pregnancy should be avoided whenever possible, particularly during the first trimester.

**Side effects**

Non-steroidal anti-inflammatory drugs can cause inhibition of phagocytosis and hence in the treatment of inflammatory conditions associated with bacterial infection, appropriate concurrent antimicrobial therapy should be instigated.
There is a risk of irritancy if the injection is accidentally inoculated under the skin during intravenous administration.
Rarely, collapse following intravenous injection has been reported. The product should be injected slowly over as long a period as is reasonably practical. At the first signs of intolerance, the administration of the injection should be interrupted.
Some non-steroidal anti-inflammatory agents may be highly bound to plasma proteins and compete with other highly bound drugs to produce an increase in non-bound pharmacologically active concentrations which can lead to toxic effects.
Gastrointestinal tract ulceration may be exacerbated by corticosteroids in animals given nonsteroidal anti-inflammatory drugs.
Concurrent administration of potential nephrotoxic drugs (e.g. aminoglycoside antibiotics) should be avoided.

**Dosage and Administration:**

Horses: 1ml/50kg/day I.V. (max 5 days)

Cattle: Initial dose : 1ml/25kg. Maintain dose: 1ml/50-70kg/day or every 2 days I.V. or I.M. (max 5 days)

Pigs: 1ml/50 kg/day I.M.

Dogs: 1ml/16kg every 12 hours I.V. (max 2 days)

**Withdrawal times:** Milk; 4 days

 Slaughter: Cattle, Pigs; 15 days

 Horse: 7 days

Store in a cool dry place.

**Dexakel 0,2%**

For I.M., S.C., I.V. and Intra-articular injection.

**COMPOSITION**

Dexamethasone sodium phosphate eq. 2 mg dexamethasone - Excipients up to 1 ml

**TARGET SPECIES**

Horses, cattle, sheep, goats, dogs, cats

**INDICATIONS**

**Dexamethasone** is a very potent synthetic glucocorticosteroid, its anti-inflammatory effects being  7-10 times stronger than those of prednisolone. and 30 times stronger than those of cortisone. In addition to its antiphlogistic properties, dexamethasone also shows extraordinary anti-allergic, anti-stress and gluconeogenetic activities. Mineralcorticoid activity is minimal.

**For the treatment of :**Metabolic disorders such as: ketosis in cattle and puerperal toxaemia in ewes and sows.
Non-infectious inflammatory processes, especially acute musculoskeletal inflammations such as: arthritis, periarthritis, tendovaginitis, bursitis, luxations, myositis, osselets and sprains.
As an aid in acute infectious diseases (e.g. acute mastitis, metritis, pneumonia, polyarthritis in calves) in combination with suitable anti-infectious therapy.
Allergic conditions, e.g. asthma, allergic skin affections (eczema, urticaria, pruritis, ...), snake-bites.
Stress- and shock conditions.
Induction of parturition in ruminants during the last stage of pregnancy (delivery within 2-4 days).

**Doseage:**

Cattle, Horses : 5-10 ml/400kg b.w.

Sheep, Goats, Calves ; 1-2 ml/50kg b.w.

Cats, Dogs : 0.25 – 0.5 ml/5 kg b.w.

If necessary repeat with intervals of 2 days (dogs,cats) and 3-4 days (other animals)

Withdrawal times: Milk: 2 days

 Slaughter: 14 days

**Banamine (Flunixin meglumine)**

**Overview**

Banamine brand of flunixin meglumine is the pioneer injectable nonsteroidal anti-inflammatory drug approved for cattle and horses in the United States.

Banamine reduces the fever and lung inflammation that typically accompany bovine respiratory disease (BRD). With Banamine as part of a BRD treatment program, cattle feel better fast. Cattle pulled for BRD and treated with Banamine (flunixin meglumine) in addition to an antibiotic visited the feed bunk more frequently (P < 0.10), spent more time at the feed bunk (P < 0.05), and had significantly reduced rectal temperature during a 12-hour period post-treatment than cattle treated with an antibiotic alone. They also have reduced lung inflammation and fewer lung lesions than cattle treated with conventional therapies.1

Each milliliter of BANAMINE Injectable Solution contains flunixin meglumine equivalent to 50mg flunixin, 0.1mg edetate disodium, 2.5mg sodium formaldehyde sulfoxylate, 4.0mg diethanolamine, 207.2mg propylene glycol; 5.0mg phenol as preservative, hydrochloric acid, water for injection qs.

**Safety**

Horse: A three-fold intramuscular dose of 1.5mg/lb of body weight daily for 10 consecutive days was safe. No changes were observed in hematology, serum chemistry, or urinalysis values. Intravenous dosages of 0.5mg/lb daily for 15 days; 1.5mg/lb daily for 10 days; and 2.5mg/lb daily for five days produced no changes in blood or urine parameters. No injection site irritation was observed following intramuscular injection of the 0.5mg/lb recommended dose. Some irritation was observed following a three-fold dose administered intramuscularly.

Cattle: No flunixin-related changes (adverse reactions) were noted in cattle administered a 1X (2.2mg/kg; 1.0mg/lb) dose for nine days (three times the maximum clinical duration). Minimal toxicity manifested itself at moderately elevated doses (3X and 5X) when flunixin was administered daily for nine days, with occasional findings of blood in the feces and/or urine. Discontinue use if hematuria or fecal blood are observed.

**Indications**

Horse: BANAMINE Injectable Solution is recommended for the alleviation of inflammation and pain associated with musculoskeletal disorders in the horse. It is also recommended for the alleviation of visceral pain associated with colic in the horse.

Cattle: BANAMINE Injectable Solution is indicated for the control of pyrexia associated with bovine respiratory disease, endotoxemia and acute bovine mastitis. BANAMINE Injectable Solution is also indicated for the control of inflammation in endotoxemia.

**Administration and Dosage**

Horse: The recommended dose for musculoskeletal disorders is 0.5mg per pound (1 mL/100 lbs) of body weight once daily. Treatment may be given by intravenous or intramuscular injection and repeated for up to five days. Studies show onset of activity within two hours. Peak response occurs between 12 and 16 hours and duration of activity is 24 to 36 hours.

The recommended dose for the alleviation of pain associated with equine colic is 0.5mg per pound of body weight. Intravenous administration is recommended for prompt relief. Clinical studies show pain is alleviated in less than 15 minutes in many cases. Treatment may be repeated when signs of colic recur. During clinical studies approximately 10% of the horses required one or two additional treatments. The cause of colic should be determined and treated with concomitant therapy.

Cattle: The recommended dose for cattle for control of pyrexia associated with bovine respiratory disease and endotoxemia and control of inflammation in endotoxemia is 1.1 to 2.2mg/kg (0.5 to 1mg/lb; 1 to 2 mL per 100 lbs) of body weight given by slow intravenous administration either once a day as a single dose or divided into two doses administered at 12-hour intervals for up to three days. The total daily dose should not exceed 2.2mg/kg (1.0mg/lb) of body weight. Avoid rapid intravenous administration of the drug.

The recommended dose for acute bovine mastitis is 2.2mg/kg (1mg/lb: 2 mL per 100 lbs) of body weight given once by intravenous administration.

**Precautions**

As a class, cyclo-oxygenase inhibitory NSAIDs may be associated with gastrointestinal and renal toxicity. Sensitivity to drug-associated adverse effects varies with the individual patient. Patients at greatest risk for renal toxicity are those that are dehydrated, on concomitant diuretic therapy, or those with renal, cardiovascular, and/or hepatic dysfunction.

Since many NSAID's possess the potential to induce gastrointestinal ulceration, concomitant use of BANAMINE Injectable Solution with other anti-inflammatory drugs, such as other NSAIDs and corticosteroids, should be avoided or closely monitored.

Horse: The effect of BANAMINE Injectable Solution on pregnancy has not been determined. Studies to determine activity of BANAMINE Injectable Solution when administered concomitantly with other drugs have not been conducted. Drug compatibility should be monitored closely in patients requiring adjunctive therapy.

Cattle: Do not use in bulls intended for breeding, as reproductive effects of BANAMINE Injectable Solution in these classes of cattle have not been investigated. NSAIDs are known to have potential effects on both parturition and the estrous cycle. There may be a delay in the onset of estrus if flunixin is administered during the prostaglandin phase of the estrous cycle. NSAIDs are known to have the potential to delay parturition through a tocolytic effect. Do not exceed the recommended dose.

Not intended for dry dairy cows, veal calves or horses intended for human consumption.

Withdrawal time: Milk: 36 hours

 Meat: 4 days

**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).

|  |  |
| --- | --- |
| **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.

|  |  |  |
| --- | --- | --- |
|   | **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**.

|  |  |  |
| --- | --- | --- |
| 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.

|  |  |  |
| --- | --- | --- |
| 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.

**Antibiotics**

**Trisulkel 240**

Manufactured by KELA

Formula: 1ml contains Sulfadimidine 200 mg –Trimethoprim 40 mg

Withdrawal time: Milk; 2 days

 Slaughter : 3 days

Store in a cool dry place.

Indications;

For infections of the urinary tract, respiratory tract, pharyngitis, septicaemia, mastitis, metritis, strangles in horses, arthritis and dermal infections

Dosage and Administration:

By I.M., S.C., or slow I.V. administration 1ml/10-15kg b.w. injection to be repeated if necessary with 12 to 24 hour intervals.

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