

FOR ANIMAL TREATMENT ONLY
RESTRICTED VETERINARY MEDICINE

LEPTO 4-WAY™

For the vaccination of cattle against leptospirosis.

ACTIVE CONSTITUENTS

Inactivated cultures of *Leptospira interrogans* Hardjo, Copenhageni and Pomona and *Leptospira borgpetersenii* serovar Tarassovi.

INDICATIONS

For the vaccination of cattle against leptospirosis caused by *L. borgpetersenii* serovar Hardjo (Hardjobovis) and *L. interrogans* serovars Copenhageni and Pomona. To prevent the shedding in urine of leptospirae of these serovars, and thus reduce the risk of human leptospirosis infection.

Also contains *Leptospira borgpetersenii* Tarassovi which can be expected to provide an immune response against Tarassovi and Tarassovi-like strain "Pacifica". A reduction in urine shedding of these serovars is also expected, thus further reducing the risk of human leptospirosis infection.

FEATURES

This vaccine is prepared from cultured strains of *L. interrogans* serovars Hardjo, Copenhageni and Pomona, and *L. borgpetersenii* serovar Tarassovi. The vaccine contains formalin killed cultures with thiomersal 0.01% added as a preservative. Each batch of vaccine has been fully tested before issue, and proved to conform to accepted standards of sterility, safety, and potency. Trials have been conducted in New Zealand. In cattle challenged with live cultures of the serovars Hardjo and Pomona, shedding of leptospirae in the urine was prevented by strains contained in LEPTO 4-WAY™.

DOSAGE AND ADMINISTRATION

Shake thoroughly before use. 2 ml by subcutaneous injection, given into the anterior half of the neck, with a further dose of 2 ml given four to six weeks later. All animals then require a single 2 ml booster injection each 12 months.

- **HERD VACCINATION:** To begin a herd vaccination program all animals must be vaccinated in the autumn, with a second dose given 4-6 weeks later. An annual booster dose must be given each autumn. Calves and cows intended for introduction to a herd must receive 2 doses 4-6 weeks apart. This programme is applicable to dairy, and beef herds.
- **VACCINATION OF CALVES:** Early vaccination of calves is advisable to protect against acute leptospirosis ('redwater'), and to minimise the risk of animals becoming carriers prior to vaccination. A course may begin from 12 weeks of age, but in this case it is essential to administer a booster dose at 6 to 9 months of age, to align with future herd vaccination. In all cases, two doses should be given, 4 - 6 weeks apart, and finishing no later than 9 months of age, and a booster vaccination should be given within 12 months. This may require a further single dose of vaccine to align calves vaccinated out of season (i.e. when young, or in a town supply herd), with the annual herd booster in autumn.
- **HIGH RISK CALVES:** Calves deemed to be at high risk may be vaccinated from as young as 4 weeks of age. However, they must still receive a second dose 4-6 weeks after the first AND where the primary vaccination is completed before 6 months of age, a booster dose at 6 months of age is essential.

- **INTRODUCED STOCK:** In the absence of known prior vaccination, dose twice at a 4-6 week interval. To eliminate possible shedding from animals already leptospirosis infected, a course of dihydrostreptomycin (3 days at 25 mg/kg) is recommended.

Some swelling usually develops at the site of vaccination, and may last for some weeks before gradually subsiding. More obvious reactions may relate to contamination at the injection site. To minimise site reactions and avoid carcass damage:

1. Vaccinate animals in clean surroundings. Avoid injection of animals in wet weather or dusty conditions.
2. Sterilise syringes and needles immediately before use by boiling in water for 15 minutes. Avoid use of strong disinfectants on apparatus.
3. Inject subcutaneously only, into the anterior half of the neck for production animals. Use the shortest practicable needle, not exceeding 15 mm in length.
4. It is important that the vaccine is properly mixed before and during use.

No withholding period is required when used as directed.

In situations where an incomplete pack is left at the end of administration it can be kept for up to 30 days as long as the following instructions are adhered to:

1. Remove the draw-off tube from the stopper with care.
2. Depress the plunger several times in order to empty the draw-off tube and vaccination gun. Discard the contents in accordance with local territorial authority requirements.
3. Remove the draw-off tube from the vaccination gun.
4. Sterilise the stopper by disinfecting it with a clean cloth soaked in methylated spirits.
5. Store the vaccine upright in the carton and in the refrigerator at 2° to 8°C. DO NOT FREEZE.
6. When re-using the incomplete pack do so with sterile needles, vaccination gun and draw-off tube.

PRECAUTION

In case of anaphylactic reaction, treat by injection of epinephrine and/or soluble corticosteroid.

DISPOSAL

Dispose of empty containers by wrapping with paper and putting in garbage. Discarded needles should immediately be placed in a designated and appropriately labelled 'sharps' container.

STORAGE

Store protected from light, at 2° to 8°C (refrigerated). DO NOT FREEZE.

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of animal health

