SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Bioestrovet 0.250 mg/ml solution for injection for cattle

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substance:

Cloprostenol	0.250 mg
(equivalent to Cloprostenol Sodium)	0.263 mg

Excipients:

Chlorocresol	1.00 mg

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.
A clear colourless aqueous solution.

4. CLINICAL PARTICULARS

4.1 Target species

Cattle (heifers, cows).

4.2 Indications for use, specifying the target species

Cattle (heifers, cows):
- Induction of luteolysis allowing resumption of oestrus and ovulation in cyclic females when used during dioestrus
- Synchronisation of oestrus (within 2 to 5 days) in groups of cyclic females treated simultaneously
- Treatment of suboestrus and uterine disorders related to a functioning or persistent corpus luteum (endometritis, pyometra)
- Treatment of ovarian luteal cysts
- Induction of abortion until day 150 of pregnancy
- Expulsion of mummified foetuses
- Induction of parturition

4.3 Contraindications

Do not administer to pregnant animals unless the objective is to terminate the pregnancy.
Do not use in animals with cardiovascular, gastro-intestinal or respiratory disturbances.

Do not administer to induce parturition in cattle with suspected dystocia due to mechanical obstruction or if problems are expected because of an abnormal position of the foetus.
Do not use in cases of hypersensitivity to the active substance or to any of the excipients.
Do not administer intravenously.

4.4 Special warnings for each target species

There is a refractory period of four to five days after ovulation when cattle are insensitive to the luteolytic effect of prostaglandins.

4.5 Special precautions for use

Special precautions for use in animals
In case of oestrus induction in cattle: from the 2nd day after injection, adequate heat detection is necessary.
For the termination of pregnancy, best results are obtained before day 100 of gestation. Results are less reliable between day 100 and 150 of gestation.
Induction of parturition and abortion may increase the risk of complications, retained placenta, foetal death and metritis.
To reduce the risk of anaerobic infections (e.g. swelling, crepitus), which might be related to the pharmacological properties of prostaglandins, care should be taken to avoid injection through contaminated areas of skin. Clean and disinfect injection sites thoroughly before administration.

Special precautions to be taken by the person administering the veterinary medicinal product to animals
Prostaglandins of the $F_{2\alpha}$-type, such as cloprostenol, can be absorbed through the skin and mucous membranes and may cause bronchospasm or miscarriage.
Direct contact with skin or mucous membranes of the user should be avoided.
Care should be taken when handling the product to avoid self-injection or skin contact. Pregnant women, women of child-bearing age, asthmatics and people with bronchial or other respiratory problems should avoid any contact with the product.
Wear disposable impervious gloves when administering the product.
Wash hands after use.
Do not eat, drink or smoke while handling the product.
Accidental spillage on the skin should be washed off immediately with soap and water.
In case of accidental self-injection or spillage onto the skin seek medical advice immediately, particularly as shortness of breath may occur, and show the package leaflet or label to the physician.

4.6 Adverse reactions (frequency and seriousness)

Localised post-injection bacterial infections, which may become generalised, are occasionally reported.
When used in cattle for induction of parturition and dependent on the time of treatment relative to the date of conception, the incidence of retained placenta may be increased.
Aanaphylactic-type reactions can be observed in very rare cases, which might be life-threatening and require rapid medical care.

The frequency of adverse reactions is defined using the following convention:
- very common (more than 1 in 10 animals treated displaying adverse reaction(s))
- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)
- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

4.7 Use during pregnancy, lactation or lay

Do not administer to pregnant animals unless the objective is to terminate the pregnancy.
Lactation: Use only according to the benefit/risk assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

Do not administer the product together with non-steroidal anti-inflammatory drugs since they inhibit endogenous prostaglandin synthesis.
The activity of other oxytocic agents can be increased after the administration of cloprostenol.

4.9 Amounts to be administered and administration route

For intramuscular use.
0.5 mg cloprostenol/animal corresponding to 2 ml product per animal.
In order to synchronise oestrus in cattle, it is recommended that the product is administered on two occasions with an interval of 11 days between treatments.
Termination of abnormal pregnancy: between day 5 and 150 after insemination.
Induction of parturition: within 10 days before the expected date of parturition.
It is recommended that the vial is not broached more than 10 times and that the appropriate vial size is used for prevailing usage conditions. Otherwise, automatic syringe equipment, or a suitable draw-off needle, should be used for the 50 ml and 100 ml vials to avoid excessive puncturing of the stopper.

4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary

Overdose may be associated with uneasiness, increased heart rate, increased respiratory rate, bronchoconstriction, increased rectal temperature, increased urination, salivation and diarrhoea. These effects are usually transient and will resolve without treatment.
No antidotes are available.

4.11 Withdrawal period(s)

Meat and offal: 1 day
Milk: Zero hours

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Genito urinary system and sex hormones, other gynecologicals, uterotonics, prostaglandins.
ATCvet code: QG02AD90.

5.1 Pharmacodynamic properties

Cloprostenol sodium is a (racemic) analogue of prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$), for use in cattle.
This product is a potent luteolytic agent. It causes functional and morphological regression of the corpus luteum (luteolysis) in cattle followed by return to oestrus and normal ovulation.

Furthermore, this group of substances has a contractile effect on the smooth muscles (uterus, gastro-intestinal tract, respiratory tract, vascular system).

The drug does not demonstrate any androgenic, oestrogenic or anti progesterone activity and its effect on pregnancy is due to its luteolytic property.
At pharmacological doses, no obvious ill effects have been observed. Unlike other prostaglandin analogues, cloprostenol has no thromboxane A_2 activity and does not cause platelet aggregation.

Cloprostenol does not impair fertility. No deleterious effects have been reported on the progeny conceived at the oestrus following treatment.

5.2 Pharmacokinetic particulars

Metabolism studies, using 15 - ^{14}C-closprostenol have been performed in cattle (by im administration) to determine residue levels. The kinetics of cloprostenol following oral administration were not determined.
The kinetic studies indicate that the compound is rapidly absorbed from the site of injection, is metabolised followed by excretion in approximately equal proportion in urine and faeces. In the cow, a major portion of the dose is excreted within 0-4 hours and most of the dose is eliminated within 24 hours. The major route of metabolism appears to be β-oxidation to the tetranor or dinor acids of cloprostenol. Peak values of radioactivity in blood were observed within 1 hour of a parenteral dose and declined with a t ½ of between 1 - 3 hours depending on species.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Chlorocresol
Citric Acid
Sodium Citrate
Sodium Chloride
Water for Injections

6.2 Major incompatibilities

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

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years.
Shelf life after first opening the immediate packaging: 28 days

6.4 Special precautions for storage

Keep the vial in the outer carton in order to protect from light.
This veterinary medicinal product does not require any special temperature storage conditions.

6.5 Nature and composition of immediate packaging

Type 1 (colourless) glass vial closed with bromobutyl rubber stopper coated with a FluroTec film (ETFE) and a polypropylene flip-off cap.

Pack sizes:
Box with 1 vial of 20 ml
Box with 1 vial of 50 ml
Box with 1 vial of 100 ml

Not all pack sizes may be marketed.

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

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal product should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Vetoquinol UK Limited
Steadings Barn
Pury Hill Business Park
Nr Alderton
Towcester
Northants
NN12 7LS

8. MARKETING AUTHORISATION NUMBER

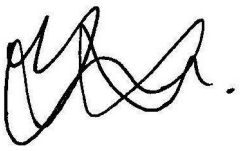
Vm 08007/4147

9. DATE OF FIRST AUTHORISATION

10 April 2017

10. DATE OF REVISION OF THE TEXT

March 2022



Approved: 15 March 2022