

## **SUMMARY OF PRODUCT CHARACTERISTICS**

### **1. Name of the veterinary medicinal product:**

Synchromate 0.25mg/ml, Solution for injection for cattle and horses

### **2. Qualitative and quantitative composition:**

1 ml of solution for injection contains:

#### **Active substance(s):**

Cloprostenol 0.25 mg  
(as Cloprostenol sodium 0.263 mg)

#### **Excipients:**

Chlorocresol 1.0 mg  
For the complete list of the other ingredients, see section 6.1

### **3. Pharmaceutical form:**

Solution for injection  
Clear colorless solution.

### **4. Clinical particulars:**

#### **4.1. Target species:**

Cattle and horses

#### **4.2 Indications for use, specifying the target species:**

##### **Cattle:**

- Suboestrus or non-detected oestrus
- Induction of parturition
- Termination of normal pregnancy
- Termination of abnormal pregnancy
  - Mummified foetus
  - Hydrops of the foetal membranes
- Chronic endometritis (pyometra)
- Ovarian luteal cysts
- Controlled breeding

##### **Horses:**

- Induction of luteolysis following early foetal death and resorption
- Termination of persistent dioestrus

- Termination of pseudopregnancy
- Treatment of lactation anoestrus
- Establishing oestrous cycles in barren/maiden mares.

#### 4.3 Contraindications:

Do not administer intravenously.

Do not use in cases of hypersensitivity to the active substance or to any of the excipients. Do not administer the product to pregnant cows unless you wish to induce parturition or therapeutic abortion, as luteolysis may result in loss of the foetus.

#### 4.4 Specific warnings for each target species:

None.

#### 4.5 Special precautions for use:

- i. Special precautions for use in animals

Due to the possibility of post-injection bacterial infections, careful aseptic techniques should be employed.

- ii. Special Safety Precautions to be taken by the Person Administering the Medicinal Product to animals

Prostaglandins of the F<sub>2</sub>α type may be absorbed through the skin and may cause bronchospasm or miscarriage.

Care should be taken when handling the product to **AVOID SELF-INJECTION OR SKIN CONTACT**.

Pregnant women, women of childbearing age, asthmatics and persons with bronchial or other respiratory tract diseases should exercise caution when handling the product.

Wear disposable impervious gloves when administering the product.

People with a known hypersensitivity to cloprostenol or chlorocresol to avoid contact with the product.

Direct contact with the skin or eyes may cause irritation.

Accidental spillage on the skin should be washed immediately with soap and water.

If accidental contact with eyes occurs, rinse the affected eyes thoroughly with clean, fresh water.

The possible incidence of bronchospasm with the product is unknown.

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.

Do not eat, drink or smoke while handling the product.

Wash hands after use

#### **4.6 Adverse reactions (frequency and seriousness):**

In very rare cases, anaphylactic-type reactions can be observed which require immediate medical care. On rare occasions severe life-threatening local bacterial infections may occur associated with clostridial proliferation at the injection site. It is important to keep treated animals under observation and, if such infection occurs aggressive antibiotic therapy, particularly covering clostridial species, should be employed as a matter of urgency. Careful aseptic techniques should be employed to decrease the possibility of these infections.

The frequency of adverse reactions is defined using the following convention:

- very common (more than 1 in 10 animals displaying adverse reactions during the course of one treatment)
- common (more than 1 but less than 10 animals in 100 animals)
- uncommon (more than 1 but less than 10 animals in 1,000 animals)
- rare (more than 1 but less than 10 animals in 10,000 animals)
- very rare (less than 1 animal in 10,000 animals, including isolated reports).

#### **4.7 Use during pregnancy, lactation or lay:**

Do not administer to pregnant animals unless the objective is to terminate pregnancy or induce parturition.

#### **4.8 Interaction with other medicinal products and other forms of interaction:**

None known.

#### **4.9 Amount(s) to be administered and administration route:**

##### **Cattle**

(Single or repeated 2ml doses (equivalent to 500 mcg of cloprostenol) by intramuscular injection).

##### *Therapeutic indications*

##### Sub-oestrus (or non detected oestrus)

After diagnosing the presence of a corpus luteum - by rectal palpation - treat with the product and inseminate those animals showing heat. Those animals which do not show heat to be re-examined 11 days later and may receive a second injection and be bred at oestrus or at fixed times; once at 72-84 hours or twice at 72 and 96 hours.

##### Induction of parturition

Induces parturition in the period around normal term. Induction should take place as close to the predicted calving date as possible and not more than 10 days before. Induction

should not be attempted before day 270 of gestation measured from the confirmed day of conception, except in pathological conditions. All treated animals must receive adequate supervision. In common with other methods of shortening the gestation period a higher than usual incidence of retention of the foetal membranes is to be expected.

#### Termination of normal pregnancy

Normal pregnancy can be terminated in cattle from one week after conception until the 150th day of gestation. Best results are obtained during the first 100 days. Treated animals should be kept under observation until expulsion of the foetus and placenta is complete.

#### Termination of abnormal pregnancy

- Mummified foetus - induction of luteolysis at any stage of pregnancy will result in the expulsion of the mummified foetus from the uterus into the vagina from which manual removal may be necessary. Normal cyclical activity should then follow.
- Hydrops of the foetal membrane - Pathological accumulation of placental fluids can cause severe physiological complications and death. Surgical drainage is not usually successful in alleviating the condition. In such cases, a single dose may be used to induce parturition.

#### Chronic endometritis (Pyometra)

Treat with a single dose. In long-standing cases treatment may be repeated after 10-14 days.

#### Ovarian luteal cysts

Where cystic ovaries associated with persistent luteal tissue and absence of heat are diagnosed, the product has proved to be effective in correcting the condition and bringing about a return to cyclicity.

#### Other indications: Controlled breeding

Examples of programmes which have been used are:

- i) A single treatment of cattle with palpable evidence of a corpus luteum, followed by breeding on detection of the subsequent oestrus.
- ii) Detection of oestrus for 6 days, breeding those animals seen in heat; a single treatment is given to all non-served animals on the 6th day and these cattle are bred at subsequent oestrus.
- iii) Two injections 11 days apart, breeding at oestrus or at fixed times (see below).
- iv) As iii) above, but breeding any animals showing oestrus before the second injection. Thus the second dose is given only to those cattle not seen in oestrus during that time and is followed by breeding either on signs of oestrus or at fixed times (see below).

Cattle which respond to a single prostaglandin injection will normally do so within 6 days of treatment. The response time after two injections is more rapid. Animals may be inseminated on detection of oestrus in any of the breeding programmes. However, fixed time insemination should only be used following the second of a two injection programme (i.e. examples iii) and iv)). In the latter case insemination should be performed either once at 72-84 hours or twice at 72 and 96 hours after the second injection, as preferred.

Double 'fixed-time' insemination may give superior results to a single insemination. However, economic factors in the particular herd may outweigh such a benefit.

For successful treatment, animals should be cycling normally. Rectal examination before treatment should avoid the disappointment of treating noncycling (an-oestrus) or pregnant animals.

Attention should be directed to the diet and condition of the treated animals. Sudden changes in feeding levels, in feed constituents and in housing, etc should be avoided around the time of the breeding programme, as should any other factor, such as regrouping, which could reasonably be expected to lead to stress.

If artificial insemination is to be used, the quality of semen and insemination technique should be assured beforehand.

A recommended guideline for use of the product in dairy cows would be as follows:

After the first injection, inseminate any cows showing signs of heat.

Animals that do not show signs of heat should be injected 11 days after the first injection and then inseminated 72-96 hours later.

## **Horses**

(Ponies and donkeys: single dose of 0.5-1.0 ml (equivalent to 125-250 mcg of cloprostenol) by intramuscular injection. Thoroughbreds, hunters and heavy horses: 1-2 ml (equivalent to 250- 500 mcg cloprostenol) by intramuscular injection).

- Induction of luteolysis following early foetal death and resorption: about 8-10% of all mares which conceive lose the conceptus during the first 100 days of pregnancy.

Persistence of luteal function in the ovary precludes an early return to oestrus.

- Termination of persistent dioestrus: non-pregnant mares frequently and spontaneously go to and out of periods of prolonged dioestrus. A very high proportion of mares in this category i.e. not cycling, are in prolonged dioestrus rather than anoestrus, particularly in the latter part of the breeding season.

- Termination of pseudopregnancy: some mares which are covered at normal oestrus and subsequently found to be empty (but not having lost or resorbed a conceptus) display clinical signs of pregnancy. These animals are said to be “pseudopregnant”.
- Treatment of lactation anoestrus: failure of lactating mares to cycle again for several months after exhibiting an early ‘foal heat’ can be avoided.
- Establishing oestrous cycles in barren/maiden mares: some of these animals will be found, on examination, to have a functional corpus luteum and are suffering from abnormal persistence of luteal function or are simply failing to exhibit normal oestrous behaviour (“silent heat”) while ovarian cyclicity continues.

#### **4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary:**

Cattle: At x5 to x10 overdose the most frequent side effect is increased rectal temperature. This is usually transient, however, and not detrimental to the animal. Limited salivation may also be observed in some animals.

Horses: The most frequently observed side effects are sweating and decreased rectal temperatures. These are usually transient, however, and not detrimental to the animal. Other possible reactions are increased heart rate, increased respiratory rate, abdominal discomfort, locomotor incoordination and lying down. If these occur, they are likely to be seen within 15 minutes of injection and disappear within 1 hour. Mares usually continue to eat throughout.

#### **4.11 Withdrawal period(s):**

##### Cattle

Meat and offal: 1 day

Milk: zero hours

##### Horses

Not authorised for use in horses intended for human consumption.

### **5. PHARMACOLOGICAL PROPERTIES**

#### **Pharmacotherapeutic group:**

ATCvet code: QG02AD90

#### **5.1 Pharmacodynamic properties:**

Cloprostenol is a synthetic prostaglandin analogue structurally related to Prostaglandin F<sub>2α</sub> (PGF<sub>2α</sub>), for use in cattle and horses. As a potent luteolytic agent it causes functional and morphological regression of the corpus luteum (luteolysis) in cattle and horses followed by return to oestrus and normal ovulation.

Note: There is a refractory period of four to five days after ovulation when cattle and horses are insensitive to the luteolytic effect of prostaglandins. Cloprostenol solution for injection has a good safety margin and does not impair fertility. No deleterious effects have been reported on the progeny conceived at the oestrus following treatment.

## **5.2 Pharmacokinetic particulars:**

After its administration by injection, cloprostenol is metabolised to acid 9, 11, dihydroxy-15-ceto prost-5-enoic and 9, 11, 15-trihydroxyprost-5-enoic which rapidly disappear from the blood, being excreted via the urine in 5-6 hours.

Radiolabelled studies show blood levels between 0.0014 and 0.002 µg per ml at 20 minutes - 2 hours after its administration. Subsequently, blood levels fall rapidly, having an apparent half life of 1-3 hours, falling below 0.00004 µg/ml at 8 hours. No significant concentrations are found at 24 hours in the liver, muscle, heart, kidneys, uterus, ovaries, skin, brain and fat, nor in milk after 4 hours.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients:**

Chlorocresol  
Citric acid monohydrate  
Ethanol 96%  
Sodium chloride  
Sodium citrate  
Water for injection

### **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:**

This veterinary medicinal product does not require any special temperature storage conditions.

Keep vial in the outer carton in order to protect from light.

### **6.5 Nature and composition of immediate packaging:**

20 ml: Clear Type I glass vial with bromobutyl stopper and bronze coloured aluminium cap.

10 ml: Clear Type I glass vial with laminated elastomeric bromobutyl stopper and aluminium cap.

Cardboard box containing 1 vial of 10 ml, 5 vials of 10 ml or 12 vials of 10 ml

Cardboard box containing 1 vial of 20 ml 5 vials of 20 ml or 12 vials of 20 ml

Not all pack sizes maybe marketed

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

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

## **7. MARKETING AUTHORISATION HOLDER**

Alivira Animal Health UK Ltd  
Hygeia Building, Rear Ground Floor  
66-68 College Road  
Harrow  
Middlesex  
HA1 1BE  
United Kingdom

## **8. MARKETING AUTHORISATION NUMBER**

Vm 54375/5000

## **9. DATE OF FIRST AUTHORISATION**

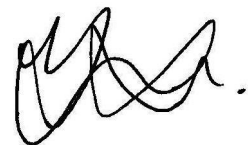
02 November 2022

## **10. DATE OF REVISION OF THE TEXT**

November 2022

## **PROHIBITION OF SALE, SUPPLY AND/OR USE**

To be supplied only on veterinary prescription. POM-V.



Approved: 02 November 2022