SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Dalmazin, 75 micrograms/ml, solution for injection for cattle and pigs.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:
Active substance:
d-cloprostenol……75 µg

Excipient:
chlorocresol……..1 mg

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.
Clear, colourless solution with no visible particles.

4. CLINICAL PARTICULARS

4.1 Target species

Cattle (cows) and pigs (sows and gilts).

4.2 Indications for use, specifying the target species

Cows

Indications for reproduction: synchronization or induction of oestrus. Induction of parturition after day 270 of gestation.

Therapeutic indications: ovarian dysfunction (persistent corpus luteum, luteal cyst), endometritis/pyometra, delayed uterine involution, induction of abortion in the first half of pregnancy and expulsion of mummified foetuses.

Sows and gilts

Indications for reproduction: induction of parturition.

4.3 Contraindications

Do not use in pregnant females, unless it is desirable to induce parturition or induction of abortion.
Do not use in sows which are expected to have a distocic parturition due to abnormal position of the foetus, mechanical obstruction, etc.

Do not use in animals suffering cardiovascular or respiratory diseases.
Do not use in animals with spastic diseases of the respiratory or gastrointestinal tract.

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

i) Special precautions for use in animals

As with parenteral administration of any substance, basic antiseptic rules should be observed.
The injection site must be thoroughly cleaned and disinfected in order to reduce the risk of infection with anaerobic bacteria.
Induction of labour before the 111th day of gestation may cause mortality in piglets and an increase in the number of sows that require manual assistance.
Do not administer by intravenous route.

ii) Special precautions to be take by the person administering the veterinary medicinal product to animals

Prostaglandins of the $F_{2\alpha}$ type can 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.
Women of child-bearing age, asthmatics and people with bronchial or other respiratory problems, should avoid contact with, or wear disposable plastic gloves when administering the product.
Accidental spillage on the skin should be washed off immediately with soap and water.
In case of accidental self injection seek medical advice and show the label to the physician.
Should shortness of breath result from accidental inhalation or injection, seek urgent medical advice and show the doctor this warning.
Do not eat, drink or smoke while handling the product.

4.6 Adverse reactions (frequency and seriousness)

Cattle (cows) and pigs (sows and gilts):

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Injection site infection[a].

[a] Occurrence of anaerobic infection is likely if anaerobic bacteria penetrate the tissue of the injection site. This applies especially to intramuscular injection and in particular to cows. Typical local reactions due to anaerobic infection are swelling and crepitus at the injection site.

Cattle (cows):

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Retained placenta[b].

[b] When used in cows 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.

Pigs (sows and gilts):

Very rare (<1 animal / 10,000 animals treated, including isolated reports):	Behavioural disorders[c].

[c] Behavioural changes seen after treatment for induction of farrowing are similar to those changes associated with natural farrowing and usually cease within one hour.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the national competent authority via the national reporting system. See also the section of the package leaflet for respective contact details.

4.7 Use during pregnancy, lactation or lay

Do not use in gestating animals unless it is desirable to induce parturition or therapeutic induction of abortion.

4.8 Interaction with other medicinal products and other forms of interaction

Do not administer the treatment 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 Amount(s) to be administered and administration route

Cows
Administer 2 ml of the veterinary medicinal product, equivalent to 150 micrograms of d-cloprostenol/animal by intramuscular route. Repeat after 11 days for the synchronisation of oestrus.
The dose of 2 ml equivalent to 150 micrograms of d-cloprostenol/animal by intramuscular route can be repeated for the induction of oestrus and for the treatment of ovarian dysfunction, endometritis/pyometra and delayed uterine involution.

In particular:

- Induction of oestrus (also in cows showing weak or silent heat): administer the veterinary medicinal product after having established the presence of a corpus luteum (6-18th day of the cycle); heat usually appears within 48-60 hours. Proceed, therefore, with insemination 72-96 hours after injection. If oestrus is not evident, administration of the product needs to be repeated 11 days after the first injection.
- Synchronisation of oestrus: administer the veterinary medicinal product twice, with an interval of 11 days between each dose. Proceed therefore with two artificial inseminations at intervals of 72 and 96 hours from the second injection.
- Induction of parturition: administer the veterinary medicinal product after 270 days of pregnancy. Birth usually results within 30-60 hours of treatment.
- Mummified foetus: expulsion of the foetus is observed within 3-4 days after administration of the veterinary medicinal product.
- Induction of abortion: administer the veterinary medicinal product in the first half of pregnancy.
- Ovarian dysfunction (persistent corpus luteum, luteal cysts): administer the veterinary medicinal product, then proceed to inseminate at the first oestrus after injection. If oestrus is not evident, conduct a further gynaecological examination, and repeat the injection 11 days after the first administration. Insemination must always be carried out 72-96 hours after injection.
- Endometritis, pyometra: administer the veterinary medicinal product. If necessary repeat the treatment after 10-11 days.
- Delayed uterine involution: administer the veterinary medicinal product and, if considered necessary, carry out one or two successive treatments at 24 hour intervals.

Sows and gilts
Administer 1 ml of the veterinary medicinal product, equivalent to 75 micrograms of d-cloprostenol/animal, by intramuscular route, not earlier than 112 days of pregnancy. Repeat after 6 hours. Alternatively, 20 hours after the initial dose of the veterinary medicinal product, a myometrial stimulant (oxytocin or carazolol) may be administered.
Following the protocol of the double administration, approximately 70-80% of the animals will give birth during the interval between 20 and 30 hours after the first administration.

As with every prostaglandin-based product, injection in contaminated skin areas is to be avoided in order to reduce the risk of infection with anaerobic bacteria.
The injection site must be thoroughly cleaned and disinfected before administration.

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

At 10 times the therapeutic dose, no adverse reactions were reported. In general, a large overdose could result in the following symptoms: increased pulse and breathing rate, bronchoconstriction, increased body temperature, increased amounts of loose faeces and urine, salivation and vomiting. As no specific antidote has been identified, in the case of overdose, symptomatic therapy is advisable. An overdose will not accelerate corpus luteum regression.

4.11 Withdrawal period(s)

Meat and offal:

cattle	Zero days
pigs	1 day

Milk: Zero hours

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: prostaglandins

ATC Vet Code: QG02AD90

5.1 Pharmacodynamic properties

Dalmazin is a sterile aqueous solution containing 75 micrograms/ml of dextrorotatory cloprostenol, a synthetic analogue of the prostaglandin $F_{2\alpha}$.
d-cloprostenol, the dextrorotatory enantiomer, constitutes the biologically active component of the racemic cloprostenol molecule and results in an approximate 3.5-fold increase in activity.
Administered in the luteal phase of the oestrus cycle, d-cloprostenol induces functional and morphological regression of the corpus luteum (luteolysis) resulting in a sharp fall in progesterone levels. The increased release of the follicle stimulating hormone (FSH), induces the follicular maturation followed by signs of oestrus and by ovulation.

5.2 Pharmacokinetic particulars

Pharmacokinetic studies demonstrate a rapid absorption of d-cloprostenol. The peak blood level is reached a few minutes following intramuscular administration, as well as a rapid diffusion to the ovaries and uterus, the organs in which the maximum concentration is reached 10-20 minutes after administration.
Following intramuscular administration of 150 micrograms of d-cloprostenol in thecow, the peak plasma level (C_{max}) of 1.4 micrograms/l is reached after approximately 90 minutes, while the elimination half life ($t½\beta$) is in the order of 1 hour 37 minutes. In sows, a C_{max} of approximately 2 micrograms/l is observed between 30 and 80 minutes following administration of 75 micrograms d-cloprostenol, with an elimination half life in the order of 3 hours 10 minutes.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

chlorocresol
ethanol
sodium hydroxide
anhydrous citric acid
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

Do not store above 25°C.

6.5 Nature and composition of immediate packaging

2 ml, 10 ml, 20 ml vials in glass type I or type II, closed with a chlorobutyl rubber stopper with an aluminium overseal.

Package sizes:
1 x 2 ml vial in a cardboard box with one syringe
15 x 2 ml vials in a cardboard box
60 x 2 ml vials in a cardboard box
1 x 10 ml vial in a cardboard box
10 x 10 ml vials in a cardboard box
1 x 20 ml vial in a cardboard box
5 x 20 ml vials in an aluminium box

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

Fatro S.p.A
Via Emilia, 285
40064 Ozzano Emilia
Bologna
Italy

8. MARKETING AUTHORISATION NUMBER

Vm 11557/5003

9. DATE OF FIRST AUTHORISATION

27 July 2000

10. DATE OF REVISION OF THE TEXT

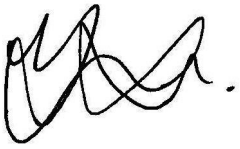
June 2023

PROHIBITION OF SALE, SUPPLY AND/OR USE

Not Applicable

11. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.



Approved: 02 June 2023