PARTICULARS TO APPEAR ON THE IMMEDIATE PACKAGE {Bottle label}

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Lutalyse 5 mg/ml Solution for Injection

2. STATEMENT OF ACTIVE AND OTHER SUBSTANCES

Dinoprost Trometamol

Each 1 ml contains: 5 mg Dinoprost (as Dinoprost Trometamol) plus 16.5 mg/ml benzyl alcohol as antimicrobial preservative.

3. PHARMACEUTICAL FORM

Solution for injection

4. PACKAGE SIZE

30 ml

5. TARGET SPECIES

Cattle, horses and pigs.

6. INDICATION

Luteolytic prostaglandin

7. METHOD AND ROUTE OF ADMINISTRATION

For intramuscular use in cattle, horses and pigs.Cattle: 5 ml; Mares: 1 ml; Pigs: 2 ml

See package leaflet for further details.

8. WITHDRAWAL PERIOD

Cattle milk: zero hours.

Cattle meat and offal: 2 days.

Pig meat: 1 days.

Horses: not to be used in horses intended for human consumption.

9. SPECIAL WARNING(S), IF NECESSARY

-

10. EXPIRY DATE

Expires end:

11. SPECIAL STORAGE CONDITIONS

Do not store above 25°C. Avoid the introduction of contamination during use.

Following withdrawal of the first dose, the product should be used within 28 days. Discard unused material.

Keep the container in the outer carton.

12. SPECIFIC PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCTS OR WASTE MATERIALS, IF ANY

-

13. THE WORDS "FOR ANIMAL TREATMENT ONLY" AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE IF APPLICABLE

POM-V

To be supplied only on veterinary prescription.

For animal treatment only.

14. THE WORDS "KEEP OUT OF THE SIGHT AND REACH OF CHILDREN"

Keep out of the sight and reach of children.

15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Zoetis UK Limited
1st Floor, Birchwood Building
Springfield Drive
Leatherhead
Surrey
KT22 7LP

16. MARKETING AUTHORISATION NUMBER

Vm 42058/5170

17. MANUFACTURER'S BATCH NUMBER

Batch No.:

PARTICULARS TO APPEAR ON THE OUTER PACKAGE {Folding carton}

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Lutalyse 5 mg/ml Solution for Injection

2. STATEMENT OF ACTIVE AND OTHER SUBSTANCES

Dinoprost Trometamol

Each ml contains: 5 mg dinoprost (as dinoprost trometamol) plus 16.5 mg/ml benzyl alcohol as antimicrobial preservative.

3. PHARMACEUTICAL FORM

Solution for injection

4. PACKAGE SIZE

30 ml

5. TARGET SPECIES

Cattle, horses and pigs.

6. INDICATION

Luteolytic prostaglandin for intramuscular use in cattle, horses and pigs.

See package leaflet for full indications for use.

7. METHOD AND ROUTE OF ADMINISTRATION

For intramuscular use in cattle, horses and pigs.

Dose:
Cattle: 5 ml
Mares: 1 ml
Pigs: 2 ml

8. WITHDRAWAL PERIOD

Cattle milk: zero hours.

Cattle meat and offal: 2 days.

Pig meat: 1 days.

Horses: not to be used in horses intended for human consumption.

See package leaflet for further details.

9. SPECIAL WARNING(S), IF NECESSARY

Operator Warnings:

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 persons 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.

Wash hands after use.

See package leaflet for full list of contra-indications and operator warnings.

10. EXPIRY DATE

Expires end:

11. SPECIAL STORAGE CONDITIONS

Do not store above 25°C.

Following withdrawal of the first dose, the product should be used within 28 days. Discard unused material.

Avoid the introduction of contamination during use.

Keep container in outer carton.

Discard date:

12. SPECIFIC PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCTS OR WASTE MATERIALS, IF ANY

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

13. THE WORDS “FOR ANIMAL TREATMENT ONLY” AND CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE IF APPLICABLE

POM-V

To be supplied only on veterinary prescription.

For animal treatment only.

14. THE WORDS “KEEP OUT OF THE SIGHT AND REACH OF CHILDREN”

Keep out of the sight and reach of children.

15. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Zoetis UK Limited
1st Floor, Birchwood Building
Springfield Drive
Leatherhead
Surrey
KT22 7LP

16. MARKETING AUTHORISATION NUMBER

Vm 42058/5170

17. MANUFACTURER’S BATCH NUMBER

Batch No.:

PACKAGE LEAFLET FOR:

Lutalyse 5 mg/ml Solution for Injection

1. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER AND OF THE MANUFACTURING AUTHORISATION HOLDER RESPONSIBLE FOR BATCH RELEASE, IF DIFFERENT

Marketing authorisation holder:
Zoetis UK Limited
1st Floor, Birchwood Building
Springfield Drive
Leatherhead
Surrey
KT22 7LP

Manufacturer responsible for batch release:
Zoetis Belgium SA
Rue Laid Burniat 1
1348 Louvain-la-Neuve
Belgium

Zoetis Manufacturing & Research Spain S.L.
Carretera De Camprodon S/n
La Vall De Bianya
17813 Girona
Spain

2. NAME OF THE VETERINARY MEDICINAL PRODUCT

Lutalyse 5 mg/ml Solution for Injection

3. STATEMENT OF THE ACTIVE SUBSTANCE AND OTHER INGREDIENTS

A clear sterile aqueous solution for injection. Each ml of Lutalyse contains dinoprost 5 mg/ml present as 6.71 mg/ml Dinoprost Trometamol with 16.5 mg/ml benzyl alcohol as preservative. Dinoprost is the synthetic, naturally occurring prostaglandin F2 ($PFG_{2\alpha}$).

4. INDICATIONS

Lutalyse is indicated for its luteolytic and/or oxytocic effects in cattle, horses and pigs. The indications for use are:

Cattle

1. To more effectively control the time of oestrus in cycling cows.

2. To treat cows which have a functional corpus luteum, but do not express behavioural oestrus (sub-oestrus or silent heat).
3. To induce abortion.
4. To induce parturition.
5. For treatment of chronic metritis and pyometra.
6. For controlled breeding in normally-cycling dairy cows:

- oestrus synchronisation
- ovulation synchronisation in combination with GnRH or GnRH analogues as part of fixed time artificial insemination protocols.

Mares

1. To more effectively control the time of oestrus in cycling mares.
2. To treat mares which have a functional corpus luteum but do not express behavioural oestrus.
3. To induce abortion.

Pigs

1. Induction of parturition
2. To reduce the weaning to oestrus interval (WOI) and the weaning to fertile service interval (WFSI) in sows in herds with reproductive problems.

5. CONTRAINDICATIONS

Do not administer by the intravenous route.

Contraindicated when abortion or parturition is not intended.

6. ADVERSE REACTIONS

Cattle

The most frequently observed side-effect is increased rectal temperature at a 5 to 10 the recommended dose. However, rectal temperature changes have been transient in all cases observed and have not been detrimental to the animal. Limited salivation has been seen in some instances.

Horses

The most frequently observed side-effects are sweating and decreased rectal temperatures. However, these have been transient in all cases observed and have not been detrimental to the animal. Other reactions seen have been increase in heart rate, increase in respiration rate, some abdominal discomfort, locomotor incoordination and lying down.

These effects are usually seen within 15 minutes of injection and disappear within one hour. Mares usually continue to eat during the period of expression of side-effects.

Pigs

Transient side-effects consisting of increased body temperature, increased respiratory rate, increased salivation, stimulation of defaecation and urination, flushing of the skin and restlessness (arching of back, pawing, and rubbing and gnawing the crate) occur occasionally following the administration of dinoprost in pregnant sows and gilts.

These effects tend to parallel the signs exhibited by sows prior to normal parturition, only they appear to be condensed in time. These effects are usually seen within 15 minutes of injection and disappear within one hour.

7. TARGET SPECIES

Cattle, horses and pigs.

8. DOSAGE FOR EACH SPECIES, ROUTE AND METHOD OF ADMINISTRATION

A single injection of the recommended dose of dinoprost activity is luteolytic provided a functional corpus luteum is present.

Administer by intramuscular injection.

Cattle
The dose for all indicated uses in cattle is 5 ml Lutalyse (25 mg dinoprost).

Mares
The dose for all indicated uses in mares is 1 ml Lutalyse (5 mg dinoprost).

Pigs
1. The induction of parturition: 2 ml Lutalyse (10 mg dinoprost) within 3 days of expected parturition.

2. Use post-partum: 2 ml Lutalyse (10 mg dinoprost) 24 to 48 hours after parturition.

9. ADVICE ON CORRECT ADMINISTRATION

Full aseptic precautions must be taken. Use a sterile syringe and needle and make the injection through an area of clean dry skin.

Care should be taken to avoid injection through wet or dirty areas of skin.

NOTES

1. Oestrus control in cycling cattle and horses.

Individual **cows** or **heifers** treated during dioestrus will normally return to oestrus and ovulate within two or four days after treatment.

Mares treated during dioestrus will normally return to oestrus within two to four days and ovulate 8 to 10 days after treatment. This may be employed to advantage as an effective aid towards managing oestrus and breeding in individual animals. (Note: Administration of Lutalyse to cattle and horses within four days after oestrus is unlikely to result in luteolysis of the corpus luteum. Administration within 48 hours before onset of the next oestrus may not influence the timing of the oestrus after treatment).

2. Treatment of sub-oestrus (no visible oestrus) in cattle and horses.

Individual **cattle** may have normal cyclical ovarian activity, without detectable behavioural oestrus; this occurs most frequently in the winter months, at peak lactation in high producing dairy cows and in suckler beef cows. If a corpus luteum is present and ovulation has not occurred in the previous four days, administration of Lutalyse will result in corpus luteum regression followed by return to oestrus and ovulation.

Breeding of cattle treated with Lutalyse for the above indication may be by natural service, artificial insemination at the usual time in relation to observed oestrus, or by fixed time insemination (78 hours or 72 and 90 hours post-treatment).

In extended dioestrus in **mares** there is failure to exhibit regular oestrus cycles as distinct from true anoestrus. Many mares described as anoestrual during the breeding season have serum progesterone levels consistent with the presence of a functional corpus luteum.

A proportion of 'barren', maiden and lactating mares do not exhibit regular oestrus cycles and may be in extended dioestrus. Following abortion, early foetal death and resorption, or as a result of 'pseudo-pregnancy' there may be serum progesterone levels consistent with a functional corpus luteum.

Treatment of such mares with Lutalyse usually results in regression of the corpus luteum followed by oestrus and/or ovulation.

3. Induction of abortion in cattle and mares.

Lutalyse may be used to terminate pregnancy in cattle and mares through its luteolytic effect during those stages of pregnancy in which the corpus luteum is

sensitive to its action and in which maintenance of pregnancy is dependent upon the corpus luteum as the sole source of progesterone.

Stage of gestation in **cattle** is an important factor influencing response. The percentage of animals responding to a single intramuscular injection decreases as the gestation period increases. Approximate percentage responding are 90% within the first 100 days of gestation, 60% within 101-150 days of gestation and 40% in animals beyond 150 days of gestation. In the early stages of gestation, abortion will usually occur within one week, but as gestation length increases, the period to abortion following injection may also increase.

In **mares** up to day 35 of pregnancy luteal regression with Lutalyse will induce abortion; response to treatment between days 40 and 90 of gestation is less predictable, possibly due to PMSG secretion from the endometrial cups rendering the corpus luteum refractory to the luteolytic effect of Lutalyse. Between days 90 and 120 of pregnancy luteal regression may lead to abortion.

4. Induction of parturition in cattle and pigs.

Cattle: Lutalyse has been used to induce parturition on or after day 270 of gestation. The interval from administration to parturition is one to eight days (average three days). Induction of parturition in cattle is indicated where there is a risk of oversize calves or where early parturition is desired. In addition, induction is indicated where pregnancies are complicated by miscellaneous conditions such as mummified or macerated foetuses, hydrops amnii, hydroallantois, etc. Lutalyse is indicated for expulsion of a dead foetus.

Pigs: Lutalyse may be used to induce parturition in pigs within 3 days of the normal predicted farrowing date. Response to treatment by individual animals varies within a range of 24-36 hours from administration to parturition. This can be advantageously employed to control the time of farrowing in sows and gilts in late gestation. Treatment earlier than 3 days prior to predicted farrowing date may produce weak piglets resulting in reduced survival. It is recommended that treatment be given in the early morning following feeding. A lack of response has been noted in a small proportion of pigs, the specific reason for which has not yet been determined.

5. Treatment of metritis or pyometra in cattle.

In the cow chronic metritis frequently occurs as a sequel to an acute or sub-acute endometritis in the first two or three weeks post-partum; typically, there is an intermittent purulent or mucopurulent discharge. Pyometra is characterised by the retention of purulent fluid within the uterus.

Luteal regression through the administration of Lutalyse is followed by oestrus, during which the uterine environment is relatively unfavourable to the bacteria involved in the infection. Treatment may have to be repeated after 10-12 days where the condition is long standing.

6. Controlled breeding in cattle.

Lutalyse is indicated for its luteolytic effect in cattle. This luteolytic effect can be utilised to control the timing of oestrus in cycling cattle that have a corpus luteum. For normally-cycling cows, at least 35 days after calving, the identified activity of Lutalyse permits a wide range of oestrus control programmes.

Programme I

1. Inject 5 ml Lutalyse intramuscularly;
2. Repeat the injection in 11 (10 to 12) days; then,
3. Inseminate 78 (75 to 80) hours after the second Lutalyse injection. No oestrus detection or observation is required if animals were cycling normally when injected.

This programme is recommended for most herds with successful A.I experience where females are known to be cycling.

Programme II

1. Inject 5 ml Lutalyse intramuscularly;
2. Repeat the injection in 11 (10 to 12) days; then,
3. Inseminate 72 (70 to 74) hours and 90 (88 to 96) hours after the second Lutalyse injection. No oestrus detection or observation is required if animals were cycling normally when injected.

Double insemination has demonstrated increased pregnancy rates in some herds.

Programme III[a]

1. Inject 5 ml Lutalyse intramuscularly;
2. Repeat the injection in 11 (10 to 12) days; then,
3. Inseminate upon detected oestrus.

Programme IV[a]

1. Inject 5 ml Lutalyse intramuscularly;
2. Inseminate upon detected oestrus.

[a] If it is unknown whether most animals to be treated are cycling, Programmes III and IV calling for oestrus detection should be followed rather than Programmes I and II calling for timed insemination.

A "clean-up bull" may be used following any Lutalyse programme, or the service may be repeated at the next oestrus, one cycle later, in animals that did not conceive at first service.

Practical application of these programmes will vary depending upon many factors, and in many cases these programmes may be altered to meet the requirements of

the specific operation. For example, some veterinary surgeons may wish to design their own programmes for specific situations and schedules. The activity of Lutalyse may be easily adapted for such individualised approach. These changes should be carefully evaluated to ensure that they do not detrimentally affect the success of the breeding programme.

Programme V

Lutalyse may be used as part of a fixed time artificial insemination protocol to synchronise ovulation for normally-cycling dairy cows at any stage of lactation. The following protocols have been commonly reported in the literature:

- Day 0 – Inject GnRH or analogue
- Day 7 – Inject 5 ml Lutalyse intramuscularly
- Day 9 – Inject GnRH or analogue
- Artificial insemination 16–20 hours later or at observed oestrus if sooner.

Alternatively:

- Day 0 – Inject GnRH or analogue
- Day 7 – Inject 5 ml Lutalyse intramuscularly
- Artificial insemination and inject GnRH or analogue 60–72 hours later or at observed oestrus if sooner.

To maximise conception rates of cows to be treated, the ovarian status should be determined and regular cyclic ovarian activity confirmed. Optimal results will be achieved in healthy normally-cycling cows.

7. To reduce the weaning to oestrus interval (WOI) and the weaning to fertile service interval (WFSI) in sows in herds with reproductive problems.

$PGF_{2\alpha}$ has a stimulating effect on uterine contractions, leading to better post-partum evacuation of the uterus. Field clinical trials in herds with reproductive problems have confirmed that treatment with Lutalyse may result in a more rapid return to oestrus and fertile service after farrowing.

10. WITHDRAWAL PERIODS

Cattle milk: Zero hours.

Cattle meat and offal: 2 days.

Pig meat: 1 day.

Horses: Not to be used in horses intended for human consumption. Treated horses may never be slaughtered for human consumption. The horse must have been declared as not intended for human consumption under national horse passport legislation.

Animals must not be slaughtered for human consumption during treatment.

11. SPECIAL STORAGE PRECAUTIONS

Do not store above 25°C.

Following withdrawal of the first dose, the product should be used within 28 days. Discard unused material. Avoid contamination during use. Keep container in outer carton.

When the container is broached (opened) for the first time, using the in-use shelf-life which is specified on this package leaflet, the date on which any product remaining in the carton should be discarded should be worked out. This discard date should be written in the space provided.

12. SPECIAL WARNINGS

Localized post injection bacterial infections that may become generalized have been reported. Aggressive antibiotic therapy, particularly covering clostridial species, should be employed at the first sign of infection. Careful aseptic techniques should be employed to decrease the possibility of post injection bacterial infections.

It is unnecessary to discard milk for human or animal consumption.

Animals should not be treated if they suffer from either acute or sub-acute disorders of the vascular system, gastro-intestinal tract or respiratory system.

Pregnancy status should be determined prior to injection since Lutalyse has been demonstrated to result in abortion or parturition induction when administered at sufficiently high doses to many animal species.

Lutalyse is ineffective when administered prior to day five after ovulation.

If pregnant, the unlikely possibility of uterine rupture should be borne in mind, especially if cervical dilation does not occur.

Induction of parturition in pigs earlier than 72 hours prior to predicted farrowing date may result in reduced piglet viability.

Operator Warnings
Prostaglandins of the F2a 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 persons 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.

Wash hands after use.

For animal treatment only

13. SPECIAL PRECAUTIONS FOR THE DISPOSAL OF UNUSED PRODUCT OR WASTE MATERIALS, IF ANY

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

14. PID LINK (Do not print heading)

[The following statement must be included where reference to the European Union Product Database is included on the product information. This statement is relevant to both UK(GB) and UK(NI) products:]

Find more product information by searching for the 'Product Information Database' on www.gov.uk.

15. OTHER INFORMATION

Lutalyse is supplied in 30 ml vials and packs of 5 x 10 ml vials. Not all pack sizes may be marketed.

Many factors contribute to the success and failure of reproduction management, and these are important when the time of breeding is to be regulated with Lutalyse.

Some of these factors are:

1. Cattle and mares must have a corpus luteum on the ovary of about five days or more of age in order for Lutalyse to be luteolytic, i.e. they are healthy and are undergoing normal oestrus cycles.
2. Semen of high fertility must be inseminated.
3. Semen must be inseminated properly.
4. Oestrus must be detected accurately if timed AI is not employed.
5. Physical facilities must be adequate to allow cattle handling without being detrimental to the animal.
6. Nutritional status must be adequate prior to and during the breeding season as this has a direct effect on conception and the initiation of oestrus in heifers or return of oestrus cycles in cows following calving.

POM-V

To be supplied only on veterinary prescription.

Vm 42058/5170

Gavin Hall

Approved 15 November 2024