ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

UBAC emulsion for injection for cattle

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One dose (2 ml) contains:

Active substances:
Lipoteichoic acid (LTA) from Biofilm Adhesion Component (BAC) of *Streptococcus uberis*, strain 5616.....≥ 1 RPU*
*Relative Potency Units (ELISA)

Adjuvant:
Montanide ISA .....907.1 mg
Monophosphoryl Lipid A (MPLA)

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Emulsion for injection.
White homogeneous emulsion.

4. CLINICAL PARTICULARS

4.1 Target species

Cattle.

4.2 Indications for use, specifying the target species

For active immunisation of healthy cows and heifers to reduce the incidence of clinical intramammary infections caused by *Streptococcus uberis*, to reduce the somatic cell count in *Streptococcus uberis* positive quarter milk samples and to reduce milk production losses caused by *Streptococcus uberis* intramammary infections.

Onset of immunity: approximately 36 days after the second dose.
Duration of immunity: approximately the first 5 months of lactation.

4.3 Contraindications

None.

4.4 Special warnings for each target species

Vaccinate healthy animals only.

The whole herd should be immunised.

Immunisation has to be considered as one component in a complex intramammary infection control program that addresses all important udder health factors (e.g. milking technique, dry-off and breeding management, hygiene, nutrition, housing, bedding, cow comfort, air and water quality and health monitoring) and other management practices.

4.5 Special precautions for use

Special precautions for use in animals
Vaccinate only healthy animals.

Special precautions to be taken by the person administering the veterinary medicinal product to animals
To the user:
This veterinary medicinal product contains mineral oil. Accidental injection/self-injection may result in severe pain and swelling, particularly if injected into a joint or finger, and in rare cases could result in the loss of the affected finger if prompt medical attention is not given.
If you are accidentally injected with this veterinary medicinal product, seek prompt medical advice even if only a very small amount is injected and take the package leaflet with you.
If pain persists for more than 12 hours after medical examination, seek medical advice again.

To the physician:
This veterinary medicinal product contains mineral oil. Even if small amounts have been injected, accidental injection with this product can cause intense swelling, which may, for example, result in ischaemic necrosis and even the loss of a digit. Expert, PROMPT, surgical attention is required and may necessitate early incision and irrigation of the injected area, especially where there is involvement of finger pulp or tendon.

4.6 Adverse reactions (frequency and seriousness)

Local swelling more than 5 cm in diameter at the injection site is a very common reaction after administration of the vaccine. This swelling will have disappeared or be clearly reduced in size by 17 days post vaccination. However, in some cases, swelling may persist for up to 4 weeks.

A transient increase in rectal temperature (mean increase of 1 °C but may be up to 2 °C in individual animals) may very commonly occur in the first 24 hours after injection.

Anaphylactic-type reactions (e.g. oedema) which might be life-threatening, may occur very rarely in some sensitive animals based on post-marketing safety experience. Under these circumstances, appropriate symptomatic treatment should be administered.

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

Can be used during pregnancy and lactation.

4.8 Interaction with other medicinal products and other forms of interaction

No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be made on a case by case basis.

4.9 Amounts to be administered and administration route

Intramuscular use. The injections should be preferably administered on the alternate sides of the neck. Allow the vaccine to reach a temperature of +15 to + 25 °C before administration. Shake before use.

Administer one dose (2 ml) by deep intramuscular injection in the neck muscles according to the following immunisation program:
- First dose at approximately 60 days before the expected parturition date
- Second dose at least 21 days before the expected parturition date
- Third dose should be administered about 15 days after the calving.

Protection of animals not vaccinated following this program has not been demonstrated. This should be considered in case of herd vaccination.

The full immunisation program should be repeated with each gestation.

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

No information is available.

4.11 Withdrawal period(s)

Zero days.

5. IMMUNOLOGICAL PROPERTIES

Pharmacotherapeutic group: Immunologicals for bovidae, inactivated bacterial vaccines for cattle.
ATCvet code: QI02AB .

Subunit vaccine to stimulate active immunity against *Streptococcus uberis*.

In a multicentre field study, the incidence of new cases of *Streptococcus uberis* clinical intramammary infection in the group vaccinated with UBAC was 50% lower than the incidence in the placebo group (6.1% versus 12.2%) which was statistically significantly different ($p=0.012$). Bearing in mind that some cows had suffered more than one episode of *Streptococcus uberis* clinical intramammary infection, the incidence of cows with clinical intramammary infection was 52.5% lower in the vaccinated group than those of the placebo group (4.7% versus 9.9%), with a statistical significance of $p<0.017$.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Montanide ISA
Monophosphoryl Lipid A (MPLA)
Disodium phosphate dodecahydrate
Potassium dihydrogen phosphate
Sodium chloride
Potassium chloride
Water for injections

6.2 Major incompatibilities

Do not mix with any other veterinary medicinal product.

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 24 months.
Shelf life after first opening the immediate packaging: use immediately.

6.4. Special precautions for storage

Store and transport refrigerated (2 ºC – 8 °C) and protected from light.
Do not freeze.

6.5 Nature and composition of immediate packaging

Type I colourless glass vials of 3 ml.
Polyethylene (PET) vials of 10, 50 and 100 ml.
The vials are closed with a rubber stopper and aluminium cap.

Pack sizes:
Cardboard box with 20 glass vials of 1 dose (2 ml).
Cardboard box with 1 PET vial of 5 doses (10 ml).
Cardboard box with 1 PET vial of 25 doses (50 ml).
Cardboard box with 1 PET vial of 50 doses (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 products should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

LABORATORIOS HIPRA, S.A.
Avda. la Selva, 135
17170- AMER (Girona)
SPAIN
Tel +34 972 430660
Fax +34 972 430661
E-mail: hipra@hipra.com
SPAIN

8. MARKETING AUTHORISATION NUMBER(S)

EU/2/18/227/001-004

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 26/07/2018

10 DATE OF REVISION OF THE TEXT

<{MM/YYYY}>

Detailed information on this veterinary medicinal product is available on the website of the European Medicines Agency (http://www.ema.europa.eu/).
Medicines Agency (http://www.ema.europa.eu/).

PROHIBITION OF SALE, SUPPLY AND/OR USE

Any person intending to manufacture, import, possess, sell, supply and use this veterinary medicinal product must first consult the relevant Member State's competent authority on the current vaccination policies, as these activities may be prohibited in a Member State on the whole or part of its territory pursuant to national legislation.

ANNEX II

A. MANUFACTURER OF THE BIOLOGICAL ACTIVE SUBSTANCE AND MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

C. STATEMENT OF THE MRLs

A. MANUFACTURERS OF THE BIOLOGICAL ACTIVE SUBSTANCE AND MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer of the biological active substance:
Laboratorios Hipra, S.A.
Avda. La Selva, 135
17170 Amer (Girona) Spain

Laboratorios Hipra, S.A.
Carretera C63 Km 48, 300, Poligono Industrial El Rieral
17170 Amer (Girona) Spain

Name and address of the manufacturer responsible for batch release:
Laboratorios Hipra, S.A.
Avda. La Selva, 135
17170 Amer (Girona) Spain

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

Veterinary medicinal product subject to prescription.

C. STATEMENT OF THE MRLs

The active substance being a principle of biological origin intended to produce active immunity is not within the scope of Regulation (EC) No 470/2009.

The excipients (including adjuvants) listed in section 6.1 of the SPC are either allowed substances for which table 1 of the annex to Commission Regulation (EU) No 37/2010 indicates that no MRLs are required or are considered as not falling within the scope of Regulation (EC) No 470/2009 when used as in this veterinary medicinal product.

ANNEX III

LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGE AND THE IMMEDIATE PACKAGE

Cardboard box with 20 glass vials of 1 dose.
Cardboard box with 1 PET vial of 5, 25 and 50 doses.
Vial of 25 and 50 doses.

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

UBAC emulsion for injection for cattle

2. STATEMENT OF ACTIVE SUBSTANCES

One dose (2 ml) contains:
Lipoteichoic acid (LTA) from Biofilm Adhesion Component (BAC) of *Streptococcus uberis*, strain 5616 $\geq$ 1 RPU*
*Relative Potency Units (ELISA)

3. PHARMACEUTICAL FORM

Emulsion for injection.

4. PACKAGE SIZE

20 x 1 dose (1 vial of 2 ml)
5 doses (1 vial of 10 ml)
25 doses (1 vial of 50 ml)
50 doses (1 vial of 100 ml)
25 doses (50 ml)
50 doses (100 ml)

5. TARGET SPECIES

Cattle

6. INDICATION(S)

7. METHOD AND ROUTE(S) OF ADMINISTRATION

Intramuscular use.
Read the package leaflet before use.

8. WITHDRAWAL PERIOD(S)

Withdrawal period: Zero days.

9. SPECIAL WARNING(S), IF NECESSARY

Read the package leaflet before use.

10. EXPIRY DATE

EXP {month/year}
Once broached use immediately.

11. SPECIAL STORAGE CONDITIONS

Store and transport refrigerated.
Protect from light.
Do not freeze.

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

Disposal: read package leaflet.

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

For animal treatment only. To be supplied only on veterinary prescription.

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

LABORATORIOS HIPRA, S.A.
Avda. la Selva, 135
17170 Amer (Girona)
SPAIN

16. MARKETING AUTHORISATION NUMBER(S)

EU/2/18/227/001-004

17. MANUFACTURER'S BATCH NUMBER

Batch {number}

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

Vial label 1 dose and 5 doses

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

UBAC emulsion for injection for cattle

2. QUANTITY OF THE ACTIVE SUBSTANCE(S)

LTA from BAC of *Streptococcus uberis*, strain 5616 Relative Potency ≥ 1 RPU

3. CONTENTS BY WEIGHT, BY VOLUME OR BY NUMBER OF DOSES

1 dose (2 ml)
5 doses (10 ml)

4. ROUTE(S) OF ADMINISTRATION

IM

5. WITHDRAWAL PERIOD(S)

Withdrawal period: Zero days.

6. BATCH NUMBER

Batch {number}

7. EXPIRY DATE

EXP {month/year}
Once broached use immediately.

8. THE WORDS "FOR ANIMAL TREATMENT ONLY"

For animal treatment only.

B. PACKAGE LEAFLET

PACKAGE LEAFLET:

UBAC emulsion for injection for cattle

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

Marketing authorisation holder and manufacturer responsible for batch release:
LABORATORIOS HIPRA, S.A.
Avda. la Selva, 135
17170 Amer (Girona)
SPAIN

2. NAME OF THE VETERINARY MEDICINAL PRODUCT

UBAC emulsion for injection for cattle.

3. STATEMENT OF THE ACTIVE SUBSTANCE(S) AND OTHER INGREDIENT(S)

One dose (2 ml) contains:

Active substances:
Lipoteichoic acid (LTA) from Biofilm Adhesion Component (BAC) of *Streptococcus uberis*, strain 5616.....≥ 1 RPU*
*Relative Potency Units (ELISA)

Adjuvant:
Montanide ISA .....907.1 mg
Monophosphoryl Lipid A (MPLA)

Emulsion for injection.
White homogeneous emulsion.

4. INDICATION(S)

For active immunisation of healthy cows and heifers to reduce the incidence of clinical intramammary infections caused by *Streptococcus uberis*, to reduce the somatic cell count in *Streptococcus uberis* positive quarter milk samples and to reduce milk production losses caused by *Streptococcus uberis* intramammary infections.

Onset of immunity: approximately 36 days after the second dose.
Duration of immunity: approximately the first 5 months of lactation.

5. CONTRAINDICATIONS

None.

6. ADVERSE REACTIONS

Local swelling more than 5 cm in diameter at the injection site is a very common reaction after administration of the vaccine. This swelling will have disappeared or be clearly reduced in size by 17 days post vaccination. However, in some cases, swelling may persist for up to 4 weeks.

A transient increase in rectal temperature (mean increase of 1°C but may be up to 2°C in individual animals) may very commonly occur in the first 24 hours after injection.

Anaphylactic-type reactions (e.g. oedema) which might be life-threatening, may occur very rarely in some sensitive animals based on post-marketing safety experience. Under these circumstances, appropriate symptomatic treatment should be administered.

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).

If you notice any side effects, even those not already listed in this package leaflet or you think that the medicine has not worked, please inform your veterinary surgeon.

7. TARGET SPECIES

Cattle.

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

Intramuscular use.
Administer one dose (2 ml) by deep intramuscular injection in the neck muscles according to the following immunisation program:
- First dose at approximately 60 days before the expected parturition date
- Second dose at least 21 days before the expected parturition date
- Third dose should be administered about 15 days after the calving.

Protection of animals not vaccinated following this program has not been demonstrated. This should be considered in case of herd vaccination.

The full immunisation program should be repeated with each gestation.

9. ADVICE ON CORRECT ADMINISTRATION

The injections should be preferably administered on the alternate sides of the neck. Allow the vaccine to reach a temperature of +15 to + 25 °C before administration. Shake before use.

10. WITHDRAWAL PERIOD(S)

Zero days.

11. SPECIAL STORAGE PRECAUTIONS

Keep out of the sight and reach of children.

Store and transport refrigerated.
Protect from light.
Do not freeze.

Do not use this veterinary medicinal product after the expiry date which is stated on the label after EXP.

Shelf life of the veterinary medicinal product as packaged for sale: 2 years.
Shelf life after first opening the immediate packaging: use immediately.

12. SPECIAL WARNING(S)

Special warnings for each target species:
Only healthy animals should be immunised.

The whole herd should be immunised.
Immunisation has to be considered as one component in a complex mastitis intramammary infection control program that addresses all important udder health factors (e.g. milking technique, dry-off and breeding management, hygiene, nutrition, housing, bedding, cow comfort, air and water quality and health monitoring) and other management practices.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:
To the user:
This veterinary medicinal product contains mineral oil. Accidental injection/self injection may result in severe pain and swelling, particularly if injected into a joint or finger, and in rare cases could result in the loss of the affected finger if prompt medical attention is not given.
If you are accidentally injected with this veterinary medicinal product, seek prompt medical advice even if only a very small amount is injected and take the package leaflet with you.
If pain persists for more than 12 hours after medical examination, seek medical advice again.

To the physician:
This veterinary medicinal product contains mineral oil. Even if small amounts have been injected, accidental injection with this product can cause intense swelling, which may, for example, result in ischaemic necrosis and even the loss of a digit. Expert, PROMPT, surgical attention is required and may necessitate early incision and irrigation of the injected area, especially where there is involvement of finger pulp or tendon.

Pregnancy and Lactation:
Can be used during pregnancy and lactation.

Interaction with other medicinal products and other forms of interaction:
No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be made on a case by case basis.

Overdose (symptoms, emergency procedures, antidotes):
No information is available.

Incompatibilities:
Do not mix with any other veterinary medicinal product.

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

Medicines should not be disposed of via wastewater or household waste.
Ask your veterinary surgeon how to dispose of medicines no longer required. These measures should help to protect the environment.

14. DATE ON WHICH THE PACKAGE LEAFLET WAS LAST APPROVED

Detailed information on this veterinary medicinal product is available on the website of the European Medicines Agency (http://www.ema.europa.eu/).

15. OTHER INFORMATION

In a multicentre field study, the incidence of new cases of *Streptococcus uberis* clinical intramammary infection in the group vaccinated with UBAC was 50% lower than the incidence in the placebo group (6.1% versus 12.2%) which was statistically significantly different (p=0.012). Bearing in mind that some cows had suffered more than one episode of *Streptococcus uberis* clinical intramammary infection, the incidence of cows with clinical intramammary infection was 52.5% lower in the vaccinated group than those of the placebo group (4.7% versus 9.9%), with a statistical significance of p<0.017.

Pack sizes:
Cardboard box with 20 glass vials of 1 dose (2 ml).
Cardboard box with 1 PET vial of 5 doses (10 ml).
Cardboard box with 1 PET vial of 25 doses (50 ml).
Cardboard box with 1 PET vial of 50 doses (100 ml).

Not all pack sizes may be marketed.
For any information about this veterinary medicinal product, please contact the local representative of the marketing authorisation holder.

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