

ANNEX 1
SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Kexxtone 32.4g continuous-release intraruminal device for cattle.
Monensin

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Active substance:

Monensin 32.4 g (equivalent to 35.2 g monensin sodium).

Excipients:

For the full list of excipients, see section 6.1.

Intraruminal device:

Each intraruminal device contains:

12 subunits each containing 2.7 g monensin (equivalent to 2.9 g monensin sodium).
Polypropylene* orifice cap.
Polypropylene* plunger.
Polypropylene* barrel and wing.
Steel spring.

*The polypropylene components are coloured with sunset yellow E110

3. PHARMACEUTICAL FORM

Continuous-release intraruminal device.

A cylindrical orange polypropylene intraruminal device uniquely identified with a number, fitted with wings, consisting of a core which presents as a stack of 12 subunits.

4. CLINICAL PARTICULARS

4.1 Target species

Cattle (dairy cows and heifers).

4.2 Indications for use, specifying the target species

For the reduction in the incidence of ketosis in the peri-parturient dairy cow/heifer which is expected to develop ketosis.

4.3 Contraindications

Do not use in animals weighing less than 300 kg bodyweight.

4.4 Special warnings for each target species

Identification of animals for treatment should be at veterinary discretion. Risk factors may include a history of energy-deficiency-related diseases, high body condition score and parity.

In the event of early regurgitation, identify the animal by matching the animal ID number with the number on the intraruminal device and re-administer an undamaged intraruminal device.

4.5 Special precautions for use

Special precautions for use in animals

Hold treated cattle in a confined area for 1 hour after administration to observe for failure to swallow or regurgitation. If this occurs re-administer the intraruminal device if undamaged. If damaged, administer a new intraruminal device. Recheck cattle for up to 4 days after dosing to observe for signs of an intraruminal device lodging in the oesophagus.

Signs of lodging may include bloat which may be followed by coughing, drooling, inappetence and unthriftiness.

Special precautions to be taken by the person administering the veterinary medicinal product to animals

Exposure to the active substance may elicit an allergic response in susceptible individuals. People with known hypersensitivity to monensin or any of the excipients should avoid contact with the veterinary medicinal product.

Do not eat, drink or smoke when handling the veterinary medicinal product.

Use gloves when handling an intraruminal device, including during retrieval of a regurgitated intraruminal device.

Remove gloves and wash hands and exposed skin after handling intraruminal devices.

Other precautions

Ingestion or oral exposure to monensin can be fatal in dogs, horses, other equines or guinea fowl. Do not allow dogs, horses, other equines or guinea fowl access to formulations containing monensin. Due to the risk of bolus regurgitation, do not allow these species access to areas where treated cattle have been kept.

4.6 Adverse reactions (frequency and seriousness)

In rare cases digestive signs (e.g. diarrhoea, ruminant stomach disorder) have been observed. In very rare cases, oesophagus obstruction has been observed.

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

Can be used during pregnancy and lactation.

4.8 Interaction with other medicinal products and other forms of interaction

None known.

4.9 Amounts to be administered and administration route

Intraruminal use.

A single intraruminal device is to be administered to a dairy cow/heifer 3-4 weeks prior to expected calving, using an appropriate administration tool.

Kexxtone delivers an approximate average dose of 335 mg of monensin per day for approximately 95 days.

Follow instructions carefully.

Adequate animal restraint is required to properly administer this intraruminal device. Such restraint must limit forward/backward motion and allow the animal's head to be held in the forward extended position and without pressure on the neck to prevent choking.

1. Each intraruminal device has an individual number along the device body. This should be recorded with the corresponding animal identification number so that, should an intraruminal device be regurgitated, the animal can be identified.
2. Fold wings down along the intraruminal device body and insert the device into an appropriate administration tool, orifice end first.
3. Restrain the animal with its head and neck stretched forward. Grasp the animal with one hand in the corner of the animal's mouth. Introduce the administration tool into the mouth avoiding the front teeth. In order to avoid trauma and damage to the pharynx and oesophagus, do not use excessive force.
4. Insert the administration tool past the base of the tongue making sure to avoid the molar teeth. As the animal swallows, the administration tool will move easily over the base of the tongue. **DO NOT USE EXCESSIVE FORCE.** If resistance is encountered, withdraw the tool slightly and repeat the procedure.
5. Be sure the head of the administration tool is past the base of the tongue. When the animal swallows, eject the intraruminal device from the administration tool.

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

Accidental administration of more than one intraruminal device could result in some adverse reactions which are typical of monensin overdose, including decreased appetite, scouring and lethargy. These are generally transient. The highest tolerated dose is typically between 1 mg and 2 mg monensin/kg bodyweight/day.

4.11 Withdrawal periods

Meat and offal: zero days

Milk: zero days

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Drugs for treatment of acetoneuria, ATC vet code: *QA16QA06*

Monensin is a member of the pharmacotherapeutic group of polyether ionophores, specifically the carboxylic subgroup. They are the product of natural fermentation products produced by *Streptomyces cinnamomensis*.

5.1 Pharmacodynamic properties

Monensin binds to bacterial cell membranes and interferes with the maintenance of important ion gradients in the cell which are needed for the transport of nutrients and to generate proton-motive

force. Monensin is mainly active against Gram-positive bacteria. Gram-negative bacteria have complex outer cell membranes, resulting in inherent resistance to the action of ionophores. Thus, the ultimate effect of monensin within the rumen is to shift the microbial population resulting in a decrease of the bacteria that produce acetate and butyrate and increasing the bacteria that produce propionate, the gluconeogenic precursor. As a result of the change in population of bacteria within the rumen, efficiency of energy metabolism is improved. In the peri-parturient dairy cow, the positive effects of monensin include reduced blood ketones, increased serum glucose and reduced incidence of ketosis.

5.2 Pharmacokinetic particulars

The site of action for intraruminal administered monensin is the gastrointestinal tract. Intraruminal administration of monensin is followed by extensive first pass metabolism which results in low concentrations of monensin in the systemic circulation. Metabolites and parent drug are excreted in the bile.

When the tablet-subunits inside the intraruminal device are in contact with rumen fluid at the orifice of the device, a gel is formed and is slowly released from the intraruminal device. Monensin is released from the intraruminal device at an approximate average dose of 335 mg/day.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sucrose fatty acid ester
Carbomer
Lactose monohydrate
Magnesium stearate
Silica, colloidal anhydrous

Polypropylene* orifice cap.
Polypropylene* plunger.
Polypropylene* barrel and wing.
Steel spring.

*The polypropylene components are coloured with sunset yellow E110

6.2 Incompatibilities

None known.

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: 6 months

6.4. Special precautions for storage

Keep the foil tightly closed.

6.5 Nature and composition of immediate packaging

Aluminium foil bag containing 1, 3 or 5 intraruminal device(s).

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, waste materials derived from such veterinary medicinal products or regurgitated intraruminal devices should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Eli Lilly and Company Limited
Elanco Animal Health
Priestley Road
Basingstoke
Hampshire RG24 9NL
United Kingdom

8. MARKETING AUTHORISATION NUMBER(S)

EU/2/12/145/001-003

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

28/01/2013

10. DATE OF REVISION OF THE TEXT

MM/YYYY

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

PROHIBITION OF SALE, SUPPLY AND/OR USE

Not applicable.

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

Name and address of the manufacturer responsible for batch release

Eli Lilly and Company Ltd
Speke Operations
Fleming Road
Liverpool
UK-L24 9LN

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

Veterinary medicinal product subject to prescription

C. STATEMENT OF THE MRLs

The Committee for Medicinal Products for Veterinary Use has recommended the inclusion of Monensin in Kexxtone in table 1 (Allowed substances) of the annex to Commission Regulation (EU) No 37/2010 as follows:

Pharmacologically active substance	Marker residue	Animal Species	MRL	Target tissue(s)	Other provisions	Therapeutic Classification
Monensin	Monensin A	Bovine	2 µg/kg 10 µg/kg 50 µg/kg 10 µg/kg 2 µg/kg	Muscle Fat Liver Kidney Milk	None	Ant-infectious agent/antibiotic

The excipients 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

Foil-bag containing 1, 3 or 5 continuous-release intraruminal devices

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Kexxtone 32.4g continuous-release intraruminal device for cattle.
Monensin

2. STATEMENT OF ACTIVE AND OTHER SUBSTANCES

35.2 g Monensin sodium (equivalent to 32.4 g monensin).

3. PHARMACEUTICAL FORM

Continuous-release intraruminal device.

4. PACKAGE SIZE

1 intraruminal device.
3 intraruminal device
5 intraruminal device

5. TARGET SPECIES

Cattle (dairy cows and heifers).

6. INDICATION(S)

7. METHOD AND ROUTE(S) OF ADMINISTRATION

Intraruminal use.
Read the package leaflet before use

8. WITHDRAWAL PERIOD

Meat and offal: zero days
Milk: zero days

9. SPECIAL WARNING(S), IF NECESSARY

Read the package leaflet before use.

Ingestion or oral exposure to monensin can be fatal in dogs, horses, other equines or guinea fowl. Do not allow dogs, horses, other equines or guinea fowl access to formulations containing monensin. Due to the risk of bolus regurgitation, do not allow these species access to areas where treated cattle have been kept.

Exposure to the active substance may elicit an allergic response in susceptible persons. People with known hypersensitivity to monensin or any of the excipients should avoid contact with the veterinary medicinal product.

Do not eat, drink or smoke when handling the veterinary medicinal product.

Use gloves when handling an intraruminal device, including during retrieval of a regurgitated intraruminal device.

Remove gloves and wash hands and exposed skin after handling intraruminal devices.

10. EXPIRY DATE

EXP {month/year}

Once opened use by:.....

11. SPECIAL STORAGE CONDITIONS

Keep the foil tightly closed.

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

Dispose of waste material in accordance with local requirements.

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

Eli Lilly and Company Limited
Elanco Animal Health
Priestley Road
Basingstoke
Hampshire RG24 9NL
United Kingdom

16. MARKETING AUTHORISATION NUMBER(S)

EU/2/12/145/001

EU/2/12/145/002

EU/2/12/145/003

17. MANUFACTURER'S BATCH NUMBER

Lot {number}

B. PACKAGE LEAFLET

**PACKAGE LEAFLET FOR:
Kexxtone 32.4g continuous-release intraruminal device 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:

Eli Lilly and Company Ltd
Priestley Road
Basingstoke
Hampshire
RG24 9NL
United Kingdom

Manufacturer responsible for batch release:

Eli Lilly and Company Ltd
Speke Operations
Fleming Road
Liverpool
L24 9LN
United Kingdom

2. NAME OF THE VETERINARY MEDICINAL PRODUCT

Kexxtone 32.4g continuous-release intraruminal device for cattle.
Monensin

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

Monensin 32.4 g (equivalent to 35.2 g monensin sodium).

A cylindrical orange polypropylene intraruminal device uniquely identified with a number, fitted with wings, consisting of a core which presents as a stack of 12 subunits.

4. INDICATION

For the reduction in the incidence of ketosis in the peri-parturient dairy cow/heifer which is expected to develop ketosis.

5. CONTRAINDICATIONS

Do not use in animals weighing less than 300 kg bodyweight.

6. ADVERSE REACTIONS

In rare cases digestive signs (e.g. diarrhoea, ruminant stomach disorder) have been observed. In very rare cases, oesophagus obstruction has been observed.

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).

If you notice any serious effects or other effects not mentioned in this leaflet, please inform your veterinary surgeon.

7. TARGET SPECIES

Cattle (dairy cows and heifers).

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

Intraruminal use.

A single intraruminal device is to be administered to a dairy cow/heifer 3-4 weeks prior to expected calving, using an appropriate administration tool.

Kexxtone delivers an approximate average dose of 335 mg of monensin per day for approximately 95 days.

9. ADVICE ON CORRECT ADMINISTRATION

Follow directions carefully.

Adequate animal restraint is required to properly administer this intraruminal device. Such restraint must limit forward/backward motion and allow the animal's head to be held in the forward extended position and without pressure on the neck to prevent choking.

Each intraruminal device has an individual number along the intraruminal device body. This should be recorded with the corresponding animal identification number so that, should an intraruminal device be regurgitated, the animal can be identified.

Fold wings down along the intraruminal device body and insert the intraruminal device into an appropriate administration tool, orifice end first.

Standing to one side of the animal, restrain it with its head and neck stretched forward and held firmly against your side. Grasp the animal with one hand in the corner of the animal's mouth. Introduce the administration tool into the mouth avoiding the front teeth. In order to avoid trauma and damage to the pharynx and oesophagus, do not use excessive force.

Insert the administration tool past the base of the tongue making sure to avoid the molar teeth. As the animal swallows the administration tool will move easily over the base of the tongue. **DO NOT USE EXCESSIVE FORCE.** If resistance is encountered, withdraw the tool slightly and repeat the procedure.

Be sure the head of the administration tool is past the base of the tongue. When the animal swallows, eject the intraruminal device from the administration tool.

Hold treated cattle in a confined area for 1 hour after administration to observe for failure to swallow or regurgitation. If this occurs re-administer the intraruminal device if undamaged. If damaged, administer a new intraruminal device. Recheck cattle for up to 4 days after dosing to observe for signs of an intraruminal device lodging in the oesophagus. In the event of early regurgitation, identify the animal by matching the animal ID number with the number on the intraruminal device.

Signs of lodging may include bloat which may be followed by coughing, drooling, inappetence and unthriftiness.

10. WITHDRAWAL PERIOD

Meat and offal: zero days

Milk: zero days

11. SPECIAL STORAGE PRECAUTIONS

Keep out of the sight and reach of children

Keep the foil tightly closed.

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

12. SPECIAL WARNINGS

Special precautions for use in animals:

Identification of animals for treatment should be at veterinary discretion. Risk factors may include a history of energy-deficiency-related diseases, high body condition score and parity.

Special precautions to be taken by the person administering the veterinary medicinal product to animals:

Exposure to the active substance may elicit an allergic response in susceptible individuals. People with known hypersensitivity to monensin or any of the excipients should avoid contact with the veterinary medicinal product.

Do not eat, drink or smoke when handling the veterinary medicinal product.

Use gloves when handling an intraruminal device, including during retrieval of a regurgitated intraruminal device.

Remove gloves and wash hands and exposed skin after handling intraruminal devices.

Other precautions

Ingestion or oral exposure to monensin can be fatal in dogs, horses, other equines or guinea fowl. Do not allow canine, horses, other equines or guinea fowl access to formulations containing monensin.

Due to the risk of bolus regurgitation, do not allow these species access to areas where treated cattle have been kept.

Pregnancy/Lactation:

Can be used during pregnancy and lactation

Overdose:

Accidental administration of more than one intraruminal device could result in some adverse reactions which are typical of monensin overdose, including decreased appetite, scouring and lethargy. These are generally transient. The highest tolerated dose is typically between 1 mg and 2 mg monensin/kg bodyweight/day.

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

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

14. DATE ON WHICH THE PACKAGE LEAFLET WAS LAST APPROVED

<DD/MM/YY>

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

15. OTHER INFORMATION

Aluminium foil bag containing 1, 3 or 5 intraruminal device(s).

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.

België/Belgique/Belgien

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Elanco Animal Health
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