[Version 9,03/2022]

ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

# 1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Maximec 10 mg/ml solution for injection for pigs [IE] Renomec 10 mg/ml solution for injection for pigs [ES] Cevamec 10 mg/ml solution for injection for pigs [FR]

# 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains

Active substance: Ivermectin 10 mg

**Excipients:** 

Qualitative composition of excipients and other constituents
Glycerol
Glycerol formal

A clear, colourless, slightly viscous, non-aqueous solution

#### 3. CLINICAL INFORMATION

#### 3.1 Target species

Pigs.

#### 3.2 Indications for use for each target species

Treatment of the infections by the following parasites:

Gastrointestinal roundworms (adult and fourth-stage larvae): Ascaris suum Hyostrongylus rubidus Oesophagostomum spp. Strongyloides ransomi (adult)

Lungworms: *Metastrongylus* spp. (adult)

Lice: *Haematopinus suis* 

Mange mites: Sarcoptes scabiei var. suis

#### 3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance or to any of the excipients. Do not use by intramuscular or intravenous administration. Do not use in cats or dogs as severe adverse reactions may occur.

#### 3.4 Special warnings

Unnecessary use of antiparasitics or use deviating from the instructions given in the SPC may increase the resistance selection pressure and lead to reduced efficacy. The decision to use the veterinary medicinal product should be based on confirmation of the parasitic species and burden, or of the risk of infestation based on its epidemiological features, for each individual animal or herd.

Repeated use for an extended period, particularly when using the same class of substances, increases the risk of resistance development. Within a herd, maintenance of susceptible refugia is essential to reduce that risk. Systematically applied interval-based treatment and treatment of a whole herd should be avoided. Instead, if feasible, only selected individual animals or subgroups should be treated (targeted selective treatment). This should be combined with appropriate husbandry and pasture management measures. Guidance for each specific herd should be sought from the responsible veterinarian.

The use of this veterinary medicinal product should take into account local information about susceptibility of the target parasites, where available.

It is recommended to further investigate cases of suspected resistance, using an appropriate diagnostic method (e.g. Faecal Egg Count Reduction Test (FECRT)).

Confirmed resistance should be reported to the marketing authorisation holder or to the competent authority.

#### 3.5 Special precautions for use

Special precautions for safe use in the target species: Not applicable.

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

Take care to avoid self-administration: the veterinary medicinal product may cause local irritation and/or pain at the site of injection.

Do not smoke or eat while handling the veterinary medicinal product. Wash hands after use.

<u>Special precautions for the protection of the environment:</u> See section 5.5.

#### Other precautions:

Avermectins may not be well tolerated in all non-target species (cases of intolerance with fatal outcome are reported in dogs especially Collies, Old English Sheepdogs and related breeds or crosses, and also in turtles/tortoises).

#### 3.6 Adverse events

Pigs:

Undetermined frequency	Injection site pain <sup>1</sup>
(cannot be estimated from the	
available data):	

<sup>1</sup>Mild and transient pain reactions may be seen in some pigs. All these reactions disappeared without treatment.

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 the national competent authority via the national reporting system. See the package leaflet for respective contact details.

# **3.7** Use during pregnancy, lactation or lay

Pregnancy:

Do not administer the veterinary medicinal product during the first 40 days of pregnancy.

Fertility:

The veterinary medicinal product can be used in breeding sows and boars.

# 3.8 Interaction with other medicinal products and other forms of interaction

None known.

# 3.9 Administration routes and dosage

For single treatment only. The veterinary medicinal product should be injected subcutaneously.

Each ml contains 10 mg of ivermectin sufficient to treat 33 kg of bodyweight of pigs. The injection may be given with any standard automatic or single-dose or hypodermic syringe. Use of 17 gauge x  $\frac{1}{2}$  inch needle is suggested.

In pigs, the recommended dosage level is 300 mcg ivermectin per kg bodyweight. This is equivalent to 1 ml per 33 kg bodyweight. The recommended route of administration is by subcutaneous injection into the neck.

In young pigs, especially those below 16 kg for which less than 0.5 ml of the veterinary medicinal product is indicated, dosing accuracy is important. The use of a syringe that can accurately deliver as little as 0.1 ml is recommended.

Underdosing could result in ineffective use and may favour resistance development.

To ensure a correct dosage, body weight should be determined as accurately as possible. If animals are to be treated collectively, reasonably homogenous groups should be set up, and all animals of a group should be dosed at the rate corresponding to the heaviest one.

Accuracy of the dosing device should be thoroughly checked.

# 3.10 Symptoms of overdose (and where applicable, emergency procedures and antidotes)

A dose of 30 mg ivermectin per kg (100 x the recommended dose of 0.3 mg per kg) injected subcutaneously to pigs caused lethargy, ataxia, bilateral mydriasis, intermittent tremors, laboured breathing and lateral recumbency.

# **3.11** Special restrictions for use and special conditions for use, including restrictions on the use of antimicrobial and antiparasitic veterinary medicinal products in order to limit the risk of development of resistance

Not applicable.

# 3.12 Withdrawal periods

Meat and offal: 32 days

# 4. PHARMACOLOGICAL INFORMATION

# 4.1 ATCvet code: QP54AA01

#### 4.2 Pharmacodynamics

Ivermectin is a member of the avermectin group. Ivermectin is a member of the macrocyclic lactone class of endectocides. Compounds of the class bind selectively and with high affinity to glutamate-gated chloride ion channels which occur in invertebrate nerve and muscle cells. This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite. Compounds of this class may also interact with other ligand-gated chloride channels, such as those gated by the neurotransmitter gamma-aminobutyric acid (GABA).

The margin of safety for compounds of this class is attributable to the fact that mammals do not have glutamate-gated chloride channels, the macrocyclic lactones have a low affinity for other mammalian ligand-gated chloride channels and they do not readily cross the blood-brain barrier.

#### 4.3 Pharmacokinetics

At a dose level of 0.3 mg ivermectin per kg bodyweight/ a mean Cmax of 6.94 ng/ml was reached at a mean Tmax of 86.75 hours. Biliary excretion, followed by elimination in faeces is probably the major route of ivermectin excretion in pigs. While the major single component excreted was unaltered drug the major metabolite in swine are 3" --0-desmethyl-H<sub>2</sub>B<sub>1a</sub> and 3" —O-desmethyl-H<sub>2</sub>B<sub>1b</sub>.

# 5. PHARMACEUTICAL PARTICULARS

#### 5.1 Major incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products.

# 5.2 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.

#### 5.3 Special precautions for storage

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

#### 5.4 Nature and composition of immediate packaging

Multidose high density polyethylene bottles of 50 ml, 250 ml and 500 ml sealed with bromobutyl seals and aluminium overseals.

Not all pack sizes may be marketed.

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

The veterinary medicinal product should not enter water courses as ivermectin may be dangerous for fish and other aquatic organisms.

Medicines should not be disposed of via wastewater or household waste.

Use take-back schemes for the disposal of any unused veterinary medicinal product or waste materials derived thereof in accordance with local requirements and with any national collection systems applicable to the veterinary medicinal product concerned.

# 6. NAME OF THE MARKETING AUTHORISATION HOLDER

Bimeda Animal Health Limited

# 7. MARKETING AUTHORISATION NUMBER(S)

# 8. DATE OF FIRST AUTHORISATION

Date of first authorisation: DD/MM/YYYY.

# 9. DATE OF THE LAST REVISION OF THE SUMMARY OF THE PRODUCT CHARACTERISTICS

DD/MM/YYYY

# 10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCTS

Veterinary medicinal product subject to prescription.

Detailed information on this veterinary medicinal product is available in the Union Product Database (https://medicines.health.europa.eu/veterinary).