SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Parofor 70 000 IU/g powder for use in drinking water/milk for cattle (pre-ruminant) and pigs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each gram contains:

Active substance:

70 000 IU of paromomycin activity (as paromomycin sulfate)

Excipients:

Qualitative composition of excipients and other constituents
Silica (E551) colloidal anhydrous
Glucose monohydrate

A white to almost white powder.

3. CLINICAL INFORMATION

3.1 Target species

Cattle (pre-ruminant), pigs.

3.2 Indications for use for each target species

Treatment of gastro-intestinal infections caused by *Escherichia coli*.

3.3 Contraindications

Do not use in cases of hypersensitivity to the active substance, to other aminoglycosides or to any of the excipients.
Do not use in cases with impaired function of the kidneys or liver.
Do not use in ruminating animals.
Do not use in turkeys due to the risk of selection for antimicrobial resistance in intestinal bacteria.

3.4 Special warnings

Cross-resistance has been shown between paromomycin and some antimicrobials in the aminoglycosides class in *Enterobacterales*. Use of the veterinary medicinal product should be carefully considered when susceptibility testing has shown resistance to aminoglycosides because its effectiveness may be reduced.

Paromomycin selects for resistance and cross-resistances at high frequency against a variety of other aminoglycosides among intestinal bacteria..

3.5 Special precautions for use

Special precautions for safe use in the target species:

Use of the veterinary medicinal product should be based on identification and susceptibility testing of the target pathogen(s) isolated from the animal. If this is not possible, therapy should be based onon epidemiological information and knowledge of susceptibility of the target pathogen at farm level or at local/regional level. Use of the veterinary medicinal product should be in accordance with official, national and regional antimicrobial policies.

The uptake of medication by animals can be altered as a consequence of illness. In case of insufficient uptake of water/milk animals should be treated parenterally using a suitable injectable veterinary medicinal product following the advice of the veterinarian.
The use of the veterinary medicinal product should be combined with good management practices e.g. good hygiene, proper ventilation, no overstocking.
Since the veterinary medicinal product is potentially ototoxic and nephrotoxic, it is recommended to assess kidney function.
Special care should be taken when considering administration of the veterinary medicinal product to newborn animals due to the known higher gastrointestinal absorption of paromomycin in neonates. This higher absorption could lead to an increased risk of oto-and nephrotoxicity. The use of the veterinary medicinal product in neonates should be based on benefit-risk assessment by the responsible veterinarian. Prolonged or repeated use of the veterinary medicinal product should be avoided by improving management practices and through cleansing and disinfection.
Use of the veterinary medicinal product deviating from the instructions given in the SPC may increase the prevalence of bacteria resistant to paromomycin and may decrease the effectiveness of treatment with aminoglycosides due to the potential for crossresistance.
Aminoglycosides are considered as critical in human medicine. Consequently, they should not be used as a first line treatment in veterinary medicine.

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

This veterinary medicinal product contains paromomycin, which can cause allergic reactions in some people. People with known hypersensitivity to paromomycin should avoid contact with the veterinary medicinal product. If you develop symptoms following exposure, such as skin rash, you should seek medical advice and show the package leaflet or the label to the physician. Swelling of the face, lips and eyes or

difficulty in breathing are more serious symptoms and require urgent medical attention.
Personal protective equipment consisting of protective clothing and impervious gloves should be worn when handling the veterinary medicinal product.
Do not eat, drink and smoke when handling the veterinary medicinal product. Wash hands after use. In case of accidental ingestion, seek medical advice immediately and show the package leaflet or the label to the physician.
When handling this veterinary medicinal product, inhalation of the dust must be avoided by wearing a disposable half-mask respirator conforming to European Standard EN 149 or a non-disposable respirator to European Standard EN 140 with a filter to EN 143.
Use in a well-ventilated area. Avoid inhaling the powder while preparing the medicated water or milk
replacer. Avoid contact with the skin and eyes. In case of accidental contact with the skin or eyes, rinse with plenty of water and seek medical attention if irritation persists.

Special precautions for the protection of the environment:

Not applicable.

3.6 Adverse events

Cattle (pre-ruminant), pigs:

Rare (1 to 10 animals / 10,000 animals treated):	Loose stool
Undetermined frequency (cannot be estimated from available data)	Nephropathy [1] Internal ear disorder[1]

[1]Aminoglycoside antibiotics such as paromomycin can cause nephro- and ototoxicity.

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 section ‘Contact details’ of the the package leaflet for respective contact details.

3.7 Use during pregnancy, lactation or lay

Pregnancy:
Laboratory studies in rat and rabbit have not produced any evidence of teratogenic, foetoxic or maternotoxic effects. The use is not recommended during the pregnancy.

3.8 Interaction with other medicinal products and other forms of interaction

General anaesthetics and muscle relaxants increase the neuro-blocking effect of aminoglycosides, which can lead to acute paralysis and apnoea.
Do not use concurrently with loop diuretics and potentially oto- or nephrotoxic substances.

3.9 Administration routes and dosage

In drinking water/milk use
Cattle (pre-ruminant):
For administration in milk/milk replacer
17500 – 35000 IU of paromomycin per kg BW/day (equivalent to 2.5-5 g of veterinary medicinal product/10 kg BW/day)
Duration of treatment: 3-5 days

Pigs:
For administration in drinking water.
17500 – 28000 IU of paromomycin per kg BW/day (equivalent to 2.5-4 g of veterinary medicinal product/10 kg BW/day)
Duration of treatment: 3-5 days

To ensure a correct dosage, body weight should be determined as accurately as possible.
The use of suitably calibrated measuring equipment is recommended.

Based on the recommended dose and the number and weight of animals to be treated, the exact daily concentration of the veterinary medicinal product should be calculated according to the following formula:

$$\frac{\text{mg veterinary medicinal product/ kg body weight / day} \times \text{mean body weight (kg) of animals to be treated}}{\text{Mean daily water/milk/milk replacer consumption (l/animal)}} = \text{… ml veterinary medicinal product per litre drinking water/milk/milk replacer}$$

The intake of medicated water/milk /milk replacer depends on several factors including the clinical conditions of the animals and the local conditions such as ambient temperature and humidity. In order to obtain the correct dosage, drinking water/milk/milk replacer uptake has to be monitored and the concentration of paromomycin may need to be adjusted accordingly.
Medicated drinking water/milk/milk replacer and any stock solutions should be freshly prepared. Any remaining quantities of medicated fluids should be removed after 6 hours (in milk/milk replacer) or after 24 hours (in water).
For the administration of the veterinary medicinal product commercially available dosing pumps can be used. The solubility of the veterinary medicinal product has been tested at the maximum concentration of 95 g/L.

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

Paromomycin when administered orally is hardly absorbed systemically. Harmful effects due to accidental overdosing are highly unlikely.

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

Cattle (pre-ruminant)
Meat and offal: 20 days
Pigs
Meat and offal: 3 days

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code:

QA07AA06

4.2 Pharmacodynamics

Paromomycin belongs to the group of aminoglycoside antibiotics. Paromomycin changes the reading of messenger-RNA, which disrupts protein synthesis. The bactericidal activity of paromomycin is mainly attributed to its irreversible binding to ribosomes. Paromomycin has broad spectrum activity against numerous Gram-positive and Gram-negative bacteria, including *E. coli*.
Paromomycin acts in a concentration-dependant manner. Five mechanisms of resistance have been identified: changes of the ribosome due to mutations, reduction of permeability of bacterial cell wall or active efflux, inactivation of aminoglycosides by enzymes and enzymatic substitution of the molecular target. The first three resistance mechanisms arise from mutations of certain genes on chromosomes. The fourth and fifth resistance mechanisms only occurs following intake of a transposon or plasmid coding for resistance.

4.3 Pharmacokinetics

Following oral administration of paromomycin, hardly any absorption takes place and the molecule is eliminated unchanged via the faeces.

Environmental properties

The active ingredient paromomycin sulfate is very persistent in the environment.

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: 2 years.
Shelf life after first opening the immediate packaging: 6 months.
Shelf life after reconstitution in drinking water: 24 hours
Shelf life after reconstitution in milk/milk replacer: 6 hours

5.3 Special precautions for storage

Do not store above 25°C.
Keep the sachet tightly closed.

5.4 Nature and composition of immediate packaging

Block-bottom polyethylene/aluminium/polyethylene terephthalate sachet of 1000 g – 500 g – 250 g
Sachet of polyethylene foil/aluminium/polypropylene foil of 25 g, placed into a cardboard box, 40 sachets per box.
Not all pack sizes may be marketed.

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

Medicines should not be disposed of via wastewater.

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

Huvepharma NV

7. MARKETING AUTHORISATION NUMBER

Vm 30282/4020

8. DATE OF FIRST AUTHORISATION

17 September 2014

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

January 2025

10. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCT

Veterinary medicinal product subject to prescription.

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

Gavin Hall
Approved: 23 April 2025