

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Otisor 23.0 mg/ml + 5.0 mg/ml + 5500 IU/ml ear drops, suspension for cats and dogs.

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml contains:

Active substances:

Miconazole Nitrate	23.0 mg (equivalent to 19.98 mg miconazole)
Prednisolone Acetate	5.0 mg (equivalent to 4.48 mg prednisolone)
Polymyxin B Sulfate	5500 IU polymyxin B sulfate

Excipients:

Qualitative composition of excipients and other constituents
Silica, Colloidal Anhydrous
Paraffin, liquid

White to off-white ear drops, suspension.

3. CLINICAL INFORMATION

3.1 Target species

Cats and dogs

3.2 Indications for use for each target species

For the treatment of otitis externa and small, localised, superficial skin infections caused by mixed infections with the following miconazole and polymyxin B susceptible bacteria and fungi:

- Gram-positive bacteria: *Staphylococcus* spp. and *Streptococcus* spp.
- Gram-negative bacteria: *Pseudomonas* spp. and *Escherichia coli*
- Fungi: *Malassezia pachydermatis*, *Candida* spp., *Microsporum* spp. and *Trichophyton* spp.

Treatment of *Otodectes cynotis* (ear mites) infestations where there is concurrent infection with bacteria and fungi susceptible to polymyxin B and miconazole.

3.3 Contraindications

Do not use:

- in cases of hypersensitivity to the active substances of the veterinary medicinal product, as well as to other corticosteroids, to other azole antifungal agents, or to any of the excipients;
- in cases of skin viral infection;
- in cases of large skin lesions and of poorly healing or fresh wounds;
- in animals with perforation of the tympanic membrane;
- in animals where resistance of causative agents to polymyxin B and/or miconazole is known;
- on the mammary glands of lactating bitches and queens.

3.4 Special warnings

Bacterial and fungal otitis is often secondary in nature. The underlying cause should be identified and treated. Cross-resistance has been shown between polymyxin B and colistin in *E. coli*. Use of the product should be carefully considered when susceptibility testing has shown resistance to polymyxins because its effectiveness may be reduced.

3.5 Special precautions for use

Special precautions for safe use in the target species:

For external use only.

Use of the product should be based on identification and susceptibility testing of the target pathogens. If this is not possible, therapy should be based on epidemiological information and knowledge of susceptibility of the target pathogens at local/regional level.

Use of the product should be in accordance with official, national and regional antimicrobial policies. An antibiotic with a lower risk of antimicrobial resistance selection (lower AMEG category) should be used for first line treatment where susceptibility testing suggests the likely efficacy of this approach.

This antimicrobial combination should only be used where diagnostic testing has indicated the need for simultaneous administration of each of the active substances.

In cases of persistent infestations with *Otodectes cynotis* (ear mites) systemic treatment with an appropriate acaricide should be considered.

Before treating with the product, the integrity of the tympanic membrane must be verified.

Systemic corticosteroid effects are possible, especially when the product is used under an occlusive dressing, with increased skin blood flow, or if the product is ingested by licking.

Oral ingestion of the product by treated animals or animals having contact with treated animals should be avoided.

Avoid contact with eyes in animals. In case of accidental contact, rinse thoroughly with water.

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

People with known hypersensitivity to prednisolone, polymyxin B or miconazole should avoid contact with the veterinary medicinal product.

The veterinary medicinal product may cause irritation to skin and eyes. Avoid contact with skin or eyes. Always wear single use disposable gloves when applying the veterinary medicinal product to animals. In case of accidental spillage, skin or eyes should be rinsed immediately with plenty of water.

Wash hands after use.

Take care to avoid accidental ingestion. In case of accidental ingestion, seek medical advice immediately and show the leaflet or the label to the physician.

Special precautions for the protection of the environment:

Not applicable

3.6 Adverse events

Target species: Cats and dogs

Very rare (<1 animal / 10,000 animals treated, including isolated reports)	Deafness*
Undetermined frequency	Infection, skin thinning, delayed healing, application site bleeding; adrenal gland disorder

*Especially in older dogs, discontinue treatment if deafness occurs.

Prolonged and extensive use of topical corticosteroid preparations is known to lead to local immunosuppression (resulting in the specific local effects detailed in the table, also including telangiectasia), and systemic effects, including suppression of adrenal function.

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 also the last section of the package leaflet for respective contact details.

3.7 Use during pregnancy, lactation or lay

The safety of the veterinary medicinal product has not been established during pregnancy and lactation. Absorption of miconazole, polymyxin B and prednisolone through the skin being low, no teratogenic/embryotoxic/foetotoxic and maternotoxic effects are expected in dogs and cats. Oral ingestion of the active substances by treated animals when grooming can possibly occur and appearance of the active ingredients in blood and milk can be expected.

Use only in accordance with the benefit/risk assessment by the responsible veterinarian.

3.8 Interaction with other medicinal products and other forms of interaction

No data available.

3.9 Administration routes and dosage

For auricular and cutaneous use.

Shake the bottle vigorously for 10 to 15 seconds to ensure the product is fully resuspended before use. Any contamination of the dropper should be strictly avoided.

At the beginning of treatment, hair surrounding or covering the lesions must be clipped; this should be repeated during treatment if necessary.

Infections of the external auditory canal (otitis externa):

Clean the external ear canal and auricle and place 5 drops of the veterinary medicinal product into the external auditory canal twice a day. Massage the ear and the auditory canal thoroughly to ensure proper distribution of the active substances, but gently enough to avoid causing pain to the animal. Treatment should be continued without interruption until a few days after complete disappearance of the clinical symptoms, at least for 7 - 10 days up to 14 days. The success of the treatment should be verified by a veterinarian before discontinuing treatment.

Skin infections (small localised superficial): Apply a few drops of the veterinary medicinal product to the skin lesions to be treated twice a day and rub well. Treatment should be continued without interruption until a few days after complete disappearance of the clinical symptoms, up to 14 days.

In some persistent cases (ear or skin infections), treatment may need to be continued for 2 to 3 weeks. In cases where prolonged treatment is necessary repeated clinical examinations including a re-assessment of the diagnosis are required.

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

No other symptoms than those mentioned in section 3.6 are expected.

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

Not applicable.

4. PHARMACOLOGICAL INFORMATION

4.1 ATCvet code:

QS02CA01

4.2 Pharmacodynamics

Miconazole belongs to the group of N-substituted imidazole derivatives and inhibits ergosterol *de novo* synthesis. Ergosterol is an essential membrane lipid and must be synthesised by fungi. Ergosterol deficiency impedes numerous membrane functions, eventually leading to the cell's death.

The spectrum of activities covers nearly all fungi and yeasts of relevance to veterinary medicine as well as Gram-positive bacteria. Practically no development of resistance has been reported. Miconazole has a fungistatic mode of action, but high concentrations are also observed to produce fungicidal effects.

Polymyxin B belongs to the polypeptide antibiotics which are isolated from bacteria. It is only active against Gram-negative bacteria. The resistance mechanism of polymyxin-resistant Gram-negative bacteria may result from chromosomal mutations or horizontal transfer of the MCR genes. All *Proteus* species share a natural resistance to polymyxin B.

Polymyxin B binds to phospholipids in the cytoplasmic membrane to disturb membrane permeability. This results in autolysis of the bacteria, thus achieving bactericidal activity.

Prednisolone acetate is a synthetic corticosteroid and is used for its anti-inflammatory, anti-pruritic, anti-exudative and anti-proliferative effects. The anti-inflammatory activity of prednisolone acetate results from reduction of the permeability of capillaries, improved blood flow and inhibition of fibroblast action.

The exact mechanism of the acaricidal effect is unclear. It is assumed that the mites are suffocated or immobilised by the oily excipients.

4.3 Pharmacokinetics

Following topical application of polymyxin B, there is virtually no absorption of the compound through intact skin and mucous membranes, but significant absorption via wounds.

After topical application of miconazole, there is virtually no absorption of the compound through intact skin or mucous membranes.

When applied topically to intact skin, prednisolone is subject to limited and delayed absorption. Greater absorption of prednisolone should be expected in cases of compromised skin barrier function (e.g. skin lesions).

5. PHARMACEUTICAL PARTICULARS

5.1 Major incompatibilities

None known.

5.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 24 months
Shelf life after first opening the immediate packaging: 3 months

5.3 Special precautions for storage

Do not store above 25°C. Keep the container in the outer carton in order to protect from light.
Do not refrigerate or freeze.

5.4 Nature and composition of immediate packaging

Cardboard box containing:

Bottle: 15ml or 30ml white low-density polyethylene squeeze dropper bottle.

Closure: White, high-density polyethylene cap (screw fit).

Dropper (Dosing Device): White, low-density polyethylene dropper.

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 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

Chanelle Pharmaceuticals Manufacturing Ltd

7. MARKETING AUTHORISATION NUMBER(S)

VPA10987/168/001

8. DATE OF FIRST AUTHORISATION

23/02/2023

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

14/11/2023

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

