ABELIA® MalaOtic

For Dogs, Cats & Small mammals

Safe and Effective Otitis Management - Helps Fight Antibiotic and Azole Resistance
Antimicrobial, cerumenolitic, drying, keratolytic and deodoryzing otic solution
To prevent recurrence in chronic conditions (allergies) and first line of defense against *Malassezia* and mixed infections

118 ml / 4 fl. oz.
240 ml / 8 fl. oz.

Safe for perforated tympanic membrane

Introduction

Otitis externa is a common condition that affects 15-20% of dogs and 5-7% of cats. The development of otitis usually is due to a combination of different causes and factors. Primary causes can trigger otitis externa by themselves as they modify the ear environment creating ideal conditions for producing secondary infections, while secondary causes are those that produce disease in an abnormal or altered ear.

Otits externa can affect
15-20% of dogs 5-7% of cats

Hypersensitivity reactions (atopy, dietary allergy and contact dermatitis) are the main primary causes of otitis externa, and among them, atopy seems to be the most common cause of canine chronic otitis. It is estimated that 55% of atopic dogs develop otitis externa and in many of them, otitis externa is the sole clinical sign.

There are some factors that increase ear canal environment moisture, leading to maceration and microbial growth. These factors are known as predisposing factors. Changes in the ear canal that reduce its lumen, or the presence of water (e.g. swimming dogs) can increase its moisture and potentially lead to inflammation and/or microbial proliferation. Some examples of predisposing factors can include:

- Anatomical conformation of the outer ear (e.g. hairy or stenotic ear canals).
- Excessive moisture due to presence of water or environmental factors.
- Obstruction of the ear canal, (e.g. polyps).
- Systemic diseases (e.g. catabolic states).
- Treatment consequences (e.g. alterations in normal microflora, or trauma from unsuitable cleansing).

Malassezia pachydermatis is present in normal ear canals and considered an opportunist pathogen, capable of causing changes in the ear. In cases of allergies when this primary cause of otitis is not addressed, the irritation resulting from response to allergies causes abnormal changes in the ear canal which leads to an overgrowth of *Malassezia pachydermatis*. The epithelium of the irritated and diseased ear loses its ability to maintain a normal microenvironment so opportunistic pathogens emerge.

Active Ingredients

Glycolic acid	2 %
Boric acid	2 %
Ceramides	0.5 %

Also contains: Water, glycerin, propanediol, octylphenol ethoxylate, polysorbate 20, fragrance, DMDM hydantoin.

Characteristics

Cerumenolytic · Drying · pH 4.9-5.3

- First line non-antibiotic therapy for non-complicated *Malassezia* and mixed infections.
- Antibiotic and azole free:
  - Controls simple otitis without antibiotics and azole, helping fight resistance.
  - Helps rationalize the use of antibiotics and azoles, preserving their efficacy.
- Cleans, exfoliates and dries the ear canal.
  - Prepares ear canal for optimal ear antibiotic/ antifungal treatment.
  - Reduces *Malassezia* and bacteria overgrowth.
- Powerful drying action - Corrects and prevents moisture inside the ear canal that can lead to yeast and bacterial overgrowth.
- Exfoliant action:
  - Helps combat infection by eliminating dead cells, giving the active ingredients better contact with deeper skin layers.
  - Regenerates the ear canal by promoting renewal of epithelial cells with powerful cerumenolytic action.
  - Opens ear canal and facilitates ear's natural cleaning and healing process.
- Safe:
  - Very low incidence of post-application discomfort.
  - Non-Ototoxic - Safe for use with perforated tympanic membrane.
  - Suitable for frequent and long-term use for maintenance.
- Aqueous, colorless and non-sticking solution:
  - Good distribution, even in stenotic or narrowed ear canals.
  - Does not create plugs in hairy animals.
  - Does not stain fur, dog beds or furniture.
- Pleasant scent – Helps fight unpleasant ear odor.

ABELIA® MalaOtic

Mechanism of Action

- **Glycolic acid** as an **Alpha-Hydroxy Acid (AHA)** is a natural water-soluble acid derived from fruits and plants. AHAs have excellent exfoliant or keratolytic properties: they use acids and enzymes removing the top layers of dead skin cells. Glycolic acid is the smallest AHA, this feature makes it the most potent of the group as it penetrates the skin more effectively. **Glycolic acid** exhibits a strong pH-dependent antibacterial activity by disrupting bacterial cell membranes. Glycolic acid is also a humectant.
- **Boric Acid** has an astringent (drying) effect, a characteristic that makes it particularly useful when the ear canal is wet. It has also shown to be effective against *Malassezia* infections. In vitro and in vivo studies in dogs prove its efficacy against the most common ear pathogens: *Malassezia* spp, *Staphylococcus intermedius, Pseudomonas aeruginosa,* etc. [1, 2, 3]
- **Ceramides** provide a healthy protective ear epidermal barrier.

Recommended Use

- For maintenance/preventative treatment of ear canals with:
  - Chronic *Malassezia.*
  - Excess debilitating moisture.
  - Seborrhea.
  - Excess scaling.
- For first line of treatment of non-complicated *Malassezia* and yeast/bacterial otitis.
- For support therapy for complicated otitis.
- To soften and emulsify waxy debris for easy removal.
- To help dry and freshen ear canals, especially in swimming dogs or those who live in a humid environment.
- For maintaining healthy ear canals with antimicrobial and antifungal effects.

Directions for Use

Apply as needed to fill ear canal. Gently massage base of ear canal to loosen wax and debris. Wipe away excess with soft absorbent material.

- **For first line of treatment of non-complicated *Malassezia* and yeast/bacterial otitis** – Apply twice a day for 7 to 10 days or until resolution.
- **For support therapy for complicated otitis** – Apply once a day until resolution and follow by Rx product (antibiotic/antifungal/steroid solution) 12 hours later. Due to its cleansing, keratolytic, drying and antimicrobial properties, ABELIA® MalaOtic prepares the ear canal for an optimal antibiotic/antifungal treatment.
- **For maintenance or routine flushing in chronic otitis** – Apply once a week as a cerumenolytic, keratolytic, drying and antiseptic agent.

Cautions: Do not use in eyes.

Effectiveness

Hernán-Gomez González, C. Treatment and prevention of 40 cases of otitis externa in dogs caused by *Malassezia* spp. with a boric acid, glycolic acid and ceramides solution (ABELIA® MalaOtic)

- Open uncontrolled retrospective field study with 40 dogs diagnosed with *Malassezia* spp.
- Clinical signs resolved favorably in 95% of dogs.
- Average duration of treatment 15 days

References

[1] Benson CE. Susceptibility of selected otitis externa pathogens to individual and mixtures of acetic and boric acids. Proc Annu Am Acad Vet Derm/Am Coll Vet Derm 1998;14:121.
[2] Gotthelf LN, Young SE. New treatment of *Malassezia* otitis externa in dogs. Vet Forum 1997;14:46-53.
[3] Bassett RJ, Burton GG, Robson DC, Hepworth G. Efficacy of an acetic acid and boric acid ear cleaning solution for the treatment and prophylaxis of *Malassezia* sp. Otitis Externa. Aust Vet Practit 2004 Jun;34(2):79-82

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