



PAW BY BLACKMORES MEDIDERM® GENTLE MEDICATED SHAMPOO

MediDerm® Gentle Medicated Shampoo is an effective low irritant, antibacterial and antifungal shampoo to aid in the treatment of canine skin infections. With only a 5 minute contact time, it utilises the active, piroctone olamine, to gently, safely & effectively treat infections.



BENEFITS:

- ✔ **Clinically proven** to effectively treat superficial dermatitis, pyoderma and seborrhoea, and the pruritus associated with these conditions.
- ✔ Controls *Staphylococcus pseudintermedius* and *Malassezia pachydermatis*.
- ✔ **Very safe to use**, no gloves or goggles required.
- ✔ **Gentle low-irritant** formula, minimising the impact on the pet's skin barrier function
- ✔ **Removes** scaly skin and grease.
- ✔ **Fast**, only a 5 minute contact time required.
- ✔ Ideal for long term management of recurrent skin infections.
- ✔ APVMA registered

WHEN TO RECOMMEND:

- ✔ Bacterial Skin Disorders: Staphylococcal caused infections including bacterial superficial dermatitis, pyoderma, (hot spots), juvenile pustular dermatitis, mucocutaneous pyoderma, folliculitis.
- ✔ Fungal Skin Disorders: Including *Malassezia* dermatitis, seborrhoea.
- ✔ As an adjunctive therapy when treating the following primary skin conditions, which predispose dogs to recurrent skin infections:
 - Parasitic skin disorders: including flea allergy dermatitis, demodicosis, sarcoptic mange.
 - Immunologic skin disorders: including atopic dermatitis, adverse food reactions, contact allergies.
 - Metabolic skin conditions: including hypothyroidism and hyperadrenocorticism.
 - Neoplastic skin conditions.

Contains: 7.21g/L
Piroctone olamine

Size: 200ml tube & 500ml bottle. Also available as duo pack with PAW NutriDerm® Replenishing Conditioner - 2x 200ml in a box.

Application: Wet animal thoroughly with clean water. Apply approx 25ml/10kg body weight of MediDerm® Gentle Medicated Shampoo at several points and gently massage evenly through the coat and onto the skin to form a rich even lather. Leave on for 5 minutes, and then rinse with clean water.

Acute treatment

Use twice weekly for 3 weeks.

Regular treatment

Once a week for 6 weeks for infection prone skin

EDUCATION

Piroctone olamine

Piroctone olamine (PO) is an ethanolamine salt¹ and broad-spectrum antimicrobial of the hydroxypyridone class. The chemical was introduced in the 1980s as an antifungal structurally unrelated to the common azole derivatives,^{2,3} but was not included on the Australian Register of Therapeutic Goods until 2006, and later approved by the APVMA.

The mechanism of action of PO is still not fully known but early studies suggested interference with microbial cell metabolism, which inhibits uptake of essential amino acids and ions. This leads to growth inhibition and cell death due to membrane alteration and rupture.^{3,6}

Hair has become the natural domain of PO because the compound has a strong affinity for keratin, the key protein in hair, skin and nails.⁷ The higher the chemical's concentration in solution, the greater its adsorption to keratin, independent of pH.⁴ This allows for residual activity beyond the application period, extending the active's contact and treatment time.

In one canine study of a shampoo containing 0.5% PO, the antifungal activity on *Malassezia* spp. appeared to increase progressively for at least four days post-treatment, indicating persistent efficacy independent of a 'washing effect'.⁵ PO possesses a broad spectrum of antimicrobial activity, including both gram-positive and gram-negative bacteria, fungi and yeasts.⁷ It is active against clinically relevant microbes in dogs, including *Staphylococcus pseudintermedius*, *Malassezia pachydermatis*, *Trichophyton mentagrophytes*, *Microsporium canis* and *Microsporium gypseum*. MICs range from 0.49 to 62.5 µg/mL for clinically relevant microbes.⁸

PO has an extremely wide safety margin seen in toxicity studies across several species, including dogs. Dermal irritation studies on humans and guinea pigs showed

no sensitising or photosensitising effects.⁸ Specific studies on breeding, pregnant and lactating dogs have not been conducted, but studies on reproductive toxicology were conducted on laboratory species and their progeny. PO was shown to possess no mutagenic, carcinogenic and teratogenic properties.^{7,8}

In a randomised trial involving 97 dogs with superficial skin infections (caused primarily by *Staphylococcus* spp. and/or *Malassezia* spp.), a shampoo containing 0.7% PO was compared to a control containing 2% chlorhexidine and 2% miconazole. Treatment was continued twice weekly for three weeks, with a five-minute contact time for the PO containing shampoo and a 10-minute contact time for the control shampoo. Both clinical dermatitis scores (based on presence of erythema, papules, pustules, crust and alopecia) and skin and coat scores (based on presence of seborrhoea, odour, scale, pruritis, hair gloss, hair moisture and softness) were assessed after 9 and 21 days of treatment. Additionally, microbial testing was conducted at these times to assess the microbial mass of *Malassezia pachydermatis* and *Staphylococcal* spp. on the skin surface.⁸

Results indicated no significant difference between the average improvement rates for efficacy against target organisms and clinical dermatitis scores, however the PO containing shampoo was more effective at improving skin and hair condition, likely reflecting its low irritancy.⁸

Warnings/prescribing information

- For animal use only.
- Wash hands after use.
- No data has been provided for use in pregnant or lactating dogs.
- Avoid contact with eyes. If product gets in eyes, rinse well with water.
- Store below 30°C (room temperature).

REFERENCES:

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4. Functional Chemicals Division. 2000. Take care of your customers' hair: Antidandruff Active Ingredient Octopirox. Clariant: Germany.
5. Bourdeau P., et al. 2006. An in vivo procedure to evaluate antifungal agents on *Malassezia pachydermatis* in dogs: example with a piroctone olamine containing shampoo. J de Mycologie Médicale, 16:9-15.
6. Dubini F., et al. 2005. In vitro Antimycotic Activity and Nail Permeation Models of a Piroctone Olamine (Octopirox) Containing Transungual Water Soluble Technology. Drug Res, 55(8):478-83.
7. Hoechst AG. Octopirox (technical monograph). Frankfurt.
8. Blackmores Ltd. data on file.