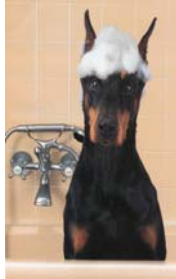


What Do I Do With This Shampoo??



William H. Miller, Jr. VMD DACVD
College of Veterinary Medicine
Cornell University
Ithaca, NY

Topical Plus Systemic

de Jaham. Vet Ther 4:94, 2003

Twenty dogs with widespread superficial staphylococcal infection
Ten with cephalixin: cure in 38 days
Ten with cephalixin and ethyl lactate
(twice weekly): cure in 29 days

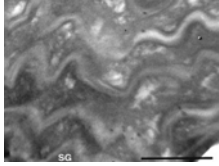
Owners prefer treatment #2 - coat quality and decreased odor

Leading Shampoo Manufacturers

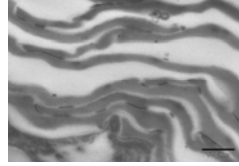
- Bayer (DVM)
- Dechra
- Sogeval
- Vetoquinol
- Virbac



The Stratum Corneum



Healthy dog



Atopic dog

Courtesy: Virbac

Reasons to Bathe

- Grooming
- Control of pruritus
- Control of seborrheic conditions
- Control of infectious conditions

Keratomodulatory Therapy Considerations

- Etiology
- Nature of skin abnormalities
 - Dry
 - Waxy
 - Oily
- Secondary infections

Topical Keratomodulatory Agents

- | | |
|------------------|-------------------|
| Sulfur | Benzoyl peroxide |
| Salicylic acid | Urea/lactic acid |
| Tar | Colloidal oatmeal |
| Selenium sulfide | Propylene glycol |

Bayer DVM Antiseborrheic Products

Dechra Antiseborrheic Products



- Hydrolyzed oat protein
- Safflower oil
- Ceramide complex

Sogeval Antiseborrheic Products



Phytosphingosine HCL
Soothex®
Fomblin
Green Tea fragrance

Vetoquinol Antiseborrheic Products



Novasome® encapsulated moisturizers

Virbac Antiseborrheic Products



Sodium Salicylate (as Salicylic Acid) 1.0%
Zinc Gluconate 0.5%
Pyridoxine HCl 0.5%

Benzoyl Peroxide



Keratolytic (benzoic acid)
Keratoplastic (cytostatic)
Antibacterial (benzoyl peroxy radicals)
Degreasing
Comedolytic (“follicular flush”)
Antipruritic (local anesthesia)
Astringent
Enhance wound healing (increased oxygen tension)
Side effects
Irritation
Drying
Bleaching

2.5% benzoyl peroxide, 1% sulfur,
1% salicylic acid, ceramide complex

Selenium Sulfide



Keratolytic (hydrogen bonds)
Keratoplastic (cytostatic)
Potent degreaser
Antiyeast ($\geq 1\%$)
Antiparasitic ($\geq 1\%$)
Side effects
Irritation
Drying
Staining

Mixed Modality Products

- Antibacterial
- Antifungal
- Antiseborrheic

Dechra Mixed Modality Products



Chlorhexidine gluconate: 4%
USP tris-EDTA
± Hydrocortisone: 1%

Dechra Mixed Modality Products



Miconazole: 2%
Chlorhexidine: 2%
USP tris-EDTA
Ceramide complex

Dechra Mixed Modality Products



Acetic acid: 2%
Boric acid: 2%

Dechra Mixed Modality Products



Ketoconazole:1%
Chlorhexidine: 2%
Acetic acid:2%

Dechra Mixed Modality Products



Acetic acid: 1%
Boric acid: 2%
Hydrocortisone: 1%
Ketoconazole: 0.15%
Ceramide complex

Microvesicle Technology

- Novasomes (Vetoquinol)
- Spherulites (Virbac)
- Time-release moisturization
- Time-release of active ingredient

Microvesicle Technology



As you can see, the Spherallite microspheres actually adhere to the hair shaft after shampooing, forming a film that time-releases its ingredients into the skin and haircoat.

The Spherallite innovation:

- Keeps moisture on the haircoat after bathing to keep hair both shiny and healthy.
- Softens, moisturizes and helps to protect the skin of your pet.



Virbac Mixed Modality Products



Chlorhexidine Gluconate: 2%
Ketoconazole: 1%

Vetoquinol Mixed Modality Products

Sebozole Shampoo



Miconazole Nitrate 2%
Chloroxylenol 1%
Purified Water
Sodium Olefin Sulfonate
Polyethylene Glycol
150 Pentaerythrityl Tetrastearate
Lauramide DEA
Propylene Glycol
Sodium Thiosulfate
Salicylic Acid
Carbopol
Sodium Hydroxide

Vetoquinol Mixed Modality Products

Universal Medicated Shampoo



Chloroxylenol 2%
Salicylic Acid 2%
Sodium Thiosulfate 2% (source of soluble sulfur)
USP Purified Water
Sodium Olefin Sulfonate
Propylene Glycol
Cocamidopropyl Betaine
Polyquaternium-10
Sodium Hydroxide

Vetoquinol Mixed Modality Products

MPA Seba-Hex™ Shampoo



Chlorhexidine Gluconate 2%
Salicylic Acid 2%
Sulfur 2%
USP Purified Water
Sodium Olefin Sulfonate
NM7
Cocamidopropyl Betaine
Glycol Stearate
Hydrolyzed Keratin
Glycol Disterate
Cetyl Alcohol
Sodium Hydroxide

New Generation Anti-infectives

- Developed in response to developing resistance of bacterial and fungal organisms
- Long term safety and efficacy data not available

Zymox System



Lactoferrin, lactoperoxidase,
lysozyme ± Vit D3
Active against methicillin-resistant
Staph pseudintermedius &
Schleiferi, *Pseudomonas*, &
Malassezia

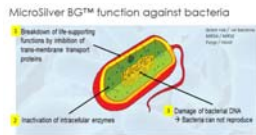
Accelerated Hydrogen Peroxides



MicroSilver BG™



Broad spectrum antimicrobial
efficacy
Nonabsorbable and remains on
the surface for numerous hours



Paleodermatologic Agents

- **Oxychlorines:** Sodium hypochlorite and hypochlorous acid (Clorox® bleach (5.25 or 8.6%); Vetericyn®) – 0.5%
- **Lime sulfur:** 2%
- **Acetic acid:** 2.5-5%

Lime Sulfur



Keratolytic (H₂S)
Keratoplastic (cytostatic)
Antibacterial (pentathionic acid + H₂S)
Antifungal (pentathionic acid + H₂S)
Antiparasitic (polythionic acid + H₂S)
Antipruritic
Astringent
Degreasing
Odor, stain, tarnish, drying, irritation

97.8% sulfurated lime solution