

# Cutania<sup>™</sup> Lime Sulfur Dip

## Antimicrobial, Antiparasitic Lime Sulfur Concentrate

### Introduction

Dermatophytosis, also known as ringworm, is a fungal infection of the skin, hair, and nails that can affect dogs, cats, and humans. Although more than 20 different species have been identified, dermatophytosis is mainly caused by *Microsporum canis* and *Trichophyton mentagrophytes*. The actual prevalence of dermatophytosis is unknown, but warm regions show an increasing trend.

Ringworm is contagious and transmission occurs by direct contact with the fungus. It may be passed by direct contact with an infected animal or via contaminated objects and surfaces. Adult animals can become asymptomatic carriers. Because the fungal spores may remain in the environment (grooming tools, pet bedding, furniture...) for up to a year, it can become a major problem in multipet households, shelters, and rescue facilities.

Dermatophytosis is usually a self-limiting disease, but in young or immunosuppressed animals, it can cause circular alopecia and desquamation.

Mange is a parasitic skin disease caused by microscopic mites. Demodectic mange is caused by *Demodex* spp. which can reside in the hair follicles or in the stratum corneum. As long as the body's immune system is functioning properly, these mites cause no harm. Demodectic mange most often occurs when an animal has an immature, weakened or compromised immune system, allowing the number of mites to increase rapidly.

Sarcoptic mange is an infectious and zoonotic disease caused by *Sarcoptes scabiei*. Although it's more frequent in dogs, can affect cats and other mammals like ferrets, guinea pigs, rabbits, sheep or goats. Feline sarcoptic mange is caused by *Notoedres cati* and rarely by *S. scabiei*. Transmission risk increases in highly dense populated facilities from direct contact with an infested animal.

Some systemic treatments can be harmful for certain breeds, very young puppies or kittens, and animals with other diseases. Therefore, topical preparations are used to treat these animals.

Lime sulfur is an antimicrobial and antiparasitic solution specifically designed to fight off serious skin conditions associated with non-specific dermatitis and parasitic skin infections and infestations. The product is particularly beneficial for treating ringworm infections, demodectic mange infections and lice infestations. In addition to killing mites, lime sulfur is powerful against bacteria and fungi.

### Mechanism of Action

- Lime sulfur has antibacterial and antifungal/anti-yeast properties secondary to the formation of pentathionic acid and hydrogen sulfide after application.
- Lime sulfur may also have keratolytic, keratoplastic, antiparasitic, and antipruritic effects.
- The inhibitory effect on growth of some bacteria is believed to be due the inactivation of sulfhydryl groups contained in bacterial enzymatic systems<sup>7,8</sup>.



For Dogs, Cats,  
& Horses



4 fl. oz. (118 ml)

### Characteristics

- Concentrated lime sulfur solution.
- Effective and affordable treatment for fungal dermatosis such as ringworm, and *Malassezia*.
- Appropriate for mites and lice management.
- Very safe diluted formula, even for very young animals, (puppies, kittens and foals) and immunocompromised individuals.
- Treatment of choice in shelters, rescue and breeding centers.
- Measuring cup included to allow using only the amount of product needed in each situation.

### Recommended Use

- For non-specific dermatosis and skin conditions in dogs, puppies, cat, kittens, and horses that respond to sulfurated lime.
- For general dermatophytosis (fungal infections) and as adjunctive treatment of yeast (i.e. *Malassezia*) dermatitis.
- For management of mites and lice infestation.
- As a part of Dermatophilosis and Dermatophytosis treatment in horses.

#### Active ingredient

Calcium polysulfides	97.8%
----------------------	-------

Inert ingredients 2.2%

# Cutania<sup>™</sup>

## Lime Sulfur Dip

### Application

- Shampoo and rinse animal prior to application.
- Carefully pour diluted CUTANIA Lime Sulfur Dip onto haircoat. If the affected area is local, the diluted solution may be applied just in that area. Make sure affected areas are covered.
- DO NOT RINSE and DO NOT DRY. Allow animal to dry. Do not allow animal to groom and lick fur until product dries. If needed, apply a protective collar to prevent licking fur until it dries.
- May apply every 5-7 days as needed or directed by your veterinarian.

### Directions for Use

#### MUST BE DILUTED BEFORE USE

- Remove jewelry from hands and arms. Wear protective gloves when mixing and applying product.
- May consider wearing safety goggles.
- Use a clean container for mixing product.

### Dilution

- Shake well the 4 fl. oz. of CUTANIA Lime Sulfur Dip.
- Mix according to volume needed – \*Measuring cup included.

CUTANIA <sup>®</sup> Lime Sulfur Dip	Water
Entire content	1 gallon
1 measuring cup* (30 ml)	¼ gallon (1 quarter)
½ measuring cup* (15 ml)	16 fl. oz.

- Swirl container gently to mix well.
- For chronic or resistant cases, consult your veterinarian who may recommend doubling the concentration.



### Cautions

For animal and topical use only. Do not exceed dilution. May cause skin irritation. If irritation develops or worsens, stop product use, and contact your veterinarian. Avoid contact with eyes and mouth. If contact occurs, rinse thoroughly with water for at least 15 minutes and contact your veterinarian immediately. If ingestion occurs, do not induce vomiting.

### Storage

Store at room temperature (59-86° F). Do not reuse empty container. If product crusting occurs around cap, immerse sealed container in warm water for 15 minutes and then shake well.

### Warnings

May cause temporary staining of hair and skin of animals. Will stain skin, clothing, jewelry, and porous surfaces (such as cement). Product has unpleasant odor. Use in well ventilated area. Keep out of reach of children and animals. Wash hands after use.

### References

1. Moriello KA, Coyner K, Paterson S, Mignon B. Diagnosis and treatment of dermatophytosis in dogs and cats. Clinical Consensus Guidelines of the World Association of Veterinary Dermatologists. Vet Dermatol 2017; 28:266-e68.
2. Frymus T, Gruffydd-Jones T, Pennisi MG, Addie D, Belák S, Boucraut-Baralon C, Egberink H, Hartmann K, Hosie, MJ, Lloret A, Lutz H, Marsilio F, Möstl K, Radford AD, Thiry E, Truyen U, Horzinek MC. Dermatophytosis in cats: ABCD guidelines on prevention and management. Journal of Feline Medicine and Surgery (2013) 15, 598-604.
3. Paryuni AD, Indarjulianto S, Widayanti S, Widyarini S. Dermatophytosis in companion animals: A review. Veterinary World EISSN:2231-0916. www.veterinaryworld.org/Vol.13/June-2020/22.pdf
4. Kandil AHAF, Atwa SMM. Ringworm in dogs. Mansoura Veterinary Medical Journal 22:1 (2020) 33-37.
5. Cat and dog: Epidemiological survey of dermatophytosis in Europe (no date) ECMM. Available at: <https://www.ecmm.info/working-groups/cat-dog-epidemiological-survey-dermatophytosis-europe/>.
6. White D.S, Yu A. A. Diagnosis and treatment of the pruritic horse. In "Equine Dermatology". 2006. AAEP Proceedings, Vol. 52,
7. Koch, S.N., F., T.S.M. and Plumb, D.C. (2012) Canine and feline dermatology drug handbook. Ames: Wiley-Blackwell.
8. Gupta AK, Nicol K. The use of sulfur in dermatology. J Drugs Dermatol. 2004 Jul-Aug;3(4):427-31.