

## Kennel Disinfectants for *Microsporium canis* and *Trichophyton spp.*

Moriello K.

### ABSTRACT

Environmental disinfection is an important component of the prevention and control of dermatophytosis and is of particular importance in facilities housing large numbers of animals such as shelters and boarding kennels. Many factors need to be considered when selecting a kennel disinfectant including, but not limited to, efficacy, lack of toxicity or irritancy to animals and workers, cost, ease of application, and lack of corrosiveness to surfaces. Therefore, a comprehensive analysis was undertaken to determine if Accelerated Hydrogen Peroxide® (AHP®) would be a suitable alternative to other chemistries with known limitations.

### BACKGROUND

Sodium hypochlorite is a commonly used disinfectant in multi-animal facilities, however there is an increasing interest in using compounds that are inexpensive, have low toxicity profiles making it easier on users and the environment, and are less corrosive to cages. Therefore, the objective of this study was to determine the antifungal efficacy of six kennel disinfectants against a robust challenge of naturally infective material.

### STUDY

The antifungal efficacy of commonly used kennel disinfectants for large surfaces was tested using naturally infective material from untreated animals (*Microsporium canis* and *Trichophyton sp.*) leaving visible fluorescing hairs and/or scales in the test inoculum. The disinfectants tested included two dilutions of

sodium hypochlorite (1:32 and 1:100), enilconazole (1:100), AHP (1:16), potassium peroxymonosulfate (1% and 2%) and calcium hypochlorite (dry bleach). The disinfectants were tested at a 1:10, 1:5, and 1:1 dilution of the test inoculum with a 10-minute contact time. Good efficacy was defined as a disinfectant resulting in no growth.

### RESULTS

This study resulted in 100% fungicidal efficacy against both pathogens for enilconazole, AHP, 2% potassium peroxymonosulfate, and all dilutions of sodium hypochlorite. In this study, 1% potassium peroxymonosulfate was not considered to have good efficacy and calcium hypochlorite was considered to have no fungicidal activity against naturally infective material.

### CONCLUSION

The results from this robust fungal spore challenge suggests that AHP products are an option for environmental disinfection of surfaces exposed to *Microsporium canis* and *Trichophyton sp.* after appropriate gross decontamination and mechanical cleaning with a detergent. Products such as AHP with proven efficacy should be considered to avoid problems associated with sodium hypochlorite.

### REFERENCE

Moriello, K. Kennel Disinfectants for *Microsporium canis* and *Trichophyton sp.* *Veterinary Medicine International*. Volume 2015, Article ID 853937