



Veterinary Products Update

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Topical Antiseptics – A comparison study of Ciderm®SP and Vetericyn®

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Using a standardized antimicrobial inhibition test with 7mm filter paper discs, two topical antimicrobial agents were compared for efficacy based on the inhibition of growth of 3 major animal pathogens. The microorganisms tested included *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa*. These organisms are often associated with dermal infections in dogs and cats. The organisms used were obtained from 3 dogs with clinical dermatitis or otitis.

The following agents were tested

1) **Ciderm®SP** (Frontier Pharmaceutical Inc. Melville NY) (160ppm Chlorine dioxide complex in aqueous base) (Lot # 2869)

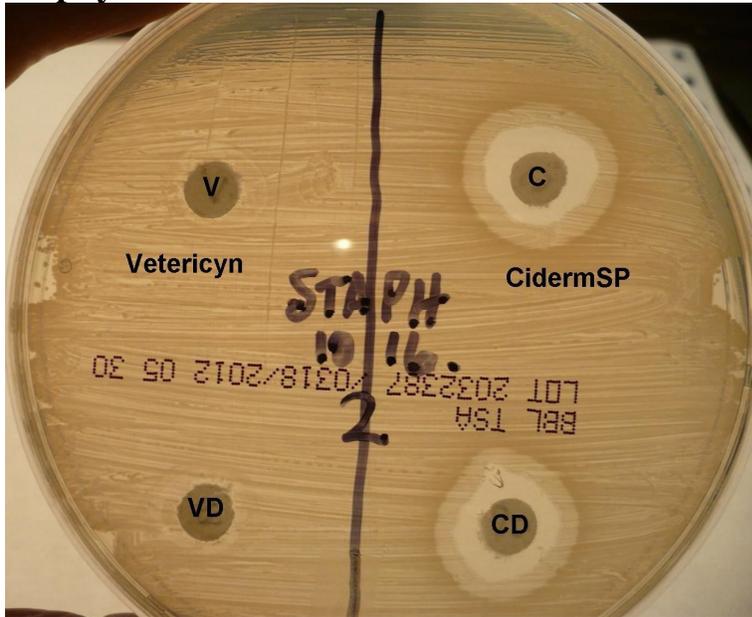
2) **Vetericyn®** (Innoviacyn Inc. Rialto CA) (Hypochlorous Acid 0.003%, Sodium hypochlorite 0.004%) (Lot # 032012-01)

The 2 agents were tested at full and half strength using sterile distilled water as diluent.

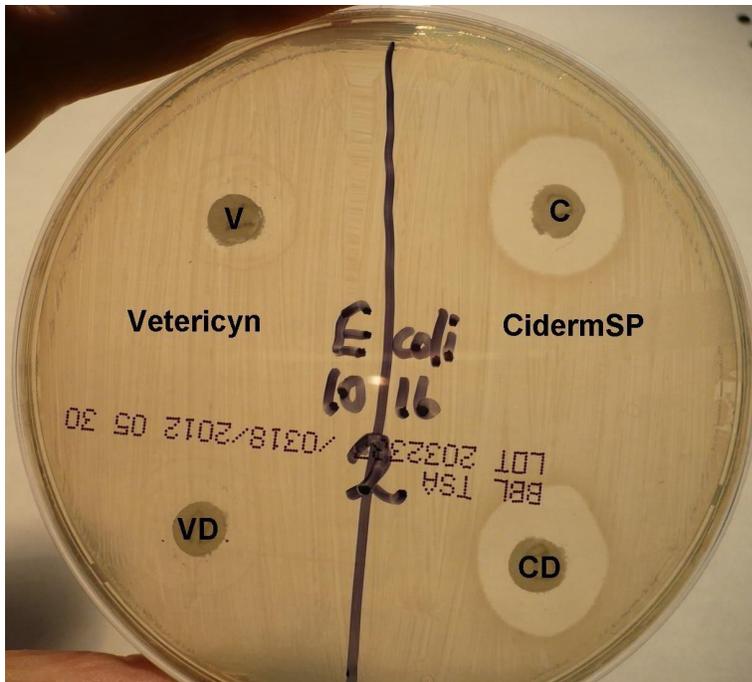
Method : Pure cultures of the 3 pathogens were obtained. The organisms were inoculated onto 9cm sized Trypticase Agar Plates (BBL) by smearing the organism evenly over the media surface using a sterile cotton swab. Discs of filter paper 7mm in diameter were labeled and distributed onto the media. One drop of full undiluted **Ciderm® SP** (C) and **Vetericyn®** (V) were added to the respective disc and allowed to diffuse into the media. One drop of diluted **Ciderm® SP** (CD) and **Vetericyn®** (VD) were added to the respective discs.

The plates were incubated at 37^o C for 20 hours. The plates were inspected and photographed following incubation. A clear zone around the disc indicated inhibition of growth of the organism.

Results: Results are depicted in the photographs below
Staphylococcus aureus:



Escherichia coli



Pseudomonas aeruginosa:



Discussion

Both products showed a degree of efficacy in inhibiting the growth of the specific microorganism around the respective discs of filter paper. The size of the ring of inhibition was variable except for **Ciderm® SP** which displayed a relatively consistent size rim of inhibition for all organisms tested even when diluted. **Vetericyn®** showed only a thin rim of activity against *E.coli* and reduced activity at dilution for *E.coli* and *Staph aureus*.

Conclusion:

Although both products show efficacy against the pathogens tested at full strength Ciderm SP maintained activity in diluted strength. This may have significance in vivo when diluted by inflammatory exudate.

Study documented Oct 16th 2012

Ciderm® SP is a clear colorless liquid containing Chlorine Dioxide Complex in an aqueous base. It is non irritating, effective in antiseptics against bacteria, yeast and viral organisms. The biocidal effects are rapid and the product quickly breaks down to inert ingredients, CO₂ and chloride. Being short acting the leukocytes associated with the inflammation repair are quickly replaced unlike other antiseptics that remain biocidal to both microbes and leukocytes. Chlorine dioxide has also been shown to assist with healing of underlying connective tissue. For more information visit www.cidermsp.com
