

# SAFETY STUDY OF VETRI REPEL IN CATS

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## INTRODUCTION

**Vetri Repel Spray** is a unique combination of lemongrass oil, cinnamon oil, sesame oil, and castor oil. The safe use of our flea and tick formulation, **Vetri Repel Spray**, has been demonstrated by extensive evaluation. 15 domestic cats experienced no adverse comedogenic (clogging of the pores) or skin reactions at application rates of up to three times per day over a 10 week period.

## HYPOTHESIS

External spray application of **Vetri Repel Spray** was applied to cats at 0, 1, 7 (one application per day), 14 (two applications per day), and 21 (three applications per day) times per week over a 10 week period will have no effect on any observational or microscopic examination for comedogenicity. The application rates will also have no adverse reactions as observed in the following categories: vomiting, regurgitation, nasal discharge, oral cavity abnormalities, eye irritation, lethargy, diarrhea/loose stool, urticaria, alopecia, dermatitis, pruritus/excessive scratching, behavioral change, urinating/defecating outside of litter box, cosmetic hair changes, skin/fur chewing, compulsive licking, and anorexia.

## OBJECTIVE

To determine if a sample of 15 cats exposed to an external application of **Vetri Repel Spray** will manifest commonly observed adverse reactions and comedogenicity in a superficial skin scraping, hair microscopic examination, and subjective scoring assay. These 15 subjects are part of the 102 above mentioned total cats tested for safety.

## ANIMALS

Fifteen domestic cats were scientifically selected from a genetically consistent, nineteen year old research colony. Five clinically normal neutered females, five intact male cats and five intact female cats were randomly divided into one control and four test groups. All cats completed the ten week study.

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## PROCEDURE

Prior to entering the study each subject was examined by a professional cat expert with extensive experience in dermatology, to make sure none of the cats had identifiable skin conditions. Baseline data was recorded for each cat, and each had a photographic record included in its file. Identification numbers were assigned to each cat name. Each cat number was unknown to the technician recording daily observation and performing required husbandry practices.

Daily observations were recorded for the first 21 days, and once per week for the remaining trial period. Any adverse or abnormal occurrences were recorded during the trial. Cats were evaluated for: vomiting, regurgitation, nasal discharge, oral cavity abnormalities, eye irritation, lethargy, diarrhea/loose stool, urticaria, alopecia, dermatitis, pruritus/excessive scratching, behavioral change, urinating/defecating outside of litter box, cosmetic hair changes, skin/fur chewing, compulsive licking, and anorexia.

Superficial skin scrapings, hair microscopic examination, and a subjective scoring assay were conducted weekly. To ensure consistency, a predefined 36 square centimeter template area was used for weekly skin scrapings, hair samples, and subjective scoring assays.

## RESULTS

The **Vetri Repel Spray** was well tolerated when applied to cats at 1, 7 (one application daily), 14 (two applications daily), and 21 (three applications daily) times per week over a 10 week period. No evidence of toxicity was noted in any of the 15 cats completing the study. Natural hair coat changes during normal seasonal environmental exposure were taken into account. One Cat from the daily application group exhibited a higher frequency of licking prior to the test and experienced some skin dryness at the ventromedial area of the tail at the completion of the trial. The dryness was not attributed to the level of application.

## CONCLUSION

External application of **Vetri Repel Spray** at 1, 7 (one application daily), 14 (two applications daily), and 21 (three applications daily) times per week over a 10 week period did not result in adverse comedogenic effects or commonly observed adverse reactions as compared to the control cats.

## CLINICAL RELEVANCE

In a target animal safety study, **Vetri Repel Spray** was well tolerated when given at 1, 7 (one application daily), 14 (two applications daily), and 21 (three applications daily) times per week over a 10 week period. Although natural flea and tick products are becoming more available to veterinarians and pet owners, most products available in the marketplace have not undergone controlled safety studies using the intended target animals or an acceptable animal model. This initial safety study demonstrated that **Vetri Repel Spray** is safe when used as directed. The unique combination of lemongrass oil, cinnamon oil, sesame oil, and castor oil; as found in **Vetri Repel Spray**, caused no measurable physiological or biological changes in healthy neutered and intact females, and intact male domestic cats when applied up to three times daily over a 10 week period.