

# **Efficacy Determination of a New Formulation of Optima 365™ On Dog Hair Coat Quality and Biology**

Debra Nickelson DVM, MBA  
Veterinary Products Laboratories  
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## Introduction:

Shedding of hair and dander is a problem for many dog owners, especially when the owners exhibit allergies or other sensitivities. Dogs that shed excessively, especially during the “non season,” may also suffer from dermatological conditions. There have been several oral and topical products available to improve the condition of dogs’ skin and coat and, as a result, reduce shedding. Owners do not usually enjoy bathing their dogs on a regular basis, preferring to give an oral treat or add a supplement to the food. Unfortunately, oral supplements can cause excess weight gain in under-active dogs.

A new formulation of Optima 365, an oral supplement marketed by Veterinary Products Laboratories, reduces shedding without causing undesirable weight gain. Optima 365 includes:

- Omega 6 to 3 fatty acids in an ideal ratio of 7.7:1
- Optimal concentration of marine and vegetable oils, including DHA, EPA and ALA
- Antioxidant vitamins A and E
- Biotin to promote skin health and hair follicle development
- Amino acids, serine and praline for collagen production
- Zinc for proper hair development
- Copper for proper hair development

## Purpose:

In a recent study, dogs in different treatment groups were given one of several different products to reduce shedding. The purpose of this study was to compare the efficacy of several oral supplements on dog hair coat quality, dander weight, shedding, and zinc concentration of hair.

## Methods:

Thirty-two random source mixed breed dogs weighing between 8 and 40 kg were allocated into four different groups by type of hair coat. The four treatment groups included:

- All Oils Mixture
- Shed Solution™
- Shed Stop®
- Optima 365

Data on the following parameters were collected for each dog several times both prior to and following initiation of treatment.

- Dander weight
- Hair weight
- Hair growth rate
- Zinc concentration in hair
- Hair length
- Body weight
- Hair shaft morphology by scanning electron microscope

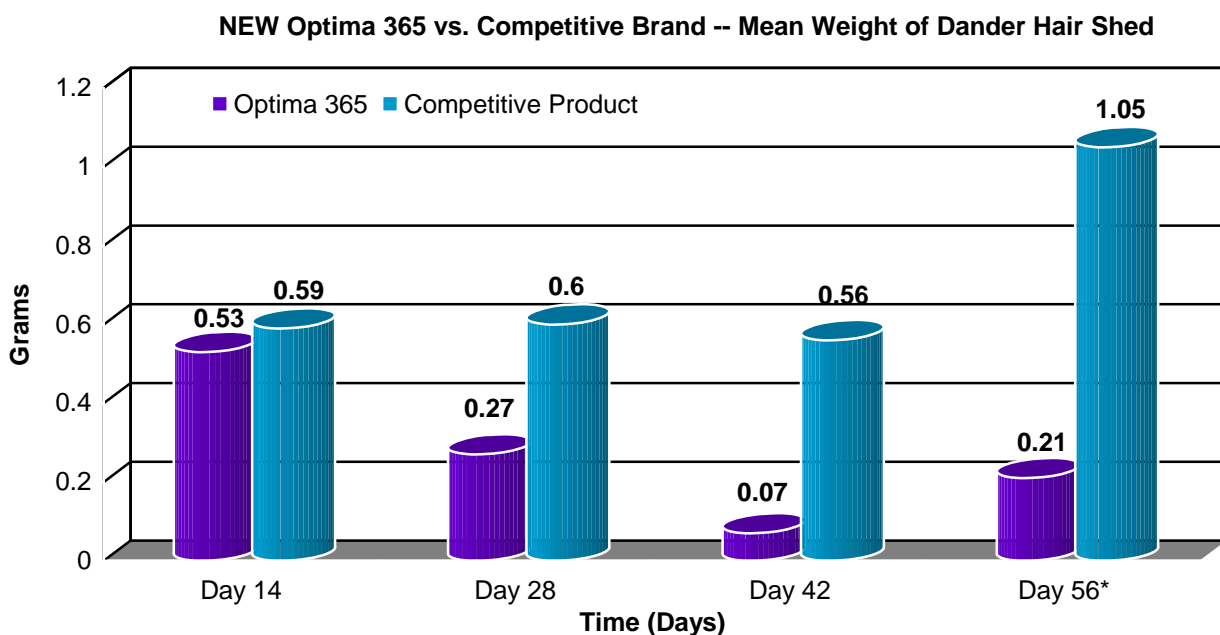
Data collected at several intervals before treatment was statistically evaluated for continuity while data collected during the treatment period was compared with the pretreatment values for each dog.

Results:

Prior to initiation of treatment, none of the study parameters varied significantly among the four treatment groups in regard to dander weight, dog weight, zinc concentration in hair, and hair length. During the treatment period, the overall variation among the groups was not significant for dander weight, dog weight, zinc concentration, or hair length. However, the variation from pretreatment to treatment duration was very significant for dander weight.

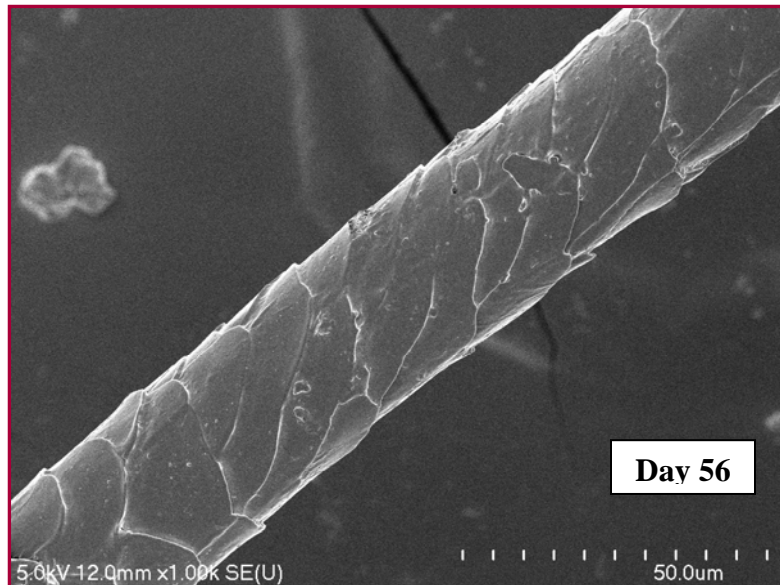
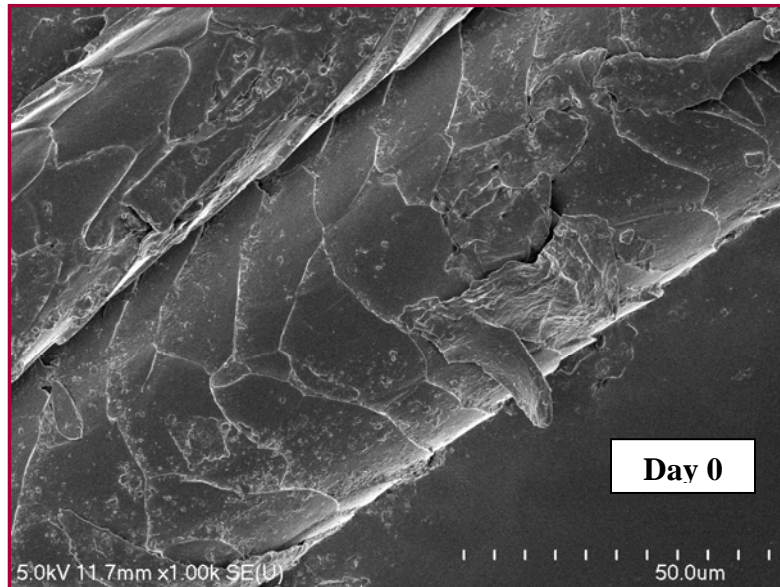
Figure 1 presents the statistical significance of the variance in mean weight of dander and shed hair for two treatment groups by study day. As seen in this graph, the mean weight of dander and shed hair for dogs treated with the new formulation of Optima 365 decreased steadily from days 14 to 42 following initiation of treatment. There was an overall 51.6% decrease in mean dander weight between days 14 and 56. On the other hand, mean dander weight for dogs treated with Shed Stop remained relatively steady between study days 14 and 42, followed by a considerable increase after day 42. In fact, the mean dander weight for the Shed Stop treatment group increased by 89.1% between days 14 and 56.

Figure 1



Scanning Electron Microscopy.

Hair samples from four different dogs in all treatment groups were collected from the lateral chest region and processed for electron microscopy scanning at various times during this trial. Hair samples were examined two weeks before initiation of the supplement, the day supplementation began and 14 days and 56 days into supplementation. The following micrographs show the improvement of a hair follicle from a dog fed the new formulation of Optima 365 from day 0 to the completion of study. The smooth and healthy appearance of the hair shaft after 56 days of supplementation could indicate a healthy hair coat.



Discussion:

Based on this study, dogs treated with the new formulation of Optima 365 had reduced dander and shedding by 71% by day 56 of supplementation. Dogs treated with the new formulation of Optima 365 had significantly reduced shedding as compared with Shed Stop during their treatment period. In addition, dogs treated with the new formulation of Optima 365 showed improved coat condition based on electron microscopy. Dogs can be expected to have reduced shedding and improved skin and coat within 3 to 4 weeks following continuous treatment with the new formulation of Optima 365.

Shed Stop® is a registered trademark of Stobac Enterprises, Inc.  
Shed Solution™ is a trademark of Farnam Companies, Inc.

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