



DOG'S COAT CARE ACCORDING TO SHAMPOOS

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Introduction

Living closely together with our pets, we place increased value on their appearance. The hair and skin of our pets has become more of our focus. We want a companion who has a shiny hair coat, clean appearance and pleasant odor (1). The majority of cosmetics for dogs are shampoos. These are used not only to wash the coat and improve its structural properties; but also as adjuvant treatment in various skin diseases (2). The dogs' owners in Lithuania are beginning carefully to take care of their pet well-being, skin health and appearance of the coat. There are many cosmetic devices for this reason and the market is expanding by the addition of new products. So, the purpose of this work was to evaluate shampoos effects to dogs' hair for daily coat care.



German jagdterrier (6 years old)



Labrador retriever (6 years old)



German shepherd (9 years old)

Fig. 1. Dogs involved in research

Methods and Materials

There were three dogs (living inside) in the research work involved (German jagdterrier, Labrador retriever, German shepherd), and three shampoos for daily coat care for research work selected randomly: X1, X2 and X3. Dogs involved in research were bathed with each shampoo three times (once a week). There were one week break before starting to use following shampoo. Shampoos viscosity was measured by rotary viscometer NDJ – 1, hydrogen ion concentration was measured by pH meter–thermometer HD2305.0. Some hair of each dog were used for analysis by scanning electron microscope FEI Quanta 200 FEG. There were taken hair photos' of cross-section. Other hair was used to evaluate hair's ratio of convolution (3). Research work was made with an agreement of the owner of each dog and by following the Republic of Lithuania law of animal care, storage and using (1997) also the Republic of Lithuania law of animal welfare and protection (1997).

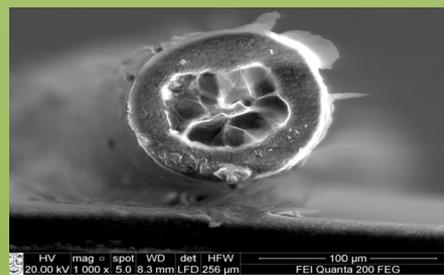


Fig. 2. Ridge's hair cross – section photo of german jagdterrier (before bathing)

Table 1. Properties of ridge's and breast's hair of German jagdterrier

HAIR	SAMPLE SIZE	RATIO OF CONVOLUTION	
		RIDGE AREA	BREAST AREA
BEFORE BATHING	10	3.97% ±0.48 A	5.95% ±0.7 A
AFTER BATHING WITH „X1“ SHAMPOO	10	5.38% ±0.46 B	5.09% ±0.64 A
AFTER BATHING WITH „X2“ SHAMPOO	10	4.13% ±0.48	5.71% ±0.79 A
AFTER BATHING WITH „X3“ SHAMPOO	10	5.06% ±0.64	2.79% ±0.65 B

A, B – averages with different letters in table columns statistically significant differences among themselves (p<0.05)

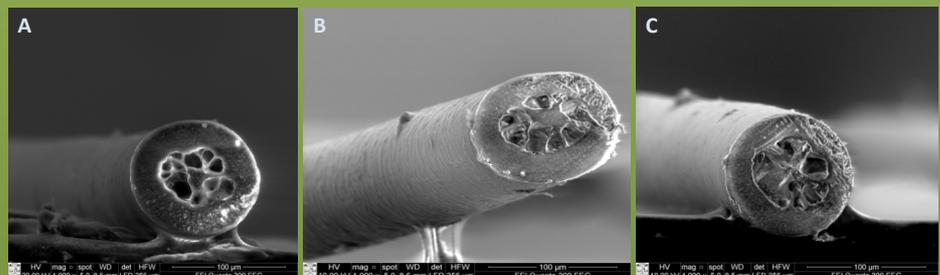


Fig. 3. Ridge's hair cross – section photo of German jagdterrier (after bathing):

A) X1 shampoo; B) X2 shampoo; C) X3 shampoo

Results and Discussion

There is visible positive influence of all three shampoos in the photos of hairs cross-section: keratin flakes of hair surface became straighter. In the photos of hair cross-section before bathing (Fig.2) keratin flakes are detached from hair surface. The maximum visible changes are conditioned after bathing with X3 shampoo (Fig 3). As expected, the influence of shampoos for ridge's and breast's hair was different: ridge's hair cross-section diameter of all three dogs has increased after bathing with all exploratory shampoos, except labrador retriever (his ridge's hairs cross-section diameter reduced after bathing with shampoos X1 and X2). Specific characteristics of breed it can influence. There were expected to reduce breast's hair cross. In most cases, breast's hair cross-section diameter of dogs reduced after bathing, except german jagdterrier: his hair's cross-section diameter increased after bathing with X1 shampoo. Ratio of convolution is the difference of straight and convoluted specimens, expressed percentage by straight specimen length. It was expected increase in ratio of convolution just for german jagdterrier ridge's hair because coat of this breed liable to curl. Breast's hair is less wavy and curly because it is thin and flexible, so their ratio of convolution reduced. All forecasts in german jagdterriers breed case have proved with each shampoo (Table 1). Labrador retriever and german shepherd ridge's hair ratio of convolution reduced after bathing with every shampoo, because their coat is thick, hair is resilient, disobedient. However, breast's hair ratio of convolution increased after bathing with shampoo X1.

Conclusions

After the research, there were established which exploratory shampoo is the most economical (X3), which is the most suitable for dogs' skin pH (X3). Also, the influence of shampoos' for hair surface, cross-section diameter and ratio of convolution was observed. In conclusion, the maximum visible changes were observed in photos after bathing with X3 shampoo, which was evaluated like the best by the dogs' owners.

References

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