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Evaluation of melanin content in the hair coat of Greenland nutria

Summary

Hair coat colour is the most conspicuous element that largely determines the attractiveness of fur products, the demand for skins and their price. Hair colour is determined by the type of skin pigment and its distribution in all types of hair and in individual hairs. The two main types of melanin are eumelanin, a black or brown pigment, and pheomelanin, a red or yellow pigment. Although hair coat colour is an important determinant of fur quality evaluation, no accurate method for evaluating this parameter has been developed. This assessment is made organoleptically under uniform background and lighting conditions. The aim of the present study was to quantify pigments in the hair coat of Greenland nutria and to find the relationship between melanin level and age of the skins obtained. Seventy skins of the light and dark variety of Greenland nutria were investigated. The skins were taken from cage-reared animals, killed between 3 and 9 months of age. Hair samples for melanin determination were taken from three topographic parts of the skin (back, side and belly). Pigment content of hair was determined in the ultraviolet using a WPA Lightwave spectrophotometer. A Sigma melanin standard was used in the study. It was found that the average melanin content of the nutria hair coat varied according to age group, colour type and site of sampling. Animals with the light colour type had the highest level of eumelanin on the belly during the first 8 months of age and that of pheomelanin on the side. For animals with the dark colour type, melanin level in hair coat showed greater variation depending on the topographic area of skin and age of animal.