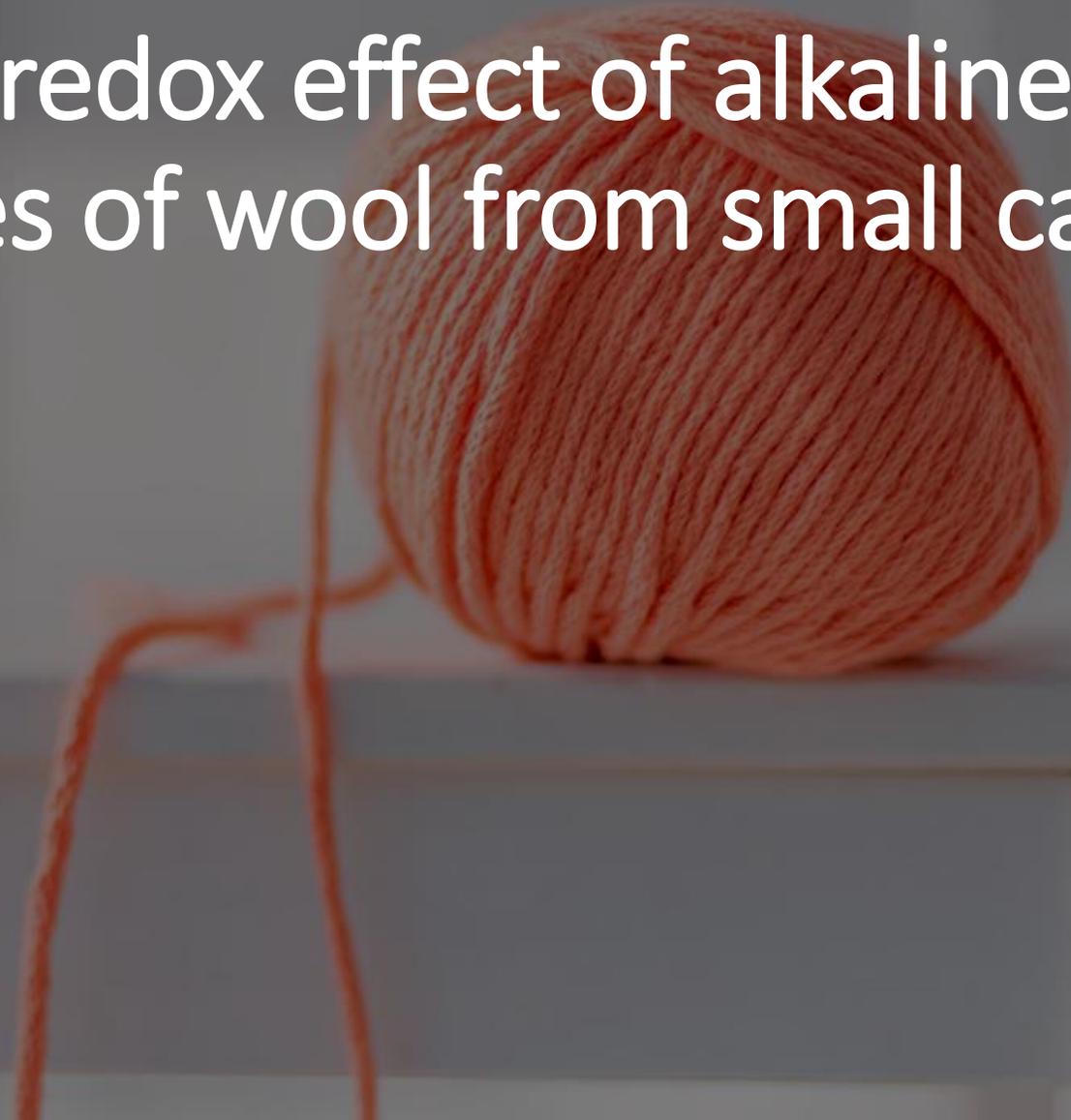
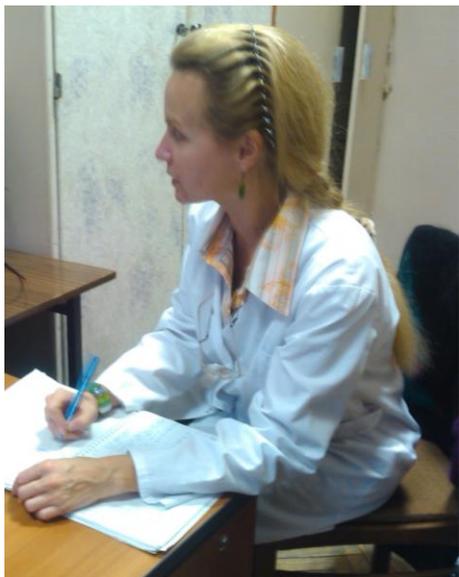
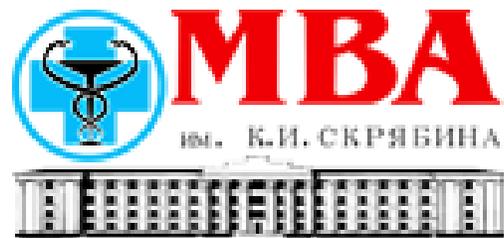


# Photo-redox effect of alkaline hydrolysates of wool from small cattle





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- ***Materials and Methods***

- As a model object the goat fell from different parts of its body was chosen. Animals varied in breed, sex and age. Fell alkaline hydrolysates were prepared during 30-minute hair incubation in *NaOH* solution (4M) in a boiling water bath. Then samples were cooled and diluted 40 times.
- The study was carried out by measuring the redox potential using the «photo-redox effect»
- In the hair structure, there are mainly two protein components: melanin and keratin, which is represented mainly by the alpha conformation. The amino acid composition is mainly composed of aspartic acid, cystine, histidine, methionine, tyrosine and glutamic acid

- Hair as a derivative of the skin has a complex morphological structure, in which three main components are distinguished: cuticle, bark and core. The bark consists of macro- and microfibrils and a cell-membrane complex. Microfibrils are oriented in the axial direction in the form of crystalline filaments embedded inside the amorphous matrix of the hair



- Under the influence of visible light, there is a change in disulfide and sulfhydryl bonds in amino acids and, accordingly, the redox potential in solutions of keratin hydrolysate changes. Therefore, it is possible to test the redox measurement method as a method of laboratory analysis and examination of skin derivatives of different animal species.

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The study of redox potentials and photo-redox effect was carried out on a specially designed and patented unit. Under the influence of light, the readings of the ionomer change, the dynamics of which is also recorded by the registration subunit. After the cessation of the action of the light, a secondary change in the readings of the device occurs

As a result of the correlation analysis of the dependence of the redox potentials of alkaline hair hydrolysates on gender and age, no differences were found, only species differences were found