

COMPLEX USE OF SAPROPEL IN MEDICINE AND COSMETIC

Konovalenko I. S., Strus O. E.*, Polovko N. P.

National University of Pharmacy, Kharkiv, Ukraine

Danylo Halytsky Lviv National Medical University *, Lviv, Ukraine

knvalenk.ilna@rambler.ru

Introduction. Sapropel – substance of biological origin, that is formed under water, on the bottom of freshwaters from residues of planktons and bentons organisms, involving bacterial processes that occur in the surface layers of sediments at low oxygen access. Sapropel consist of silt solution, skeleton and colloidal complex. Silt solution consist from water and substances dissolved in it – mineral salts, low molecular weight organic compounds, vitamins, ferments.

Aim. The aim is to focus in studing of sapropel identify promising set of biologically active substances and the creation on its basis of a medicament for the treatment of certain diseases.

Material and methods. Sapropel unique naturally occurring substance that finds its use as a source of organic minerals in traditional mud therapy, cosmetology and agriculture.

Given the wide range of pharmacological properties of sapropel – antimicrobial, anti-inflammatory, antioxidant, detoxic effects there is creation of medical and cosmetic products based on native raw materials and extractions from sapropel.

We was investigated chemical composition of sapropel from Pribich lake Shatsky district of Volyn region. Was indicated the presence of a wide range of amino acids, fatty and organic acids, microelements. Was getting aqueous, spirituous and oily extracts of sapropel. Was defined anti-inflammatory, reparative and antimicrobial activity of developed extracts. Was defined humidity, fractional composition, technological properties of native materials (bulk, volume, specific weight, porosity), was investigated dependent technological properties from humidity. Was soundly expediency of using native sapropel in cosmetics.

Results and discussion. For the results of physico-chemical, structure-mechanical and microbiology researches was developed the composition of cosmetics masks for different types of skin. The using of the gelling agent was soundly for increasing adhesion to skin surface. Conducted market analysis of the pharmaceutical market of drugs and cosmetics, which include derivatives sapropel and concluded that the ukrainian pharmaceutical and cosmetics market is almost no state producers, making them promising for development of new medications and cosmetics.

Conclusions. In the course of the thesis was achieved the main goal - to focused study of sapropel identify promising set of biologically active substances and the creation on its basis of a medicament for the treatment of certain diseases.