



Abstracts

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ON ACID-WATER EXTRACTION – ULTRAFILTRATION TECHNOLOGY FOR SOME BIOLOGICALLY ACTIVE ALKALOIDS PRODUCTION FROM LOCAL PLANTS

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There are some methods for manufacture of alkaloids drug substances by plants extraction with lean solutions of different mineral or organic acids and following liquid-liquid extraction from alkalized water-acid extract. Substantial imperfection of such methods is the formation of stable emulsions on following liquid-liquid extraction stage.

Formation of stable emulsions in liquid-liquid extraction with organic solvents is caused by presence of co-extracted surfactant species (proteins, polysaccharides, lipids etc.) impeding phase separation. We have used ultrafiltration in order to separate extractive substances by their molecular weights.

We investigated possibility to use some types of membrane (pore sizes 0.01 mk, 0.05 mk, 0.1 mk, 0.15 mk) to remove the abovementioned high molecular surfactant species from crude extract of alkaloids. Successful results were obtained using membrane No.5 (pore size 0.01 mk) that fully prevented appearance of emulsion.

As result the uniform technology for obtaining alkaloids with different basicity using plants extraction by water of lean solutions of different mineral or organic acids, following ultrafiltration and liquid-liquid extraction of target product.

Technology for batch manufacturing of antiarrhythmic drugs allapinine, aklesine, axaritmine, anticholinesterase drug galantamine hydrobromide, expectoration lycorine hydrochloride, arrhythmogenic substance aconitine was developed.