



## **ECOLOGICALLY SAFE TECHNOLOGY OF PLANTS RAW MATERIAL EXTRACTION**

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Fundamental and applied researches in the field of chemistry and technologies of natural compounds represent a scientific basis of complex use of plants raw material. Rational use of wood resources provides processing waste of wood greens which are formed during timber cuttings and logging. Extractive compounds of wood greens possess high physiological activity and can be used in agriculture as growth regulators and fungicides substances, fodder additives.

In Institute of chemistry the emulsion method of extraction of biologically active substances from plants raw material is developed. It is new ecologically safe way of processing with use of water solutions of the bases. Experimental researches of extractive compounds output from wood greens on dependence of concentration of water -alkaline solution and surface-active substances were spent during emulsion method of plants raw material extraction studying.

The optimum conditions, allowed to raise extractive compound output up to 1,5-1,8 times in comparison with petrol extraction are determined. Study of alternative solvents - dialkyl-carbonates and water solutions of glycerin for isolation of biologically active compounds from plants raw material are carried out. Influence of the hydromodule, temperatures and time of carrying out of process for an raise extractive compound output is studied. Modern progressive technologies of cultivation of agricultural crops should provide obtaining of high crops of qualitative production with minimization of negative influence on an environment. Ecological safety of an agricultural production demands reduction of volume of chemical means of protection. Alternatively, application of the natural biologically active substances raising stability of plants to pathogen deserves, and also agricultural crops stimulating efficiency.

On the basis of *Picea* and *Abies* wood greens advanced by the way of emulsion extraction, the growth regulator and means of protection of plants are obtained.



Tests on various agriculture plants are spent. It is shown that productivity of plants raises on 20-25 %, their diseases is decreases, losses of a crop decrease at storage. The interdiction on use in the EU countries fodder antibiotics and антибиотических growth factors has led to active search of alternative products.

Products obtained from coniferous plants possessing expressed antiseptic and bactericidal effect long since the person are used. From wood greens by the emulsion extraction way vitamin fodder additives which will allow to raise efficiency of birds and animals and to raise their immunity are obtained.

*This work was supported Integrated Project "SOLSAFE" (WP 2) 6 FP EC.*