Determining of optimal mode extracting of Robinia

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Introduction. Essential oils - a liquid mixture of volatile organic compounds that are produced by plants and give them smell. Essential oils and their components are mainly used for flavoring food, beverage, household chemical products, in pharmaceuticals, perfumes, varnish industry, medicine and aromatherapy.

Materials and methods. As raw materials used Robinia. The composition of essential oils include anthranilic acid methyl ester, indole, heliotropin, benzylalkohol and salicylic acid esters. The experiments were conducted in conical flasks at vibromixed to vibration, allowing maintain the desired temperature environment, with an amplitude of 12 mm and a frequency of 100 cy / min.

Results and discussion. For the experiments had previously built three-level matrix multivariate experiment. It was determined the upper and lower levels of each factor. Setting temperature lower level was taken at room temperature (20 ° C), the upper level of 60 ° C. For the lower level of hydrological was chosen extractant least amount necessary for wetting the total volume of raw materials. For hydrological upper level is taken so the maximum amount of extractant in which we were able to record the changes in mass fraction of solids in the process of extraction using the refractometer. Another factor was the concentration of ethanol. Lower index was chosen 70% vol. the calculation of that essential oil is dissolved in such minimal concentrations of the solvent. For the top rate was taken as accessible ethanol concentration- 96.6% vol.

Samples were taken at intervals of 30 minutes during extraction for the purpose of recording changes in mass fraction of solids. The experiment was conducted in three repetition to ensure the accuracy of the analysis.

According to preliminary experiments conducted it was established a maximum extraction of raw materials, which amounted to 120 minutes.

Conclusions. As a result, we obtained alcohol extracts Robinia who possess this inherent flavor and essential oils are rich bright green color. The results can be used for further research. Extracts have the opportunity to apply flavoring food, beverage, household chemical goods.