

Among compounds interacting with the division apparatus and the cytoskeletal structure of the cell, particular interest is caused by taxol - one of the alkaloids of plants of the family Taxaceae. Taxol is widely used for research purposes, and in some countries (USA, France) this alkaloid is employed in the chemotherapy of cancer [1]. Taxol was first isolated from *Taxus brevifolia* [2], and subsequently from other representatives of plants of the Taxaceae family [4].

We have made an attempt to isolate physiologically active preparations of taxol from *Taxus baccata* (common yew; specimens of the plant were obtained in the Central Institute of Biological Sciences of the Ukrainian SSR Academy of Sciences) by simple and available methods. The comminuted leaves, bark, and young shoots of common yew were extracted with ethanol in a ratio of 1:10. The ethanolic extract was evaporated in vacuum and was extracted successively with three volumes of petroleum ether, hexane, and chloroform. The concentrated chloroform residue was subjected to column liquid chromatography on silica gel L 100/160, with elution by a stepwise gradient of ethanol in chloroform in ratios of from 5:95 to 50:50. The taxol-containing fractions were combined and concentrated by evaporation, and further separation was achieved on a column of silica gel L 40/100 using the same solvents as the mobile phase. The final purification of the taxol-containing fractions was carried out on a column of Kieselguhr 60. Taxol was identified by the TLC method with comparison of the  $R_f$  values of the sample and a standard. The substances were chromatographed in the solvent system chloroform-ethanol (95:5) on silica gel plates for TLC (Merck), and the spots were revealed in iodine vapor. The methods used permitted the isolation of 0.012% of taxol on the weight of the plant.

The biological activity of the preparation obtained was checked by the method of inducing the assembly of microtubules isolated from cattle brain. The process of assembly of the microtubules was recorded by turbidimetry and electron microscopy. By simple and available methods we had succeeded in obtaining a fraction of alkaloids enriched in taxol and possessing a high physiological activity.

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## LITERATURE CITED

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