TRITERPENE ACIDS FROM THE WASTES FROM THE PRODUCTION OF THYME EXTRACT

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An extract of the herb Thymus serpyllum L. (thyme) is included in the preparation "pertussin." In the preparation of the thyme extract, the raw material is treated with 30% ethanol, but triterpene compounds dissolve sparingly in dilute ethanol, and therefore we have studied the waste material after the preparation of the thyme extract for its triterpenoid content [1]. We have reported previously that this material contains 1.62% of neutral triterpenoids and 2.96% of triterpene acids [2].

To isolate the triterpene acids, after exhaustive extraction with petroleum ether the material was treated with chloroform. When the chloroform extract was concentrated, a dirty-yellow precipitate deposited which was separated off and dissolved in 95% ethanol. The ethanolic solution was repeatedly purified by successive boiling with 2 N hydrochloric acid and with a 5% solution of caustic potash. The purified ethanolic solution was concentrated, whereupon thin colorless needles (substance I) began to deposit. A chloroform extract after the separation of the first precipitate was concentrated and dissolved in 95% ethanol and was purified as described above. The purified ethanolic solution was passed through a column containing activated carbon. Elution was performed with ethanol until the reaction for triterpenoids was negative. The eluates were concentrated, giving a white crystalline compound (II) [3].

Both products gave positive chlorosulfonic acid, Liebermann–Burchard, and Sal'kovskii reactions.

On the basis of a physicochemical investigation and chemical analysis, and also the analysis of a series of derivatives of the compounds isolated, compound (I) was identified as ursolic acid and (II) as oleanolic acid [4].

LITERATURE CITED

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