

The alkaloid sarracine was first isolated from *Senecio sarracenus* [1, 2] and then from *Senecio platyphyllus* [3]. The amount of sarracine in the roots of *Senecio* varies from 0.68 to 2.12%, and the hydrogen tartrate of this substance is used as a spasmolytic agent [4, 5].

We have investigated the possibility of isolating sarracine from the roots of *Senecio rhombifolius* (Willd.) Sch. Bip. with chloroform, dichloroethane, ethanol, and isopropanol, and also with weak solutions of acids. Good results were obtained by the use of 2% and 4% solutions of sulfuric acid. The completeness of isolation of the alkaloids was checked by thin-layer chromatography [6]. We also considered the influence of the time of steeping on the yield of alkaloids. The raw material was steeped with a 4% solution of sulfuric acid for 1, 3, 6, 12, or 24 h. It was found that the optimum time of steeping is 3 h. The steeping process was combined with the reduction of the N-oxides of the alkaloids, which gave a considerable saving of time. In the study of the influence of the amount of zinc dust on the yield of alkaloids, the best results were obtained by the addition of 20% of zinc dust on the weight of the plant raw material (time of reduction 3 h).

We studied the sorption of sarracine and seneciophylline under static and dynamic conditions using the cation-exchange resins KU-1, KU-2, SBS-1, SBS-3, SDV-3, SDV-3T, and SF. The best exchange capacity for sarracine is possessed by SDV-3 cation-exchange resin.

The extraction process was performed by the repercolation method using a 4% solution of sulfuric acid as extractant. After the reduction of the N-oxides of the alkaloids, the extracts were passed through a column containing SDV-3 resin at the rate of 600-1200 liters/h/m<sup>2</sup>. After saturation, the resin was washed with water to neutrality and was eluted with a 4 N solution of ammonia in methanol at the rate of 146 liter/h/m<sup>2</sup>.

The alcoholic solution obtained from the absorbers was concentrated under vacuum until the alcohol had been eliminated completely and was extracted with chloroform. The yield of combined alkaloids was 2.12% on the weight of the plant raw material. The combined alkaloids were dissolved in 90% ethanol, and tartaric acid was added. This led to the precipitation of 1.90-1.92% of sarracine which, after recrystallization from 90% ethanol, had mp 176-177°C.

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