

Metvin (vincanine methochloride) is a drug possessing a ganglion-blocking action accompanied by a dilatation of the blood vessels and a fall in the arterial pressure [1, 2]. By a decision of the Pharmacological Committee of the Ministry of Health of the USSR it has been recommended for use in medical practice.

We have developed a method for obtaining Metvin consisting of two main stages:

1) The preparation of vincanine methiodide. Free vincanine was treated with 2.5 parts by weight of methanol and, with cooling and stirring,  $\text{CH}_3\text{I}$ , taken in excess (125% of stoichiometric) was added. After the solidification of the methiodide formed (97,3% of the calculated amount), it was dried, and a 0,24% ethanolic solution was prepared;

2) conversion of vincanine methiodide into the methochloride. An ethanolic solution of the methiodide was passed through the ion-exchanger AV-16g in the  $\text{Cl}^-$  form, where the I ions of the methiodide were replaced by the  $\text{Cl}^-$  ions of the anion-exchanger, and the eluate contained Metvin. The resulting solution was concentrated by adding benzene to form the azeotropic mixture of methanol and benzene (38,5:61,5) and was distilled at normal pressure. As distillation proceeded, crystals of vincanine methochloride deposited. The yield was 90% of that calculated on the vincanine [3].

To determine the beginning of "breakthrough" [4] of the I ions of the methiodide into the eluate we used thin-layer chromatography (TLC) and a qualitative reaction for I ions.

In TLC, as the support we used a fixed layer of alumina. In the chloroform-acetone-methanol (50:45:5) system the  $R_f$  value of the methiodide was 0.25 and that of the methochloride 0.05. When the plates were treated with a 1% solution of ammonium cerium sulfate in orthophosphoric acid, the methiodide gives a yellow coloration and the methochloride a green one. When the Dragendorff reagent was used, the methiodide gave a brown coloration (concentration  $\sim 0.01\%$ ).

The presence of the methiodide in the eluate was determined by the following method. To 2 ml of the solution were added 2 ml of 10%  $\text{H}_2\text{SO}_4$  and 3-4 drops of a 1% solution of sodium nitrite. When the methiodide was present a red-brown precipitate formed. Then 2 ml of chloroform was added and the mixture was shaken, whereupon the chloroform layer assumed a pink color. In the absence of the methiodide, no red-brown precipitate was formed and the chloroform remained colorless [5].

These methods of control have been used in the making for the purposes of clinical testing of the drug Metvindin, possessing an action similar to that of Metvin.

The method of quality control that we have developed has been introduced into the instructions for the production of Metvin.

#### LITERATURE CITED

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