

THE CONTROL OF THE PRODUCTION OF  
OLITORISIDE

M. T. Turakhozhaev, L. P. Zubkova,  
M.-R. I. Shamsutdinov, G. L. Genkina,  
and T. T. Shakirov

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In order to perform the industrial process correctly and to ensure normal yields of the cardiac preparation olitoriside [1-3], a reliable method for the control of production is necessary.

A method for the quantitative determination of olitoriside in the raw material predicated the previous separation of the glycosides with subsequent photolorimetric determination of the olitoriside is already known [4].

TABLE 1

Extract	Amount of extract deposited on the chromatogram, ml	Content of olitoriside in the extract, %	
		on the weight of the raw material	on the total amount of olitoriside
1	0,2	0,54	65,3
2	0,5	0,19	23,7
3	1,0	0,07	8,7
4	1,4	0,02	2,3

We have performed the stagewise control of the production of olitoriside by a method similar to this. In accordance with the technology of the work [3], a method has been developed for determining olitoriside in extracts at all stages of the purification in the mother solutions and ground raw material.

In each case, an amount of solution to be deposited on the chromatogram was selected individually in such a way that the amount of olitoriside it contained corresponded to the sensitivity of the method. The dynamics of the extraction of olitoriside by ethanol from the ground and defatted seeds of jute containing 0.85% of olitoriside was studied. The amount of olitoriside in each extract was determined photolorimetrically (Table 1).

TABLE 2

Stages of the industrial process	Amt. of extract deposited on chromatogram, ml	Olitoriside content, %	
		on wt. of raw material	on tot. amt. of olitoriside in seeds
Seeds of potherb jute	1,5	0,85	100,0
Total ethanolic extract (four extractions)	0,1	0,82	96,5
Extracted residue	1,0	0,03	3,5
Extract after concn. and precipitation of sugars	0,1	0,70	82,4
Ethereal solution	—	0,09	10,6
Aqueous solution	0,1	0,60	70,6
Chloroform extract	0,25	0,08	9,4
Chloroform-isopropanol extract	0,1	0,45	52,9
Mother liq. from first crystall.	0,2	0,16	18,8
Mother liq. from second crystall.	0,25	0,08	9,4
Crystalline olitoriside	—	0,20	23,5

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The total amount of olitoriside extracted in four successive treatments was 0.82% of the weight of the raw material, or 96.5% of the amount of olitoriside present in the seeds.

The results of the determination of olitoriside in the stages of the industrial process are given in Table 2.

We have developed a method for the control of the production of olitoriside in the stages of the industrial process, have studied the dynamics of its extraction from the raw material, and have established the distribution of olitoriside and its losses in the various stages of the production process.

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