DETERMINATION OF ASCORBIC ACID IN PEACH LEAVES

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Relevance. Vitamin C is essential for the development and proper functioning of the body. Ascorbic acid plays an important role in the immune system. It is often recommended to get vitamin C from the diet rather than taking supplements. Fresh oranges and freshly squeezed orange juice are good sources of vitamin C. Fresh fruits and vegetables, especially citrus fruits, are also important sources of vitamins. But today, as a result of various biochemical studies, it has become clear that peaches contain relatively more vitamin C. Not only its fruits, but also its leaves have been studied for vitamin C content, and its use as a medicinal raw material is currently considered relevant.

Research methods: Experimental tests were carried out on five raw peach samples. The determination of the indicators was carried out in triplicate. Qualitative reactions for ascorbic acid were carried out by titration according to FS.2.1.0058.18 "Ascorbic acid" according to the State Pharmacopoeia, XIV edition.

Results: Qualitative reactions for ascorbic acid were carried out by titration according to the XIV edition of the State Pharmacopoeia, FS.2.1.0058.18 "Ascorbic acid".

The first experiment was based on the reaction with silver nitrate.

Reaction: 0.05 g of the preparation is dissolved in 2 ml of water and 0.2 ml of nitric acid is diluted to 12.5% and 0.5 ml of 1.7% silver nitrate solution is added; a black precipitate is formed due to the reduction of silver. It is based on the reduction of metallic silver to silver and the oxidation of ascorbic acid to dehydroascorbic acid. The second experiment is based on the reduction of molecular iodine to iodide ion and the oxidation of ascorbic acid to dehydroascorbic acid by reaction with iodine solution.

The metrological description of the method for determining the amount of ascorbic acid in raw peaches is presented in Table 1.

Table 1

Ascorbic acid content in peach leaves

Sample	**Ascorbic acid content in peach leaves**
№ 1	**0,018 %**
№ 2	**0,020 %**
№ 3	**0,017 %**
№ 4	**0,021 %**
№ 5	**0,017 %**

According to the results of the study, the amount of ascorbic acid in peach leaves is 0.018% in the first sample, 0.020% in the second sample, 0.017% in the third sample, 0.021% in the fourth sample, and 0.017% in the fifth sample. The highest content of ascorbic acid in peach leaves corresponds to the second sample, and the lowest indicator was found in the third and fifth samples and amounted to 0.017%.

Table 2

Metrological characteristics of the method for determining the amount of ascorbic acid in peach raw materials

MPF	N	F f	X average, %	S2	S	P, %	T (P, f)	ΔX	E, %
Peach leaves	5	4	0,018	0,0000033	0,00182	95	2,78	0,005	28,1

The data in Table 2 show that the content of ascorbic acid in peach leaves is 0.018% ± 0.002.

Conclusions. One of the ways to determine the amount of vitamin C in peach leaves is the titration method. As a result of biochemical studies, it was found that the amount of ascorbic acid in peach leaves is 0.018% ± 0.002.

Literature

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