CHEMICAL COMPOSITION OF THE LEAVES OF Camellia sasanqua

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Sasanqua camellia Camellia sasanqua, family Theaceae, is an evergreen plant cultivated in a nubmer of countries as a foodstuff. It has been studied inadequately in the chemical respect. It is a promising industrial source of eugenol in the Adzhar ASSR. We have subjected to analysis the green mass of the plant gathered in the Batumi region.

Sugars, tanning substances, ascorbic acid, carotenoids, and nitrogeneous substances were determined by the methods generally adopted [1-5]. To determine the qualitative composition of the flavonoids, 500.0 g of air-dry leaves was extracted with chloroform and then with 80% ethanol. The alcoholic extracts were evaporated, the dark green precipitate was separated off, the clarified extract was washed with heptane and the phenolic compounds were extracted with ethyl acetate. The combined ethyl acetate extracts were dried with anhydrous sodium sulfate, the solvent was distilled off to small volume, and this residue was poured into a tenfold volume of heptane. A light yellow precipitate of flavonoids deposited.

Hydrolysis of the total flavonoids showed the presence of only one aglycon — quercetin. One of its glycosides predominated in the total flavonoids, and this corresponded in its physical constants and the results of IR and UV spectroscopies to quercetin 3,7-di-O-β-D-glucopyranoside. A second compound was identified as isoquercetin (quercetin 3-β-D-glucopyranoside). The glycosides were separated with the aid of gel filtration through Molselekt G-25.

The chemical composition of the leaves of sasanqua camellia is given below (mean results of 10 experiments):

Substance	Amount, % of the fresh mass
Dry matter	48.5
Sugars	
total	13.8
invert	8.6
sucrose	5.2
Cellulose	16.5
Nitrogenous substances	0.53
Tanning substances	3.6
Ascorbic acid	20.4 mg/100 g
Carotenoids	9.3 mg/100 g
Eugenol	2.1

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