TRITERPENE GLYCOSIDES FROM *Camellia oleifera* AND *Camellia sasanqua*

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We have investigated the seeds of *Camellia oleifera* and *Camellia sasanqua* Thunb. obtained from the Batumi botanical garden.

From an ethanolic extract of the chloroform-defatted seeds of *C. oleifera* by partition chromatography on silica gel we isolated a substance $C_{63}H_{100}O_{28}$ chromatographically homogeneous on TLC and various sorbents in acid, neutral, and alkaline solvent systems with mp 203-208°C, $[\alpha]_D^{18}$ + 16.3° (c 1.2; aqueous ethanol), mol. wt. 1254 (ebullioscopically), which we have called *oleiferin*. Its IR absorption spectrum showed the absorption of an ester group at 1720 cm^{-1} (COOR) and absorption at 3400 cm^{-1} (OH).

After the acid and then alkaline hydrolysis of oleiferin the following pentacyclic polyhydroxytriterpene aglycones were identified chromatographically in a thin layer of silica gel in the presence of markers: dihydropriverogenin A dihydropriverogenin A, barringtogenol C, and theasapogenol A. In the acid hydrolyzate by chromatography on paper and in a thin layer of silica gel in the presence of authentic samples we identified D-glucuronic acid, D-glucose, D-galactose, and D-xylose. The alkaline hydrolyzate was acidified and extracted with ether. In the ethereal extract by gas chromatography in the presence of authentic samples we found angelic and tiglic acids in a ratio of 3:1 and a small amount of α-methylbutyric acid.

From an ethanolic extract of chloroform-defatted seeds of *C. sasanqua* by partition chromatography on silica gel we obtained a chromatographically homogeneous substance with the composition $C_{60}H_{96}O_{28}$, mp 226-230°C, mol. wt. 1239 (ebullioscopically). The IR spectrum of the substance showed absorption bands at 3400 cm^{-1} (OH) and 1720 cm^{-1} (COOR).

By methods analogous to those used for oleiferin, we showed that the carbohydrate moiety of the glycoside consists of D-glucuronic acid, D-glucose, D-galactose, and D-arabinose. As aglycones we identified dihydropriverogenin A, barringtogenol C, and camelliagenins B, C, and D. Among the fatty acids we identified angelic and tiglic acids in a ratio of 5:1, and a small amount of α-methylbutyric acid.

The glycoside that we isolated from the seeds of *C. sasanqua* is close in melting point and the composition of the carbohydrate moiety and of the aglycones to the sasanquasaponin isolated previously [1, 2]. However, we found that it includes, in addition to the angelic acid detected previously [2], tiglic and α-methylbutyric acids.

Consequently, the partial structures of the glycosides of *C. oleifera* and *C. sasanqua* show that they belong to the same type of glycosides as aescin [3] and theasaponin [4, 5], i.e., they are glycosides of pentacyclic polyhydroxy triterpenes esterified with fatty acids.

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