(OH) and 1729 cm^{-1} (ester carbonyl). The PMR spectrum showed the signals of the protons of eight tertiary CH_3 groups in the 0.84-1.18 ppm region, the signal of an acetate CH_3 group at 2.0 ppm (3 H, singlet) and, in the weak field, signals at 3.39 ppm (1 H, triplet, J = 2.5 Hz, C_3-H, 3.64 ppm (1 H, multiplet, C_{24}-H, and 4.88 ppm (1 H, multiplet, $\Sigma J = 24$ Hz, C_{12}-H). When triterpene (IX) was saponified with a 1 N solution of KOH in methanol, betulafolienetriol oxide was obtained. These results indicate that the triterpene (IX) is the 12-monoacetate of betulafolienetriol oxide.

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A STEROID SAPOGENIN OF THE LEAVES OF *Yucca gloriosa*

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By preparative thin-layer chromatography on silica gel we have isolated from the most polar fraction of the total sapogenins of *Yucca gloriosa* (moundlily yucca) [1] a chromatographically homogeneous substance appearing at the level of an authentic sample of chlorogenin and having, after recrystallization from methanol, mp 270-273°C, $[\alpha]_D^{20}$ $-45°$ (c 1.00; chloroform). The acetylation [2] of 200 mg of the sapogenin gave a diacetate with mp 150-153°C, $[\alpha]_D^{20}$ $-39°$ (c 1.00; chloroform).

The IR spectrum contained bands characteristic for chlorogenin diacetate [3]. In the PMR spectrum of the acetate of the substances there were the signals of angular methyl groups: CH_3-18 — s, δ 0.75 ppm — and CH_3-19 — s, δ 0.88 ppm. In the same region it is possible to see two doublet signals assigned to methyl groups: CH_3-21 — d, J = 7.0 Hz, δ 0.95 ppm — and CH_3-27 — d, J = 6.0 Hz, δ 0.76 ppm.

The signals of the two OAc groups appear in the form of two singlets with a small difference in their chemical shifts (≈2 Hz) at 2.0 ppm. The presence of these resonance lines and their position indicate that in the initial substance there were two hydroxy groups in positions 3 and 6. The protons in positions 3 and 6 resonate in the form of a complex multiplet with its center at 4.70 ppm. The presence of the complex multiplet indicates that the protons 3 and 6 are geminal with respect to OAc groups present in the axial position — in the opposite case, the resonance signal would form a broadened singlet [4]. The spectrum of the chlorogenin diacetate from the moundlily yucca (in the form of a solution deuterochloroform) was recorded on a Tesla BS-497 spectrometer with a resonance frequence of 100 MHz.

The results obtained characterize the substance under investigation in farily great detail, confirming its identity as chlorogenin.

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STEROID SAPOGENINS OF THE LEAVES OF *Yucca aloifolia*

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The sum of the steroids sapogenins from the leaves of *Yucca aloifolia* (aloe yucca) introduced into the Sukhumi Botanical Gardens was obtained by the direct hydolysis of the saponins in the raw material [1]. On recrystallization from methanol, the combined material yielded 1% of tigogenin. The mother liquor remaining after the separation of the tigogenin was subjected to adsorption chromatography on alumina. The column was washed successively with petroleum ether, benzene, and benzene—chloroform. Petroleum ether and benzene eluted smilagenin, tigogenin, and hecogenin, which have been isolated previously from this plant [2]. The benzene—chloroform fractions yielded two sapogenins. One of them melted at 265-268°C. $[\alpha]_D^{20}$ −77° (c 1.00; chloroform); mp of the diacetate 243-244°C, $[\alpha]_D^{20}$ −98° (c 1.00; chloroform). The IR of the spectra of the genin and the diacetate correspond to those of gitogenin and its acetate [3]. On the basis of the results obtained and a chromatographic comparison of authentic samples, this substance was identified as gitogenin.

The second compound had mp 273-275°C; $[\alpha]_D^{20}$ −45° (c 1.00; chloroform), mp of the diacetate 153-155°C, $[\alpha]_D^{20}$ −39° (c 1.00; chloroform). By a comparison of the IR spectra [3, 4] and also from the results of NMR spectral analysis of the genin and its diacetate, the substance was identified as chlorogenin.

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