ECDYSTERONE FROM Ajuga chia

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Continuing a study of the genus <u>Ajuga</u> (family Labiatae) for its content of phytoecdysones [1], we have investigated the plant A. chia (collected in 1972, Western Georgia).

A methanolic extract of the whole plant (610 g) was diluted with water and treated with petroleum ether and ethyl acetate as described previously [1]. By chromatography on alumina [elution with chloroform and chloroform—ethanol (9:1) and (4:1)] and rechromatography on silica gel [elution with chloroform methanol (9:1) and (4:1)] the ethyl acetate fraction yielded 59 mg (0.01% of the weight of the raw material) of a compound $C_{27}H_{44}O_7$, R_f 0.5 [SiO₂+5% of gypsum, chloroform—methanol (4:1); thin-layer chromatography]. The substance obtained had the double mp 153-154°C and 236-237°C (aqueous methanol), and also 243-244°C (aqueous acetone), $[\alpha]_{20}^{20}$ +54.8° (c 0.51; CH₃OH), $\lambda C_{2}H_5$ OH 244 nm (lg ε 4.05). The constants given above and the characteristics of its IR and mass spectra, and also the results of a direct chromatographic comparison permitted the compound obtained to be identified as ecdysterone [2].

Cyasterone has been isolated from <u>A</u>. <u>chia</u> previously [3]. This is the first time that ecdysterone has been isolated from this species of Ajuga.

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