

FAGACEAE

FATTY ACIDS AND TRITERPENOIDS OF *QUERCUS ILEX*

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(Received 11 May 1972. Accepted 1 June 1972)

Key Word Index—*Quercus ilex*; Fagaceae; heartwood; fatty acids C₁₂–C₂₈; sitosterol; triterpenoids.

Plant. *Quercus ilex* L. *Source.* Pierola (Barcelona). Collected in August 1968. *Previous work.* (+)-Quercitol on leaves and bark.¹ On flavonoids of leaves.² On waxes of fruits.³

Plant part examined. Heartwood. Extracted first with Et₂O then with acetone. The residues of evaporation were extracted with light petrol. The methyl esters of combined and free acids were separated into a non-hydroxylated and a hydroxylated fractions, by column chromatography, through silica gel. The total non hydroxylated fraction was analyzed by GLC.^{4,5} We were able to identify the following fatty acids; 12:0(2),* 13:0(<1), 14:0(4), 15:0(2), 16:0(30), 17:0(2), 18:0(7), 19:0(1), 20:0(2), 22:0(3), 23:0(1), 24:0(3), 25:0(<1), 26:0(1), 27:0(<1), 28:0(<1), 15:1⁶(<1), 16:1⁷(1), 17:1⁸(2), 18:1⁹(19), 18:2^{9,12}(15), 18:3^{9,12,15}(1).

The neutral and unsaponifiable fraction by column chromatography through alumina II–III, afforded the following compounds: friedelin (m.p., [α]_D, IR and MS), sitosterol (m.p., [α]_D, IR, MS and acetate), lupeol (m.p., [α]_D, IR, MS and acetate). Small amounts of two compounds (MS parent ions *m/e* 426) had by GLC the same *R_f* (SE-30 and XE-60, as free alcohols and TMS derivatives) as two pure specimens of α- and β-amyrin.

* Numbers in parentheses refer to area percentages.

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