## EXPERIMENTAL

After air drying, the plants were steam-distilled.[19] The oil was trapped in xylene, separated, dried ($Na_2SO_4$) and injected in the gas chromatograph. The analysis was made using two GLC apparatuses, Hewlett-Packard 700 and Hewlett-Packard 5750.

The columns (2 m × 6 mm) contained Carbowax 20 M and SE 30 respectively. They were programmed from 60–220° with He, or 60–280° with $N_2$, respectively.

The amount of compounds present in the oil was calculated from the peak areas.

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Phytochemistry, 1971, Vol. 10, pp. 1953 to 1954. Pergamon Press. Printed in England.

# LAURACEAE

# PALMITONE AND PHYTOSTEROLS FROM *NEOLITSEA SERICEA*

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**Abstract**—Palmitone was isolated from the leaves, and phytosterols (β-sitosterol, stigmasterol, campesterol) were detected by gas chromatography from the wood.

*Plant. Neolitsea sericea* Koidz.

*Occurrence.* Hiroshima prefecture, Japan.

*Previous work.* Terpenic constituents of the leaves.[1–4]

*Leaves and wood.* Crushed to pieces with a chip machine.

*Palmitone.* Pieces of wood (4·0 kg) were extracted with $Et_2O$ (16 l.) at room temp. for 48 hr. The solvent was concentrated into 100 ml to give white crystalline substance (2·2 g, 0·05% yield). Recrystallization from warm EtOH. m.p. 82–83°. GLC, $t_R$ 14·2 (SE-30 5% on Celite 545 at 260°), only one peak. Mass spectrum ($M^+$ 450, direct inlet). $C_{31}H_{62}O$. (Found: C, 83·05; H, 13·3, Calc. C, 82·60; H, 13·78%.) Identified by IR, NMR and mass spectra (parent ion 450, major peak 239 ($CH_3(CH_2)_{14}CO^+$), other peaks at 255, 194, 267, 281 and below 100).

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*Phytosterols.* 10 kg of wood was extracted with $Et_2O$ at room temp. for 10 days. The $Et_2O$ extract was evaporated dryness. Chromatography on silica gel over *n*-hexane and EtOAc (5:1) gave a white crystalline substance (1·0 g, 0·01%). TLC $R_f$ 0·28, *n*-hexane–EtOAc (5:1). β-Sitosterol, stigmasterol and campesterol were detected by GLC comparison with authentic specimens (SE-30 5% on Celite 545 at 280°). The ratio of β-sitosterol–stigmasterol–camphesterol (31:3:68).

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## LEGUMINOSAE

# CONSTITUENTS OF *SAMANEA SAMAN* BARK

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*Plant. Samanea saman*[1] Merrill. syn. *Pithecellobium saman, Inga saman.*

*Uses.* Medicinal.[2,3]

*Previous work.* Seeds and leaves.[2,3] On sister species, *Pithecellobium dulce.*[4–8]

*Bark.* Extr. EtOH; *n*-hexane soluble neutral fraction, chromatography ($Al_2O_3$): *Hexacosanol*, $C_{26}H_{54}O$, m.p., mixed[7] m.p., IR, acetate, m.p. *Lupeol*, $C_{30}H_{50}O$, m.p., mixed[9] m.p., $[\alpha]_D$, IR, co-TLC, m.p. and $[\alpha]_D$ of acetate, $C_{32}H_{52}O_2$ and benzoate, $C_{37}H_{54}O_2$. *α-Spinasterol*, m.p., mixed[7] m.p., $[\alpha]_D$, IR co-TLC, m.p. and $[\alpha]_D$ of acetate, $C_{31}H_{50}O_2$ and benzoate, $C_{36}H_{52}O_2$.

*n*-Hexane soluble acidic fraction, chromatography (silica gel): *Octacosanoic acid*, $C_{28}H_{56}O_2$, m.p., mixed, m.p., IR, methyl ester, m.p. 66–67°, mol. wt. 424 (mass).

*n*-Hexane insoluble middle layer: *β-D-Glucoside of α-spinasterol*, $C_{35}H_{58}O_6$, m.p., mixed[8] m.p., $[\alpha]_D$, IR, co-TLC, tetra-acetate, $C_{43}H_{66}O_{10}$, m.p.; acid hydrolysis to α-spinasterol and glucose.

Ether soluble $FeCl_3$ and Mg–HCl positive fraction: *Flavonoid mixture* one, separated through preparative paper chromatography, had $R_f$ 0·68 ($BzOH–H_2O$, 4:1) and 0·69 (*n*-BuOH–AcOH–$H_2O$, 4:1:3), $\lambda_{max}^{alc}$ 250, 349 nm, with NaOAc → 275 nm, could not be identified due to its paucity.

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