

Plant. Neolitsea aciculata (Blume) Koidz. *Date.* Collected in August in 1971. *Source.* Hiroshima Prefecture, Japan. *Uses.* None known. *Previous work.* Nine sesquiterpenoids identified.¹

Leaves. The essential oil (1.02 g, 0.034% yield, n_D^{25} 1.4995) was isolated from fresh leaves (3 kg) by steam distillation. The individual constituents were isolated by preparative GLC (Carbowax 20 M–20% at 170°) and identified by IR and NMR spectra: *cis*-ocimene (2.9%), *trans*-ocimene (9.5%), β -elemene (5.3%), caryophyllene (13.4%), α,β -selinene (22.9%), unidentified (46.0%).

Plant. Machilus thunbergii Sieb. et Zucc. *Date.* Collected in August 1971. *Source* Hiroshima Prefecture, Japan. *Uses.* None known. *Previous work.* Sesquiterpene constituents.²

Leaves. The essential oil (1.38 g, 0.014% yield, n_D^{25} 1.4987) was obtained from the fresh leaves (10 kg) by steam distillation. The individual constituents were isolated by preparative GLC (Carbowax 20 M–20% at 170°) and identified by IR and NMR spectra: α -pinene (13.5%), β -pinene (3.8%), camphene (1.3%), limonene (0.6%), *cis*-ocimene (11.3%), *trans*-ocimene (5.3%), β -elemene (10.8%), caryophyllene (21.3%), α,β -selinene (7.8%), unidentified (24.3%).

¹ K. TAKEDA, I. HORIBE, M. TERAOKA and H. MINATO, *J. Chem. Soc. C*, 973 (1970).

² N. HAYASHI, K. TAKESHITA, N. NISHIO and S. HAYASHI, *Flavour Ind.* **1**, 405 (1970).

Key Word Index—*Actinodaphne*; *Machilus*; *Neolitsea*; Lauraceae; terpenes; ocimene; caryophyllene; α,β -sclinene.

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PHYTOSTEROLS OF THE TRUNKS OF *LINDERA OBTUSILOBA*

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Plant. Lindera obtusiloba Blume. *Source.* Common in mountains, Hiroshima prefecture, Japan. *Uses.* Not known. *Previous work.* None.

Trunks. Chipped pieces (10 kg) were digested with Et₂O at room temp. When the solution was concentrated to 100 ml, a white crystalline substance (380 mg) precipitated. The substance was recrystallized from EtOH to give white leaflets of sitosterol (mixed m.p., IR,¹ NMR,² GLC, MS). Campesterol (GLC), stigmasterol (GLC) were also shown to be present. Total amount of phytosterols was estimated to be 0.0038% of the trunks. The ratio of sterols was 1.4 (campesterol): 10.3 (stigmasterol): 88.3 (sitosterol).

¹ W. T. BEBER, J. PARSONS and G. D. BAKER, *Analyt. Chem.* **29**, 1147 (1957).

² G. SLOMP and F. A. MACKELLAR, *J. Am. Chem. Soc.* **84**, 206 (1962).

Key Word Index—*Lindera obtusiloba*; Lauraceae; sitosterol; stigmasterol; campesterol.