## EXPERIMENTAL

*Elemicin* identified from PMR, IR, UV and MS; oxidized ($KMnO_4$) to 3,4,5-trimethoxybenzoic acid (m.p., m.m.p., PMR). *Dillapiole* identified by comparison with authentic sample (PMR, MS and co-GLC (two stationary phases)). N-*isobutyl*-trans-2,trans-4-*octadienamide*, m.p. 88–90° (Recorded[2] m.p. 94°) was identified by comparison with an authentic sample (MS, co-GLC on two stationary phases: SE-30 and OV-17).

[2] M. JACOBSON, *J. Am. Chem. Soc.* **78**, 5084 (1965).

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Phytochemistry, 1972, Vol. 11, p. 2646. Pergamon Press. Printed in England.

# CONSTITUENTS OF *PIPER NEPALENSE*

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**Key Word Index**—*Piper nepalense*; Piperaceae; caryophyllene oxide; triacontanol; sitosterol; *N*-isobutyl-deca-*trans*-2-*trans*-4-dienamide; piperine; piperlonguminine.

*Plant. Piper nepalense* Miq. *Source.* Himalayas. *Uses.* In Ayurvedic medicine. *Previous work.* None in the literature. *Date.* Collected in August 1971.

*Stems.* Powdered stems (0·5 kg) extracted with light petroleum (60–80°). The individual constituents were isolated by chromatography (neutral alumina, Brockmann) and by preparative TLC. The compounds were identified by m.p., m.m.p., TLC, UV, IR, NMR and MS.

*Constituents.* Caryophyllene oxide, m.p. 59–60°, $C_{15}H_{24}O$; triacontanol, m.p. 87–88°, $C_{30}H_{62}O$, sitosterol, m.p. 136–137°, $C_{29}H_{50}O$, *N*-isobutyl-deca-*trans*-2-*trans*-4-dienamide,[1] m.p. 82–83°, $C_{14}H_{25}NO$; piperine, m.p. 129–130°, $C_{17}H_{19}NO_3$; and piperlonguminine,[2] m.p. 166–168°, $C_{16}H_{19}NO_3$.

[1] K. L. DHAR and C. K. ATAL, *Indian J. Chem.* **5**, 588 (1967).
[2] A. CHATTERJEE and C. P. DUTTA, *Tetrahedron Letters* **16**, 1797 (1966).