Phytochemistry, 1971, Vol. 10, p. 896. Pergamon Press. Printed in England.

THE CYCLITOLS OF *THEVETIA NERIFOLIA* AND *NERIUM INDICUM*

SANSEI NISHIBE, SUEO HISADA and ISAO INAGAKI
Faculty of Pharmaceutical Sciences, Nagoya City University, Mizuho-ku, Nagoya, Japan

(*Received* 15 *July* 1970)

Abstract—L-(+)-Bornesitol was isolated from the stems and leaves of *Thevetia nerifolia* Juss. Dambonitol was isolated from the stems and leaves of *Nerium indicum* Mill.

Plant. Thevetia nerifolia Juss.

Uses. Arrow poison in the tropics.

Previous work. On the glycosides of seeds[1,2] and stem barks.[3]

Stems. Extracted with MeOH, evaporated to small volume, diluted with H_2O. After extraction with light petrol, Et_2O and $CHCl_3$ respectively, the aqueous layer was concentrated to syrup, extracted with ethyl acetate. Then extracts of residue with $CHCl_3$–MeOH (2:1) were chromatographed on activated charcoal, eluted by EtOH–H_2O (1:99). L-(+)-Bornesitol, $C_7H_{14}O_6$, m.p. 204–206°, $(\alpha)_D^{15}$+32·7 (H_2O) (0·03% of stems, m.p., i.r., TLC: acetate; m.p., NMR).

Leaves. Extracted with MeOH. The extraction procedure was the same as described in stems. L-(+)-Bornesitol (0·4% of leaves, m.p., mixed m.p., i.r. and TLC).

Plant. Nerium indicum Mill.

Uses. Medical.

Previous work. On glycosides of leaves.[4,5] On sister species, *N. oleander* Linn.[6,7]

Stems. Extracted with MeOH. The extraction procedure was the same as described above. Dambonitol $C_8H_{16}O_6$, m.p. 209–210,° (0·004% of stems, m.p., mixed m.p., i.r. and TLC).

Leaves. Extracted with MeOH. The extraction procedure was the same as described above. Dambonitol (0·05% of leaves, m.p., mixed m.p., i.r. and TLC).

Acknowledgements—The authors thank Dr. V. Plouvier, Muséum National d'Histoire Naturelle, for authentic sample of D-(−)-bornesitol and Mr. T. Takami for his assistance.

[1] N. G. BISSET, *Ann. Bogor.* **4**, 145 (1961).
[2] N. G. BISSET, J. V. EUW, M. FRÉREJACQUE, S. RANGASWAMI, O. SCHINDLER and T. REICHSTEIN, *Helv. Chim. Acta* **42**, 977 (1959).
[3] O. STICHER and H. SCHMID, *Helv. Chim. Acta* **52**, 478 (1969).
[4] T. MATUKUMA, *Iken* **28**, 4139 (1958).
[5] M. ISHIDATE and Z. TAMURA, *Yakugaku Zasshi* **70**, 239 (1950).
[6] H. JÄGER, O. SCHINDLER and T. REICHSTEIN, *Helv. Chim. Acta* **42**, 977 (1959).
[7] V. PLOUVIER, *C. R. Acad. Sci. Paris* **251**, 131 (1960).