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### TRITERPENOIDS OF *GARDENIA TURGIDA*

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**Key Word Index**—*Gardenia turgida*; Rubiaceae; sitosterol; oleanolic acid; gypsogenic acid; hederagenin.

*Plant.* *Gardenia turgida* Roxb. *Use.* For indigestion in children<sup>1</sup>. *Previous work.* D-Mannitol<sup>2</sup> from exudate.

*Present work on wood and bark.* Both gave the same components, though in different yields. (i) *Sitosterol* from petrol. extract by chromatography over silica gel, (ii) D-Mannitol from alcohol extract (deposition of crystals). From mother liquor by concentration, hydrolysis and separation into neutral and acid genins, the following substances: From neutral genin fraction *sitosterol* by chromatography over silica gel. The acid genin fraction after treatment with CH<sub>2</sub>N<sub>2</sub> and chromatography over silica gel yielded: (a) an *unknown triterpenoid* in traces. C<sub>32</sub>H<sub>48</sub>O<sub>5</sub> (M<sup>+</sup>, 512), m.p. 258–260°, [α]<sub>D</sub> +49.2° (c 0.61, CHCl<sub>3</sub>); IR. (2941, 1721, 1449, 1377, 1355, 1235, 1163, 1114, 893, 876, 847 and 820 cm<sup>-1</sup>); MS. 512 (M<sup>+</sup>, 46), 497 (5), 453 (13), 452 (10), 263 (40), 262 (100), 203 (99), 202 (40), 189 (33) and 133 (21); (b) *Oleanolic acid methyl ester* (m.p., m.m.p., TLC and IR); (c) *Gypsogenic acid methyl ester*; (d) *Hederagenin methyl ester*. (c) and (d) were characterized by m.p., specific rotation, elemental analysis, IR, NMR, MS and by reduction with LAH to hederagenin triol of known m.p. and specific rotation.

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<sup>1</sup> NADKARNI, A. K. (1954) *Indian Materia Medica*, Vol. 1, p. 569, Popular Books, Bombay-7.

<sup>2</sup> FORSTER, M. O. and RAO, K. A. N. (1925) *J. Chem. Soc.* 127, 2176.

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### MURRAYANINE AND DENTATIN FROM *CLAUSENA HEPTAPHYLLA*\*

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**Key Word Index**—*Clausena heptaphylla*; Rutaceae; alkaloid; murrayanine; coumarin; dentatin.

From taxonomic interest, we undertook the examination of *Clausena heptaphylla* (Rutaceae, sub-fam. Aurantiae) from which we reported the isolation and structure proof of a new

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