

ALKALOIDS FROM *LINDERA GLAUCA*, *LINDERA ERYTHROCARPA*,
AND *LINDERA CITRIODORA*

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As part of our continuing search for alkaloids of Lauraceous plants (1, 2) from chemotaxonomical interests, we report here the isolation and identification of two aporphine and two 1-benzyl-tetrahydroisoquinoline alkaloids listed in Table 1, from *Lindera glauca* (Sieb. et Zucc.) Blume, *Lindera erythrocarpa* Makino, and *Lindera citriodora* (Sieb. et Zucc.) Hemsl. Full details of the isolation and identification of the compounds are available on request to the senior author.

TABLE 1. Alkaloids from *Lindera* spp.

Compound	Identification	Occurrence	Reference
Laurotetanine	mp, ir, ¹ H-nmr, uv, [α] _D , co-tlc by preparing N- methyl derivative (mmp, ir, ¹ H-nmr)	<i>L. glauca</i> (root, bark) <i>L. erythrocarpa</i> (root) <i>L. citriodora</i> (root, bark)	(3)
N-Methylaurotetanine	mmp, ir, ¹ H-nmr, uv, co-tlc	<i>L. erythrocarpa</i> (root)	(3)
(+)-Reticuline	perchlorate (mmp, ir, uv, [α] _D , co-tlc)	<i>L. glauca</i> (root)	(2)
(+)-Norcinnamolaurine	mmp, ir, uv, ms, [α] _D , co-tlc by preparing N- methyl derivative (ir, co-tlc)	<i>L. glauca</i> (bark)	(4)

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LITERATURE CITED

1. M. Tomita, T. Sawada, M. Kozuka, D. Hamano, and K. Yoshimura, *Yakugaku Zasshi*, **89**, 737 (1969), and references cited therein.
2. M. Tomita and M. Kozuka, *Yakugaku Zasshi*, **84**, 362 (1964).
3. M. Tomita, S.T. Lu, P.K. Lan, and F.M. Lin, *Yakugaku Zasshi*, **85**, 593 (1965).
4. E. Gellert and R.E. Summons, *Aust. J. Chem.*, **23**, 2095 (1970).

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