

ALKALOIDS FROM *LINDERA STRYCHNIFOLIA*

MUTSUO KOZUKA,* MASAYUKI YOSHIKAWA, and TOKUNOSUKE SAWADA

Kyoto Pharmaceutical University, Misasagi, Yamashina-ku, Kyoto 607, Japan

Lindera strychnifolia (Sieb. et Zucc.) F. Vill., (Lauraceae) is an evergreen shrub that grows in southern China and in western Japan. The root of this plant has been used as a stomachic, one of the components of several herb recipes, in traditional Chinese medicine. As part of our continuing search for alkaloids of Lauraceous plants (1,2), we have previously reported the isolation of an aporphine alkaloid, laurolitsine, from the root (1). In this communication, we describe the isolation and identification of two alkaloids, boldine and (+)-reticuline, from the root. The substances were identified on the basis of their spectral data and by comparison with authentic samples.

EXPERIMENTAL

PLANT MATERIAL.—Roots of *L. strychnifolia* were collected in Nara Prefecture, and voucher specimens are preserved in the herbarium of Kyoto Pharmaceutical University.

EXTRACTION AND ISOLATION.—Fresh and cut material (18.6 kg) was extracted with boiling MeOH, and the extract (2.391 kg) was subjected to the procedure based on the Stas-Otto method (1). The resulting phenolic alkaloid mixture (7.7 g) was treated with picrolonic acid. After separation of laurolitsine picrolonate (4.876 g), boldine (perchlorate, 0.641 g) and (+)-reticuline (perchlorate, 0.150 g) were isolated from the mother liquor of the picrolonate. The alkaloids were identified by mmp determination, comparison of ir and ¹H-nmr spectra, and behavior on tlc.

Full details of the isolation and identification of the compounds are available on request to the senior author.

ACKNOWLEDGMENTS

We are grateful to Dr. M. Tomita, Professor Emeritus, Kyoto University, for his interest and encouragement throughout this work. We also wish to thank Dr. S. Asada of Kobe Women's College of Pharmacy for an authentic sample of boldine and Dr. K. Umemoto and Mr. Y. Fujiwara of this university for elemental analyses and ¹H-nmr measurement, respectively.

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).

Received 6 June 1984