

## ERICACEAE

FLAVONOIDS OF *LEUCOTHOE KEISKEI*

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**Key Word Index**—*Leucothoe keiskei*; Ericaceae; flavonoids: poriol; poriolin; taxifolin-3- $\beta$ -xylopyranoside.

*Plant.* *Leucothoe keiskei* Miq. *Previous work.* Ursolic acid and uvaol from the leaves.<sup>1</sup> Toxic macrocyclic flavonoid glycosides, poriolide and isoporiolide, from the whole plant.<sup>2</sup>

*Extraction and isolation.* Methanolic extract of the dried whole plant was fractionated into a benzene and an ethyl acetate layer. TLC of the benzene layer on silica gel yielded poriol. From the ethyl acetate fraction, poriolin and taxifolin-xyloside were obtained by using silica gel and polyamide column chromatography.

*Poriol* (5,7,4'-trihydroxy-6-methylflavanone).<sup>3,4</sup> m.p. 270–275°. Confirmed by IR, NMR and UV. The 7,4'-dimethylether was identical with authentic specimen. *Poriolin* (poriol-7-O- $\beta$ -glucoside).<sup>5</sup> m.p. 173–175°. Identified with authentic specimen by comparison of UV;  $\lambda_{\text{max}}$  285 nm (MeOH and MeOH with NaOMe), 313 nm (MeOH with AlCl<sub>3</sub>), IR, and TLC. Hydrolysis with emulsin gave poriol and D-glucose. *Taxifolin-3-O- $\beta$ -xylopyranoside*. m.p. 242°. Acid hydrolysis gave taxifolin and xylose. Position of the sugar was determined by NMR and UV. The signal at  $\delta$  4.51 ppm due to the carbonyl proton at C-3 position appears at the same chemical shift in the NMR of its acetate. UV absorption maximum at 295 nm in MeOH shifts to 330 and 316 nm by addition of NaOMe and AlCl<sub>3</sub> respectively. Consumption of two equivalents of NaIO<sub>4</sub> shows the xyloside to be a pyranoside: the  $\beta$ -form of the glycoside is indicated by the coupling constant (*J* 7.0 Hz)<sup>6</sup> of the anomeric proton at  $\delta$  5.40 ppm.

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