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Several Flavonols Extraction from Leaves of *Glehnia littoralis*

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Objectives

Glehnia littoralis (Umbelliferae) is a perennial herb, indigenous to the seashore. In this paper, we have isolated and identified flavonol profiles in the leaves of *G. littoralis* by using HPLC technique.

Materials and Methods

1. Material

Leaves of *G. littoralis* were collected on August, 2004. They dried up in the shade and were stored at -70°C for future analysis.

2. Methods:

For flavonoid analysis freeze-dried leaves were extracted in 85% MeOH. Preliminary analysis of the flavonoid extracts was employed by 2-D TLC. Purified flavonoids were identified by employing a combination of UV spectral analysis, acid hydrolyses, Rf values, retention times, and co-chromatography with standard using HPLC and TLC by methods of Harbone (1980) and Markham (1982).

Results and Discussion

Seven flavonol compounds were extracted from *G. littoralis* leaves and their Rt values were 10.5, 24.6, 24.5, 14.5, 13.1, 12.4 and 14.5. Some of them were derivatives of the following flavonols; kaempferol and quercetin. We identified kaempferol-3-O-glycoside-7-O-glycoside, quercetin-3-O-glycoside-7-O-glycoside and quercetin-3-O-glycoside. Among them quercetin glycosylated derivatives was major flavonol compound. In spite of the abundant economical value, the study of flavonoids of this species is limited to anthocyanin profiles (Miura *et al*, 1997 and Kitamura *et al*, 2001). This identification of flavonol profiles in this species may be the first paper.