

## Quantitative HPLC analysis of benzene derivatives of *Melicope ptelefolia* leaves

### Abstract

A high performance liquid chromatography procedure for the quantitative determination of three marker benzene derivatives, 2,4,6-trihydroxy-3-prenyl acetophenone (tHPA) (1), 2,4,6-trihydroxy-3-geranyl acetophenone (tHGA) (2), and p-O-geranyl coumaric acid (GCA) (3), in the *Melicope ptelefolia* ethanolic leaf extracts, a medicinal herb obtained from a few locations of the Peninsula Malaysia, was described. The quantitative analysis was performed using high performance liquid chromatography-photodiode array detection on Xterra octadecylsilyl silica (ODS;  $3.0 \times 150$  mm,  $3.5 \mu\text{m}$ ) column kept at  $32^\circ\text{C}$ , using gradient elution with acetonitrile and water containing 0.1% formic acid at a flow-rate of 1 ml/min with UV detection wavelength at 280 nm. All calibration curves showed good linearity ( $R^2$  of 0.999 to 1.0000) within the concentrations range of  $2.5 \times 10^{-3}$  to 0.1 mg/mL. The method was shown to be simple, sensitive, and reliable for qualitative and quantitative analysis of the marker compounds in *M. ptelefolia* leaf preparations.

**Keyword:** Quantitative analysis; HPLC-DAD; *Melicope ptelefolia*; p-O-geranyl coumaric acid (GCA).