E2-44 Quantitative determination of a mixture of isoshinanolone and epi-isoshinanolone in different brands of dasamoolaristhya using HPLC

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The development of standard specifications for Ayurvedic drugs is important if the drug manufacturing industry is to benefit from the increasing demand for pharmaceuticals of natural origin. The quantitative analysis of a mixture of isoshinanolone (**1**) and epi-isoshinanolone (**2**) (IS_{mix}) which can be used as a marker for *Plumbago indica* (Ratnitul) in commercial samples of *Dasamoolaristhya*, is reported.

IS_{mix} required to obtain the standard curve, was isolated from the dried root of *P.indica*. Identification was based on UV, IR, ^{1}H-NMR, ^{13}C-NMR and MS.

Three bottles each of 4 different brands (labelled, 1,2,3,4.) of Dasamoolaristhya were purchased from the market. IS_{mix} was extracted from the fluorescent zone on a TLC of the sample (silica gel G60 F_{254} precoated, toluene/diethylether, 1:1, saturated with 10% acetic acid) and subjected to HPLC. (i-Bondapack, methanol:water, 60:40 v/v, 254nm). The accuracy of the method was determined by the standard addition method.

The standard curve obtained was;

Y(peak height mm)= - 49.555+762.68(concentration mg ml^{-1}). Standard recovery over the content range 0.027 - 0.048 mg was 97.5 - 107.5%. The conefficient of variation at the lower end of the calibration curve (0.096mg ml^{-1}) is 13.97% and can be considered the limit of determination.

Table 1: Quantity of IS_{mix} in different brands of *Dasamoolaristhya*

Sample	IS_{mix} concn. ($mgml^{-1}$)	±s.e.m. Range
1	0.00850 ± 0.00075	0.00720-0.0098
2	0.00407 ± 0.00070	0.00287-0.0053
3	0.00264 ± 0.00044	0.00198-0.0035
4	0.00125 ± 0.00017	0.00102-0.0016

A wide range of values for IS_{mix} was observed. The analytical method developed is precise and accurate.

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