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### Standardization parameters of different leaf extracts of *Indigofera tinctoria* L. (Nil Aweriya) grown in Sri Lanka

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**Background:** *Indigofera tinctoria* (Nil Aweriya) under the family Fabaceae is an herb used in traditional medicine which holds laxative, expectorant, diuretic, anthelmintic, hypoglycaemic and thermogenic properties. It is also used as a natural hair colorant. Hence, standardization parameters are required in the identification of herbal raw materials used in Ayurveda manufacturing.

**Objective:** This study was aimed at developing standardization parameters for different extracts of *I. tinctoria* leaves grown in Sri Lanka.

**Method:** Matured leaves were collected from Uva Province and air dried. Extracts were obtained from cold maceration with methanol, acetone and hot water extraction. Each was subjected to preliminary phytochemical screening, physico-chemical tests, and High Performance Thin Layer Chromatography (HPTLC).

**Results:** Phytochemical screening showed flavonoids, anthraquinones, diterpenes, triterpenes, terpenoids and proteins in all extracts while carbohydrates and reducing sugars were found in methanol and aqueous extracts. Saponins were detected in aqueous extract while tannins, phenols and amino acids were detected in methanol and acetone extracts. Physico-chemical parameters; total ash, acid insoluble ash, water soluble ash, loss on drying, extractability in methanol, acetone and water were 10.7±0.1% w/w, 0.7±0.1% w/w, 0.9±0.1% w/w, 3.2±0.4% w/w, 29.5±1.3% w/w, 12.9±0.6% w/w and 12.8±2.8% w/w respectively. HPTLC fingerprint of methanol extract showed 10 peaks ( $R_f$ : -0.06, -0.03, 0.00, 0.03, 0.09, 0.33, 0.63, 0.73, 0.84, 0.86) with ethyl acetate: toluene: n-hexane: chloroform in 2:2:4:2 proportion while acetone extract showed 10 peaks ( $R_f$ : -0.19, -0.05, 0.04, 0.10, 0.19, 0.39, 0.52, 0.58, 0.61, 0.81) for ethyl acetate: toluene: n-hexane: chloroform (2.5:2.5:4:1). Reverse phase HPTLC was run for aqueous extract which showed 13 peaks ( $R_f$ : 0.06, 0.12, 0.14, 0.16, 0.22, 0.30, 0.37, 0.39, 0.47, 0.50, 0.75, 0.84, 0.87) with methanol: distilled water: ethanol (3:3:5).

**Conclusion:** Hence, these parameters can be used in standardization and identification of *I. tinctoria* leaves as a raw material in Ayurveda manufacturing.

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