

TLC-based Metabolite Profiling for *Amurthashtaka kwatha*: An Ayurvedic Polyherbal Formulation Used for Fever Associated Inflammation

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Amurthashtaka kwatha (AK) is a polyherbal Ayurvedic formulation of eight raw plant materials; *Azadirachta indica* (Neem), *Cyperus rotundus* (Nut grass), *Holarrhena antidysenterica* (Coneru), *Picrorhiza scrophulariiflora* (Katuka), *Santalum album* (Sandalwood), *Tinospora cordifolia* (Guduchi), *Trichosanthes cucumerina* (Snake gourd) and *Zingiber officinale* (Ginger). This study has focused on thin layer chromatography profiling of metabolites of AK and its plant materials under standardization process. The plants were collected from five locations in Sri Lanka (one location contains all eight plant materials) and they were named as sample 1,2,3,4 and 5. Methanolic extracts of individual plants and AK were prepared using decoction method. Ethylacetate: n-hexane=5:5v/v, chloroform: methanol: acetic acid = 8.5: 1.5: 0.2v/v, toluene: ethylacetate: formic acid: methanol=3:3:0.3:0.2v/v, chloroform: methanol: formic acid=7:2:1v/v, toluene: ethylacetate=8.5:1.5 v/v, chloroform: methanol=8.5:1.5v/v, n-hexane: ethylacetate = 9:1v/v and n-hexane: ethylacetate=6:4v/v were used as mobile phases for *A. indica*, *C. rotundus*, *H. antidysenterica*, *P. scrophulariiflora*, *S. album*, *T. cordifolia*, *T. cucumerina* and *Z. officinale* respectively. Purchased nimbolide, berberine and picroside were used as standards. Spots were visualized under UV light at 254nm and 366nm. Only one kwatha sample exhibited similar spots with nimbolide at 254nm while four kwatha samples were given spots at 366nm (R_f 0.35). *P. scrophulariiflora* sample 2,5 and kwatha sample 1,2 were given similar spots with picroside at 254nm (R_f 0.55). *T. cordifolia* sample 1 and four kwatha samples were given similar spots with Berberine at 254nm while three *T. cordifolia* and all kwatha samples gave spots at 366nm (R_f 0.14). The present study qualitatively determined the presence of: nimbolide, picroside and berberine in AK; picroside in *P.scrophulariiflora*; and berberine in *T.cordifolia*.

Key words: Amurthashtaka kwatha, methanolic extracts, mobile phases, phytochemicals and Thin Layer Chromatography

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