Use of HPLC Fingerprints and UV Spectroscopy for Standardization of Herbal and Herbo-mineral Formulations with Special Reference to two Pills Seetharama & MahaVarthikava

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Gampaha Wickramarachchi Ayurveda Institute,1 Gampaha, Department of Food Science and Technology, University of Sri Jayawardenapura,2 Nuwara Eliya, Bandaranaike Memorial Ayurveda Research Institute3, Nawinna, Maharagama. People prefer to consume herbal based natural drugs over synthetic counterparts. However, the quality of currently available poly herbal drugs has become a concern and therefore, there is a long felt need for standardization of drugs. In the present study, HPLC and UV spectrophotometer have been used for the standardization of two selected drugs. Ethanol (95%) extractions of Seetharama watee and Maha varthikava watee were used for the present analysis. Soxhlet extraction of the 2 formulations 0.5 g from each preparation were used. After extracting, ethanol was evaporated using rotary evaporator at 60°C. Then the residue was dissolved in 10ml of 95% ethanol as final volume and 0.5ml was used for UV spectrometry. For the HPLC analysis, the residue was dissolved in 10ml of methanol and 25μl was used respectively.

In the HPLC Chromatograms of authentic samples of Seetharama watee, seven major peaks were identified whereas fourteen major peaks were identified in authentic samples of Maha Varthikava watee. The comparison of commercial samples of Maha varthikava showed one main peak to be more prominent in three commercial samples (Concentration 67.2%, 63.5% and 46.8%). In the spectroscopic measurements, all prepared Seetharama watee samples and 3 commercial samples were in ε max 287 nm while the 2 samples were in ε max 290 nm. All the samples had almost equal ε max values, so the action groups were almost equal in all formulations. In the Maha Vathikava samples and 2 commercial samples were in ε max 287/290 nm while the 3 samples were in ε max 340/345 nm. Therefore, the prepared and two commercial samples had the same functional groups while the other 3 commercial samples may be different. The actions of all prepared samples and 2 commercial samples may have the close relationships while the other 3 commercial samples actions may be different. The HPLC fingerprint profiles and UV Spectrophotometric measurements can be used as reliable parameters to standardize Sri Lankan formulations "Seetharama Watee" and "Maha varthikava Watee," as the two reliable tools.

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