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**Use of physical and chemical properties as a tool in standardizing
Maha Varthikava Watee: an effective Sri Lankan poly herbal formulation**

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Maha Varthikava watee is an effective poly herbal drug, recorded in the ancient text *Watika Prakaranaya*. It contains 29 herbals and is a very effective drug for digestive tract disorders. Commercially available indigenous preparations that are not prepared according to the original recipes may not be effective as they should be. Therefore, standardization of such poly herbal formulations which synergistically cure diseases has become an essential part in assuring the quality and thereby the actual efficacy of the drugs. A study was carried out to investigate whether physico-chemical properties can be used as measuring tools in assessing *Maha Varthikava watee* for its conformity. In this study all herbals were purified and finely powdered and mixed thoroughly and pulverized together with juices extracted from leaves of Indian pivot, neem and betel and bees honey. The pills were made to the size of a grain of green gram and were dried under shade. Likewise, three batches were prepared to avoid errors due to deviations associated with seasonal changes and their average was used to assess five commercial samples available at the market. Physical properties namely weight, specific gravity, loss on drying, ash content, acid insoluble ash content and chemical properties viz pH value, extractability to hexane, dichloromethane (DCM), ethyl acetate (EA) and methanol were considered as tools for the standardization. One way ANOVA followed by the Dunnett t test was used in the analysis of data at 0.05 significance levels. The SPSS statistical package was used for the data analysis. No significant differences were found in all commercial samples with regards to fiber content (8.42 ± 1.8), acid insoluble ash (0.088 ± 0.07), DSM extract percentages (1.17 ± 0.19), EA extract percentages (2.13 ± 0.52) and methanol extract percentages (15.29 ± 4.36) ($P=0.59, 0.55, 0.8, 0.3, 0.43$) while the weight of pills (1.18 ± 0.062) was significantly different from that of the control at 0.05 level. The pH values (4.57 ± 0.07) were significantly different in 1st, 2nd and 3rd commercial samples ($P=0.08, 0.92, 0.32$) while there were no significant differences in 4th and 5th commercial samples. Loss on drying (12.3 ± 0.48) was significantly different in 1st and 2nd samples ($p=0.08, 0.91, 0.32$), but that of other 3 samples was the same. Specific gravity (1.24 ± 0.035) was found different only in the 2nd sample while other 4 samples were the same ($P=0.09, 0.49, 0.19, 0.16$). Ash value (6.87 ± 0.17) was significantly different only in the 4th commercial sample while other 4 samples were the same ($P=0.93, 0.88, 0.64, 0.24$). Hexane extract value (6.12 ± 0.84) was same for all samples ($P=1, 0.04, 0.87, 1, 0.1$) except in 2nd one. Hence, *Maha Varthikava Watee* can be standardized using the above mentioned physical and chemical measurements.

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