

Abstract No: MO-24

**Development of an eco-friendly and cost-effective novel preparation of herbal textile
– An Ayurveda**

S. P. A. S. Nishan^{1*} and M. R. M. Wickramasinghe²

^{1,2} Unit of Allied Sciences, Institute of Indigenous Medicine, University of Colombo, Sri Lanka
samindranishan@iim.cmb.ac.lk

Ayurveda is an ancient system of medicine that focuses on the preventive or prophylactic and curative aspects of health. 'Ayurveda' is a combination of the words 'Ayuh' and 'Vastra'. *Ayuh* refers to long life and *Vastra* means clothing. The process of developing medicinally treated fabric involving *Ayurveda* to preserve health in an eco-friendly manner is a great way of adopting a healthy life. *Ayurveda* has endless scope to capture the global market for *Ayurveda* products. Foreign currency earnings by *Ayurveda* in 2020 was US\$ 4571.7 million. The objectives of this project were to develop a novel preparation of *Ayurveda* treated by herbal raw materials with natural dyeing process to provide human friendly textiles to preserve natural health of people, to introduce eco-friendly manufacturing process of herbal extracts treated clothes for modern textile industry instead of chemical dyeing process and to enhance the trend of use of herbal treated fabrics in Sri Lankan textile industry targeting with international fabric market. In this study, the pharmaceutical analysis of selected herbal raw materials (*Aralu- Terminalia chebula*, *Neem- Azadirachta indica*, *Turmeric- Curcuma longa*, *Lime-, Citrus aurantifolia*) were reviewed from previous research articles. Reviewed pharmaceutical analysis of bioactive ingredients of selected plants' raw materials showed anti-septic, anti-allergic, antifungal, anti-inflammatory, antimicrobial, and immunomodulatory in antioxidant properties. The sample was prepared following several cryogenic procedures. Selected cotton grade fabric was bleached with lime juice and the gumming process was conducted by immersion in *Aralu* decoction, then soaked into filtered *Neem* and *Turmeric* decoction, and heated under mild flame while being stirred. The medicinally treated cloth was washed by diluted decoction to remove additional colour and dried in air. As per reviewed data, it can be concluded that *Ayurveda* can be used for skin infections, eczema, hypertension, asthma, diabetes and a broad range of diseases and it is based on the therapeutic effect of used herbal raw materials for manufacturing. Further, pharmaceutical analysis will be conducted to evaluate therapeutic efficacy of medicinally treated fabrics.

Keywords- *Ayurveda*, Markets, Manufacturing, Medicated fabrics.