

**PP 124: Assessment of physico-chemical parameters and organoleptic properties of *Madhumeha Choornam***

*LUP Liyanage*<sup>1</sup>, *RP Mendis*<sup>1</sup>, *AMHS Attanayake*<sup>1</sup>, *W Kumbukgolla*<sup>2</sup>, *TK Nawarathne*<sup>1</sup>, *LPTB Levangamage*<sup>3</sup>, *P Kahingalage*<sup>1</sup>, *SC Samarawickrama*<sup>1</sup>, *SS Dennis*<sup>1</sup>

<sup>1</sup>*Bandaranaike Memorial Ayurveda Research Institute, Sri Lanka*

<sup>2</sup>*Department of Biochemistry, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*

<sup>3</sup>*Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka*

The subject of herbal drug standardization is complicated because of the complex nature of herbal drugs in their composition. However, standardization is still important to recognize the quality of the formulation. *Madhumeha Choornam* (MC) is a well-known *Siddha* drug and according to the *Siddha pharmacopeia*, MC can be used to treat *Prameha* and help with body strengthening. The aim of this study was to evaluate the physicochemical parameters of MC. We examined extractable matter, total ash content, acid insoluble ash content, pH value, particle size and organoleptic parameters such as color, odor, and taste of MC. All the experiments were done at the research laboratory in Bandaranaike Memorial Ayurveda Research Institute (BMARI) under standard conditions. The experiments were conducted in triplicate and mean values were obtained. The color of the samples was light brown, odor was characteristic and taste was pungent. Mean value of the ash content was  $5.9 \pm 1.6$  % and acid insoluble ash content was  $5.3 \pm 0.9$  %. Mean value of the weight loss of drying at 105 °C was  $11.3 \pm 0.6$  % and the pH was  $3.9 \pm 0.4$  %. The mean value of the water soluble matter and methanol soluble matter was 31.1 % and 13 % respectively. Particle percentage which is less than 150  $\mu\text{m}$  is 39.3 %. The physicochemical properties found in MC are comparable to good characters of an ideal *Choorna*. These parameters can be used to standardize the MC among different manufacturers.

**Keywords:** *Madhumeha Choorna*, *Prameha*, physicochemical evaluation, organoleptic

**OP 125: Assessment of the applicability of Supercritical fluid extraction method in preparing *Cinnamomum zeylanicum* bark oleoresins extracts based on antioxidant assays**

*S Abira*<sup>1</sup>, *KRD de Silva*<sup>1</sup>, *S Thiruchenduran*<sup>1</sup>, *RD Gunaratne*<sup>3</sup>, *PA Paranagama*<sup>4</sup>

<sup>1</sup>*Interdisciplinary Center for Innovations in Biotechnology & Neurosciences, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka*

<sup>2</sup>*Institute of Postharvest Technology, National Aquatic Resources Research and Development Agency, Sri Lanka*

<sup>3</sup>*Department of Biosystems Technology, Faculty of Technology, University of Sri Jayewardenepura, Sri Lanka*

<sup>4</sup>*Department of Chemistry, Faculty of Science, University of Kelaniya, Sri Lanka*

Cinnamon extracts have versatile industrial applications mainly focusing on its ability to act as an antioxidant. Cinnamon bark and oleoresins are the major raw materials for the industrial cinnamon extracts. Studies have shown that the antioxidant activity of the cinnamon extracts is subjective to their processing conditions. Putatively superior supercritical extraction (A) has been compared with Soxhlet's extraction (B) using cinnamon oleoresin and the water extract (C) of cinnamon bark for their antioxidant activities. Extracts A, B and C were assayed for their antioxidant activity through radical scavenging activity using DPPH assay. The linearity range for the analysis was 12.5  $\mu\text{g}/\text{ml}$  – 800  $\mu\text{g}/\text{ml}$  using butylated hydroxyl toluene (BHT) standard. All the extracts indicated significant

antioxidant activity against blank at concentrations above 12.5µg/ml. IC50 values of the samples were 587.68, 544.62 and 1261.40 respectively and 49.32 for BHT standard. The BHT equivalent radical scavenging activity of the extracts at IC50 were 0.084, 0.091 and 0.039 respectively. Supercritical fluid extraction exhibited significantly higher antioxidant activity when compared with water extract (p-value = 0.035). Extract from Soxhlet's extraction didn't indicate significant differences with the other two extracts at a significant level of 0.05 (p-values: A-B = 0.74; B-C = 0.057). This study indicates that extracts from cinnamon bark oleoresins extracted using the supercritical extraction method has higher antioxidant activity compared to water extracts but an equivalent antioxidant activity with extracts from Soxhlet's extraction.

**Keywords:** Cinnamon, antioxidant activity, DPPH

### **PP 126: A comparative assessment of two Ayurvedic formulations on clinical features of *Medo Roga***

JMGSL Jayasinghe<sup>1</sup>, RDH Kulathunga<sup>2</sup>, DUS Rathnapala<sup>3</sup>

<sup>1</sup>Department of Kayachikitsa, Institute of Indigenous Medicine, University Of Colombo, Sri Lanka and Welagedara Ayurvedic Hospital, Kurunegala, Sri Lanka

<sup>2</sup>Department of Kayachikitsa, Institute of Indigenous Medicine, University of Colombo, Sri Lanka

<sup>3</sup>National Hospital of Sri Lanka

*Medo Roga* increases *Kapha doṣa* and *Medo dhātu*, thus the contour of the body can be correlated with obesity and hyperlipidemia. Even though these are major health issues in the world, allopathic medicines are discouraged due to their inefficiency of reducing signs and symptoms. The objective of this study was to assess the effectiveness of two Ayurvedic remedies comparatively; *Daśāṅga Guggulu* and *Tripalā Cūrna*, in management of clinical features of *Medo Roga*. Clinically diagnosed 60 patients with *Medo Roga* were selected at the *Kāyacikitsā* clinic of Ayurvedic Teaching Hospital Borella and divided in to two by 30 subjects for each group. Ten clinical features of *Medo Roga* mentioned in text of *Mādhava Nidāna* were considered and Lipid Profile and BMI were calculated before and after the treatment. *Daśāṅga Guggulu* 3 g and *Tripalā Cūrna* 15 g per day were administered for Group 1 and Group 2 respectively for three months. Statistical analysis showed that *Daśāṅga Guggulu* and *Tripalā Cūrna* showed a highly significant mean reduction of all clinical features ( $p < 0.001$ ) and there were not significant mean differences between two groups. But the mean difference in Group 2 for most of the clinical features, are higher than the mean difference in Group 1, thus *Tripalā Cūrna* was more effective than *Daśāṅga Guggulu* for reduction of clinical features of *Medo Roga*.

**Keywords:** *Medo Roga*, *Daśāṅga Guggulu*, *Tripalā Cūrna*, obesity, hyperlipidemia