

## Selection of Best Drying Method of *Neolitsea cassia* Leaves as to Preserve a Local Mucilaginous Material for Food Industry

I.G.G. Kasunmala\*, S.B. Navarathne and I. Wickramasinghe

Department of Food Science and Technology, Faculty of Applied Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.

### Abstract

Continuous supply of raw materials is a most common problem in food industry. *Neolitsea cassia* is the most common materials used to extraction of mucilage in Sri Lanka. Mucilaginous materials extracted from *Neolitsea cassia* was used as textural improvers, thickeners, stabilizers etc. Due to lack of continuous supply of the raw material, introducing this mucilage into food industry is a challenging issue in food industry. Hence, preservation of materials is an important task. Drying is the most common and easy way to preserve raw materials. Therein, *Neolitsea cassia* leaves were subjected to four different drying methods namely solar drying, mechanical drying, dehumidified air drying and shade drying. Mucilaginous material was extracted manually in 1% citric acid solution and filtered. Viscosity and the dry matter content were measured for each drying method. They were compared with mucilaginous material extracted fresh leaves. Results revealed that, there was a significant difference ( $P < 0.05$ ) in both viscosity and the dry matter content between dehumidified air drying over other drying methods. Dehumidified drying exhibited the highest viscosity and yield which was  $3.75 \pm 0.05$  cP and  $2.85 \pm 0.03$  g/kg% respectively. Dehumidified drying able to retain its original properties which was nearly same as that of fresh leaves, 97.40% and 99.65%, respectively. Shelf life study showed a significant retention of viscosity over six months for dehumidified drying. Hence dehumidified air drying was identified as the best drying method to preserve *Neolitsea cassia* leaves as a local mucilaginous material for food industry.

**Keyword-** Drying techniques, Dehumidified drying, *Neolitsea cassia* leaves, Mucilaginous material, Food security

\*Corresponding Author: kasunmala@sci.sjp.ac.lk