



COMPARATIVE STUDY OF PHYSIOCHEMICAL PROPERTIES OF LOCALLY AVAILABLE MUCILAGINOUS MATERIALS IN SRI LANKA

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ABSTRACT

Although Sri Lanka has several hydrocolloid gums and mucilaginous materials, still imports a substantial amount of hydrocolloid gums. *Neolitsea cassia*, *Cinnamomum verum* and *Terminalia arjuna* leaves, and *Dillenia retusa* fruits are some of the common materials used for extraction of mucilage in Sri Lankan food industry. However, these mucilage materials are not commonly used in food products due to lack of information on the physicochemical properties of the mucilage and the extraction process. Hence identification of potential local sources to extract mucilaginous materials is important to promote local raw materials among the people. Therein mucilaginous materials were extracted, precipitated and dried in hot air oven as the procedure described by kasunmala *et al* (2017). Organoleptic properties, solubility profile and physicochemical properties of dried mucilaginous materials were analyzed and compared. Dried mucilaginous material obtained from the *Neolitsea cassia* shows the best organoleptic properties over other precipitated dried mucilaginous materials. All the precipitated mucilaginous materials showed same pattern of solubility which is dissolved in hot water and insoluble in organic solvents. They had a good swelling index, high swelling index reported in *Neolitsea cassia* (27.8%) and all mucilaginous materials had acidic nature. The results of the aforementioned properties showed that *Neolitsea cassia* has relatively high physicochemical properties, but all the precipitated mucilaginous materials have acceptable physicochemical properties and can be used as a several food applications.

Keywords: mucilaginous materials, extraction, comparison, physicochemical properties food industry