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Estimation of Total Carbohydrate Content in Aqueous Extract of Sri Lankan Marine Algae *Chnoospora minima*

Keerthirathna W.L.R.[1,2], Samarakoon K.W.[3], Ranasinghe P.[4], Peiris L.D.C.[1]

[1]Department of Zoology, University of Sri Jayewardenepura, Nugegoda, Sri Lanka
[2]Center for Instumentation Facility, Faculty of Applied Science, University of Sri Jayewardenepura
[3]National Science and Technology Commission, Colombo, Sri Lanka
[4]Industrial Technology Institute, Malabe, Sri Lanka
**rangee9183@gmail.com*

Abstract

Marine organisms are rich in bioactive compounds such as polysaccharides, polyunsaturated fatty acids and polyphenols. These macromolecules possess anticoagulant, antiviral, antioxidant, anticancer and immunomodulatory activities. The present study was carried out to determine the total carbohydrates present in the extract of marine algae *Chnoospora minima* (Family: Scytosiphonaceae). Phenol-sulfuric method was used to estimate the total carbohydrate content. This method detects virtually all classes of carbohydrates, including mono-, di-, oligo-, and polysaccharides. Absorbance was measured at 490 nm with different concentrations of working standard of glucose solution (0, 0.020, 0.040, 0.060, 0.080, 0.10 and 0.023 mg/L mL) and the algal sample, followed by the addition of 5% phenol and 96% sulphuric acid. Resulted total carbohydrate content of the sample *C. minima* was 22.5 mg/kg. This high amount of carbohydrate content in *C. minima* reveal its potential to develop polysaccharide-based drugs following assessment of its anti-cancer activities.

Keywords: *Choonospora minima,* Polysachcharides, Phenol-sulphuric method, anti-cancer activity

***Acknowledgement*:** Financial assistances under the research grant ASP/01/RE/SCI/2017/49