
Comparative physicochemical analysis of seeds of selected medicinal plants used in traditional medicine

Jayasinghe M.R.¹, Rajkumar G.^{1*}, Sanmugarajah V.² and Thavaranjit A.C.¹

¹Department of Botany, Faculty of Science, University of Jaffna, Sri Lanka.

²Unit of Siddha Medicine, University of Jaffna, Sri Lanka.

Medicinal plants are the sources of many important drugs in the world's pharmaceuticals. The present study attempts to evaluate the proximate estimation of physicochemical properties of seeds of *Syzygium cumini* L. Skeels, *Brassica alba* L. Rabenh, *Trigonella foenum-graecum* L. and *Nigella sativa* L. Proximate nutrient and total caloric content of the seeds were estimated according to the standard protocols recommended by the Association of Analytical Chemists (AOAC) and bomb calorimeter method respectively. The pH in 1% w/v (1g; 100 ml) of water-soluble portions of seed powder and essential chemical elements were determined by the standard simple glass electrode pH meter and flame photometric method respectively. According to the results, the highest and the lowest ash contents were found in *Syzygium* sp. (16.19%) and *Nigella* sp. (3.86%) respectively. The moisture content ranged between 11.44% (*Syzygium* sp.) and 2.64% (*Nigella* sp.). The fat content varied from 7.30% (*Syzygium* sp.) to 25.28% (*Nigella* sp.). The caloric content was significantly higher in *Nigella* sp. (595.56 kcal/100g) and the lowest amount was found *Syzygium* sp. (314.7 kcal/100g). All the seeds showed approximately same pH values and ranged between 5.42 (*Nigella* sp.) and 5.60 (*Syzygium* sp.). *Syzygium* sp. has a higher percentage of all the tested chemical elements such as Barium (1.743%), Sodium (0.831%), Calcium (1.203%) and Potassium (0.632%) than other plant seeds. The present study concludes the chances of discovering significant physicochemical properties in seeds of *Syzygium cumini* L. is the highest and it can be used as a potential source in the traditional system of medicine.

Keywords: Physicochemical, *Syzygium cumini*, *Trigonella foenum-graecum*, *Brassica alba*

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*Corresponding author: gowrir@univ.jfn.ac.lk