

A12. Nutritional profile and phytochemical characteristics of Australian grown Samphire (*Tecticornia sp.*)**Sukirtha Srivarathan^{*1,3}, Anh Dao Thi Phan¹, Hung Hong Trieu¹, Olivia Wright^{1,2},****Yasmina Sultanbawa¹, Michael E. Netzel¹**¹*ARC Industrial Transformation Training Centre for Uniquely Australian Foods, Queensland Alliance for Agriculture and Food Innovation, The University of Queensland, Coopers Plains, QLD, Australia*²*School of Human Movement and Nutrition Sciences, The University of Queensland, St. Lucia, QLD, Australia*³*Department of Biosystems Technology, Faculty of Technology, University of Jaffna, Ariviyal Nagar, Kilinochchi (NP), Sri Lanka*s.srivarathan@uq.edu.au

Strong evidence from recent studies indicates that plant-based diets show beneficial effects against diabetes, heart disease and obesity. Wild edible plants, in particular, are reported as having significant biological activities that are most likely attributed to their phytochemicals. Samphire (*Tecticornia sp.*) is a wild plant from the same family as spinach but grows in arid and semi-arid regions. Most of the samphire species are well known for food and non-food uses among indigenous people of Australia, while scientific information is limited on their nutritional composition and potential bioactivities. This study systematically evaluated the nutritional composition, main bioactive compounds (phytochemicals) and antioxidant capacity of six Australian grown samphire from different locations and baby spinach as a “control”/comparison. State-of-the-art UHPLC-MS/MS technique was used for the analysis of phytochemicals, with Celosianin II being identified as the predominant phytochemical in samphire 2 and 4. There were only slight differences in the proximate composition, whereas a significant ($p < 0.05$) difference could be observed in the fibre content (26.4 ± 0.22 (samphire 5) to 46.8 ± 0.14 (samphire 6) g/100 g DW). The results of total phenolic content (TPC) showed that all seven samples had different values, with samphire 2 having the highest ($p < 0.05$) TPC and also the highest ($p < 0.05$) DPPH radical scavenging capacity. The high fibre content and antioxidant capacity in the analysed samphire samples are promising initial results. However, further studies need to be carried out to determine the complete nutritional profiles and potential bioactivity of the different samphire species before commercial application.