

Investigation of the antioxidant and antimicrobial activity of methanolic extracts of raw and cooked scallion (*Allium Wakegi*).

Deepalakshmi J, Ambika K, Purushothaman A, Kathiravan MN.

Department of Biochemistry, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai, India.

Corresponding author email: trishabaskaran@yahoo.com

From International Conference on Biosciences- Trends in Molecular Medicine.

Post Graduate Department of Biochemistry, Dwaraka Doss Goverdhan Doss Vaishnav College, Arumbakkam, Chennai 600 106, India. 7-8 February 2012.

American J of Bio-pharm Biochem and Life Sci 2012 March, Vol. 1 (Suppl 1): A62

ABSTRACT

This study presents the quantitative estimation of total phenol, total flavonoids content of raw and cooked onion methanolic extracts. Further, these extracts used to evaluate the free radical scavenging and antimicrobial activities. The total content of the raw and cooked scallion extracts was found to be 9.8 mg/ g GAE and 7.9mg / g GAE respectively. The total flavonoids content was estimated to be 428.6 ± 23.1 mg/100g for raw and 348.2 ± 19.4 mg / 100g cooked scallion extracts. From the results, the cooked scallion extracts shows up to 22% and 18% decreased contents of the TPC and total flavonoid respectively. The DPPH IC50 values of the raw and cooked scallion methanolic extracts were 0.84 mg/ml and 1.22mg/ ml, respectively. This result suggests that raw onion was found to be more powerful free radical scavenger when compared with cooked onion. The methanolic extracts of raw and cooked onion were screened for antibacterial activities. The extracts showed the widest zone of inhibition (between 4 – 10mm) in the order of E.Coli > Klebsiella sp. > Pseudomonas sp. > B. subtilis. No zone of inhibition was found in Staphylococcus in the raw onion extract. However, cooked onion extract shows poor zone of inhibition (less than 4mm). The present study revealed the raw onion methanolic extract has strong antioxidant and antimicrobial activity than cooked onion extracts.