

## Phenols, Antioxidants and Resistant Starch Contents in Local Banana Varieties

S. Vinthuja<sup>1</sup>, K.Karthiha<sup>1</sup> and S. Balakumar<sup>2†</sup>

<sup>1</sup>Department of Agricultural Chemistry, University of Jaffna, Sri Lanka

<sup>2</sup>Department of Biochemistry, University of Jaffna, Sri Lanka

<sup>†</sup>balakumarbiochem@gmail.com

**Abstract:** The aim of this study was to compare the antioxidant properties, phenol content, resistant starch, total starch and reducing sugar contents of six local banana (*Musa* species) varieties such as *kathali*, *kappal*, *itharai* (wild type), *aanai vaazhai*, *maruththuva vaazhai*, and *sevvaazhai*. The banana varieties were obtained from Thirunelvely market, situated in Jaffna, during the month of January. Antioxidant activity, ferric reducing power assay, total phenol content, resistant starch, non-resistant starch and reducing sugar content were determined and the contents were calculated per 100g dry weight. Highest antioxidant activity (ascorbic acid equivalent: 782.33±0.12mg) and ferric reducing power (24.796±0.95mg) were found in *kathali* and lowest antioxidant activity and ferric reducing power were detected in *itharai* (543±0.19mg and 12.97±0.6mg). Highest phenol content was detected in *aanai* (20.92±0.30mg) and lowest phenol content was detected in *itharai* (8.09±0.20mg). Highest resistant starch (RS) content was detected in *itharai* (11.69±0.82g) while lowest RS content was detected in both *kathali* (2.08±0.75g) and *sevvaazhai* (2.03±0.23g). Highest percentage of resistant starch (20.48% out of total starch content) was found in *itharai* variety; hence it is a better choice for prediabetic and diabetic patients. Also it is good for colonic health, mainly to prevent colon cancer. The present study shows that banana contains many bioactive compounds, which could significantly contribute to human health.

**Keywords:** Antioxidants, Ferric reducing power, Phenols, Resistant starch