

**DEVELOPMENT OF FRUIT POWDER AND DRINKING YOGHURT
FROM SOURSOP (*Annona muricata*) AND EVALUATION OF THE
FUNCTIONAL PROPERTIES**

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Soursop (*Annona muricata*) is an underutilized seasonal climacteric fruit with high perishability. Development of value-added products including fruit powder and drinking yoghurt from soursop is a timely solution for high postharvest losses. The objective of the present study was to develop soursop incorporated drinking yoghurt and vacuum dried soursop powder and to evaluate their antioxidant properties. Composition of soursop fruit in terms of the edible portion, peel, seeds and central pith was 71.5%, 17.2%, 8.3% and 3.0% respectively. Trials were carried out by incorporating soursop pulp (15%, 20% and 25% w/v) into drinking yoghurt. Based on the sensory evaluation, the best fruit content was selected as 20% w/v. Titratable acidity, pH, total soluble solids and syneresis of soursop drinking yoghurt (20% w/v) were 0.85%, 4.5, 15.3°Brix and 29.3% respectively, which complied with existing standards. The drinking yoghurt with 20% w/v soursop incorporated with added sucralose and sugar separately were compared with normal drinking yoghurt as a control. The drinking yoghurt with sucralose was selected as the most preferable drinking yoghurt concerning all sensory attributes. A significantly ($p < 0.05$) higher antioxidants potential by terms of total polyphenolic content, total flavonoids content, ferric reducing antioxidant power, radical scavenging activities of 2,2'-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid) and 2,2-diphenyl-1-picrylhydrazyl were shown in the soursop drinking yoghurt ($14.13 \pm 0.63 \text{ mgGAEg}^{-1}$; $3.39 \pm 0.36 \text{ mgQEg}^{-1}$; $1.3196 \pm 0.30 \text{ mgTEg}^{-1}$; $30.14 \pm 3.24 \text{ mgTEg}^{-1}$ and $25.67 \pm 3.38 \text{ mgTEg}^{-1}$ respectively). Vacuum-dried powder had the lowest values ($1.80 \pm 0.092 \text{ mgGAEg}^{-1}$; $0.07 \pm 0.01 \text{ mgQEg}^{-1}$; $0.12 \pm 0.01 \text{ mgTEg}^{-1}$; $2.50 \pm 0.08 \text{ mgTEg}^{-1}$ and $0.919 \pm 0.13 \text{ mgTEg}^{-1}$ respectively). Accordingly, soursop (20% w/v) incorporated drinking yoghurt was identified as the product with the best functional properties.

Keywords: Antioxidant potential, Drinking yoghurt, Functional properties, Soursop fruit, Vacuum-dried soursop powder