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CHARACTERIZING COCONUT SAP SUGAR AND SYRUP AS A PROMISING FUNCTIONAL FOOD/INGREDIENT

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Background Carbohydrates are commonly referred to as 'sugars'. However, all sugars are not created equal. Simple sugars are readily digestible in the small intestine while complex sugars are not. Complex sugar may be a good sugar substitute and may have a significant role in the proper control and management of diabetes mellitus and in the prevention for risk of obesity.

Objectives The study characterized coconut sap sugar and syrup in terms of nutrient composition, dietary fiber/sugar composition and its fermentability characteristics, and physico-chemical and microbiological properties.

Methods Physicochemical/ microbiological properties, nutrient composition, simple/complex sugar composition, dietary fiber and fermentability characteristics of coconut sap sugar/syrup were determined using standard methods.

Result Results showed that both products have acceptable water activity with time. Salmonella and Coliform were within the acceptance criteria of the Philippine National Standards. The color was attributed to the effects of temperature, relative humidity and pH. The moisture of coco sugar was within CODEX Standards (1.7–1.8 g/100g). Significant amounts of minerals and vitamins were obtained. Both products contained sucrose, glucose, fructose and mannose. No dietary fiber was detected from coconut sap sugar but has significant amounts of inulin (4.7 g/100g). Coconut sap syrup has both dietary fiber and inulin. Fermentable inulin produced short chain fatty acids with propionate>acetate>butyrate ($P<0.05$).

Conclusion The significant amounts of inulin and propionate are added nutritional values of coconut sap sugar/syrup and may be considered as a promising functional food/ingredient.