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GLYCEMIC INDEX OF COCO SUGAR

The glycemic index (GI) is a method of classifying food based on the glucose response of an individual to a food relative to a starchy food, e.g. white bread, or to a standard glucose solution. Low GI foods are recommended for proper control and management of diabetes mellitus, cardiovascular disease and in the maintenance of weight because it can reduce post-prandial blood glucose and insulin and improve the overall blood glucose and lipid concentrations in normal subjects (Jenkins et al., 1987), as well as patients with diabetes mellitus (Collier et al., 1988; Fontvieille et al., 1988; Brand et al., 1991; Wolever et al., 1992). The GI Classification of foods is as follows: Low GI = 55 or less; Med GI = 56-69; High GI = 70 or more.

The objective of the study is to determine the glycemic index of Coco Sugar. Ten (10) healthy human subjects were studied. The test food used was coco sugar prepared by the Philippine Coconut Authority. The protocol of the study is as follows: Fifty grams available carbohydrates of standard glucose solution (Medic Orange 50, 200ml., Medic Diagnostic Laboratory, Pasig City, Philippines) and coco sugar was fed in random order to the subjects. The test food was given for three days and the standard glucose solution once. Blood samples of approximately 0.3 – 0.4 ml were collected using finger prick technique. Blood samples were collected in a 7ml-vacutainer at 0 h and every 15 min after feeding for 1 h and every 30 min for the next hour. The serum was separated from the blood using a refrigerated centrifuge (Eppendorf Centrifuge, Eppendorf, Germany) and analyzed for glucose levels on the same day using a Clinical Chemistry Analyzer (ARTAX Menarini Diagnostics, Firenze, Italy) after calibration with the glucose standard (Glucofix Reagent1: Menarini Diagnostics, Firenze, Italy). The incremental area under the glucose response curve (IAUC) of the test food was calculated geometrically ignoring the area below the fasting level (Wolever et al., 1992). The glycemic index of the test food was calculated as $GI = \text{IAUC of the test food} / \text{IAUC of standard glucose} \times 100$. The glycemic index of coco sugar is 35 and is classified as a low glycemic index food.

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