

DEVELOPMENT OF A PROTOCOL FOR COCONUT SUGAR PRODUCTION USING TAPPING SAP

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Abstract: Coconut sugar is one of the most economically valued products and a sweetener ingredient. Increasing threats of diabetes, obesity, hypertension, and heart diseases have become real concerns for many people due to the high consumption of sugar in food, beverage, and confectionery products. Due to an increased interest in healthy diets, people try to replace conventionally refined sugar. Consequently, the demand for alternative sweeteners is growing. Coconut inflorescence sugar benefits from this trend and is conquering European grocery stores and kitchens. This study was conducted as a development of a protocol for coconut sugar production using tapping sap. Fresh good quality coconut tapping sap was used to develop coconut sugar. Therefore, the freshness of the tapping sap was tested at 6-hour intervals. The temperature was tested for the production of coconut sugar. There was one treatment and two control samples. Newly produced coconut sugar was tested against brown cane sugar and marketed coconut sugar. The physicochemical properties, sensory properties and consumer acceptance were tested in all samples. Sensory evaluation was done using a five-point hedonic scale using 30 untrained panellists. From the sensory evaluation, novel product with 100% coconut tapping sap sugar was selected as the best. The same was ranked as the best in taste compared to the marketed coconut sugar and brown cane sugar. The finding demonstrated that there is a high possibility and potential of producing coconut sugar using coconut tapping sap.

Keywords: Coconut sugar; Physicochemical properties; Production protocol; Sensory properties; Tapping sap