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A study on purification and crystallization of commercial Palm Jaggery

Amrita Ray, Ramalakshmi K and **Chakkaravarthi A**
CSIR-Central Food Technological Research Institute, India

Palm jaggery is commonly available in South India as well as in other parts of the country and used as a nutritionally rich product with numerous health benefits. It is a rich source of minerals like iron, magnesium, calcium, and potassium. It is also known to have a low Glycaemic Index (GI) and it can be a preferred choice of energy and mineral source for diabetic patients apart from enormous health benefits as claimed in Ayurveda. During the collection of neera processing to concentrate and setting of the jaggery, it gets adulterated with unwanted material. This will affect the nutritional profile and may also lead to health problems. The present study is aimed in removal of unwanted material (impurities) from commercially available jaggery and making pure crystals. The commercially available jaggery was dissolved and subjected to centrifugation at different concentration (10%, 30%, 50%) with different gravity (7000, 11000 & 15000) for different time durations (5, 10, 15 minutes). Upto16% of impurities could be removed by this method. 30% solution at 7000 g was found to be optimum for the purpose. Further, it is concentrated to 85% total suspended solids (TSS). Upon crystallization for 36 hours at 30°C, small pure crystals were obtained. Commercially available palm jaggery with 16% impurities hampers the export potential, this purification process followed by granulation and crystallization may help in tapping the export market which in turn will benefit the farmers.

ray.amrita05@gmail.com

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