



Effect of different particle sizes of jaggery powder on storability

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● ABSTRACT ●

The investigations were carried out to study the effect of different particle size and packaging materials on storability of jaggery powder on the basis of changes in chemical composition and organoleptic characteristics. Jaggery powder of three different grades viz., coarse (0.500 - 0.708 mm), medium (0.351 - 0.420 mm) and fine (0.211 - 0.296 mm) were prepared and packed in 100 gauge polyethylene bag. The samples were stored at room temperature for the period of 6 months. In order to optimize the particle size of jaggery powder, the changes in chemical composition and organoleptic properties were evaluated during storage. The results revealed that change in chemical composition was lower in case of coarse jaggery powder. The coarse jaggery powder having particle size in the range 0.500 – 0.078 mm) was found more acceptable among all other powder sizes after storage period of six months in terms of its chemical properties and organoleptic characteristics.

KEY WORDS : Jaggery, Powder, Storability, Particle size

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● INTRODUCTION ●

Jaggery is one of the most important sweeteners in India. Jaggery (also known as *gur*) is a traditional unrefined non-centrifugal sugar consumed in Asia, Africa, Latin America, and the Caribbean (Nevkar *et al.*, 2005). It is a concentrated product of cane juice without separation of the molasses and crystals, and can vary from golden brown to dark brown in color. It contains up to 50% sucrose, up to 20% invert sugars with some other insoluble matter such as ash, proteins and bagasse fibers (Ghosh and Agrawal, 1983). It is directly consumed by human and used in animal feed mixtures. Jaggery is a natural sweetener made by the concentration of sugarcane juice prepared without the use of any chemicals (Singh, 1985). Jaggery has great nutritive and medicinal value. Jaggery

purifies the blood, prevents the rheumatic afflictions and disorders of bile and process properties of higher order (Sahu and Paul, 1998; Sahu and Saxena, 1994). Jaggery contains proteins, vitamins and minerals, which are essential constituents for the body. It is also a potent source of iron and copper (Beguin, 1978). Jaggery is an energy food that is said to purify blood, regulate liver function and keep the body healthy. It has also been prescribed in various diseases like jaundice, breathlessness and kidney problems (Veldhuyzen-van, 1999).

Jaggery industry is the dominant decentralized cottage industry of India, which meets about 40 to 50% sweetener requirement of Indian population. About one third to one half jaggery produced needs to be stored every year (Singh, 1985). Jaggery is usually available in the market in the form of one or half kg block. However, these blocks are not feasible for transportation and retailing. The loss of jaggery during storage ranged from 7 to 25% depending upon storage conditions (Shinde *et al.*, 1981). Hence, in present investigation, efforts were made to convert jaggery into different particle sizes and further prepared jaggery powder was analyzed for its physicochemical and organoleptic characteristics during storage for the period of 6 months.

● MATERIALS AND METHODS ●

The present research work entitled “effect of

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