

**DEVELOPMENT AND QUALITY EVALUATION OF
VALUE ADDED COCONUT (*Cocos nucifera*) JAM**

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ABSTRACT

Jam is a semi-solid product used as a spread ingredient in bakery products. In Coconut jam is made from Young coconut, Coconut Embryo that are rich in pectin, sucrose, and citric acid. Jam based on coconut meat is an innovative product aimed to make coconut product diversification.. This research study was carried out to investigate the production of coconut based jams, which are more nutritious and, instead of jam containing artificial colors and sweeteners widely available in Sri Lanka. Also to improve the eating quality of coconut embryo ,which has exceptional medicinal properties, to introduce these product to the market and to raise awareness about their medicinal value. The high content of bioactive compounds in Coconut Embryo and Young Coconut provides various health benefits.

The result of this study confirms the great potentiality of Young Coconut pulp with Coconut Embryo for jam production. The treatments are as follows. T₁ - Ordinary Young Coconut pulp, T₂- Young Coconut pulp with Coconut Embryo, T₃- Ordinary Coconut Embryo. Physico-chemical analysis vs.- pH, Moisture content (MC), Total Soluble Solids (TSS) and Titrable acidity (TA) and sensory analysis vs.- Texture, Colour, Spreadability, taste, appearance and overall acceptability were conducted for each treatment of the jam. Physico-Chemical analysis was conducted by using standard AOAC methods. In physico-chemical analysis there was a decrease of pH value in T₃ (Ordinary Coconut Embryo) which is responsible for the low pH of coconut Embryo and citric Acid. In T₂ (Young Coconut with Coconut Embryo) had highest amount of Total Soluble Solids.

Sensory evaluation was conducted using a sensory panel consisting 20 semi trained panelists. The texture, colour, spreadability, taste, appearance and overall acceptability were evaluated using a Nine-point hedonic scale. In the sensory analysis T₂ (Young Coconut pulp with Coconut Embryo) had highest texture, colour, spreadability, taste and overall acceptability and appearance. T₁ had highest appearance similar to T₂. The initial bacterial and fungal population of the coconut based jam was 2.00×10^{-6} cfu/g and 1.00×10^{-6} cfu/g respectively. An

increasing trend in bacterial and fungal population was observed in the stored jam samples. A minimum count was recorded in the prepared by Young Coconut with Coconut Embryo packed in glass bottles throughout the storage period .

Therefore, jam prepared from Young Coconut with coconut embryo is the best jam sample within three treatments and there is no any harmful effect to the consumers. Therefore, it can be concluded that jam prepared by Young Coconut with Coconut Embryo is having good potential for the commercial production.

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