

**DEVELOPMENT OF READY-TO-DRINK
BEVERAGE FROM COCONUT WATER OF
DC MILLS**

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Addition

By

WATTE GEDARA MANJULA KUMARA

Faculty of Animal Science and Export Agriculture

Uva Wellassa University

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ABSTRACT

Coconut liquid endosperm is the inner most part of the coconut (*Cocos nucifera*) fruit and it is rich in nutrients. Mature coconut water is considered as a waste and removed from desiccated coconut industries. This active pollutant pollutes the surrounding environment. Development of a beverage from this waste water may be a good solution but coconut water beverage has shorter shelf life. Processing, preservation and proper packaging may be extending the shelf life. pH, titratable acidity, total soluble solids (TSS), total sugar and minerals (Mg, Ca, K, Na and Fe) of DC nut water were analyzed. The pH and Brix value adjusted coconut water was pasteurized by heating at 80 °C for 5 minutes, heating at 80 °C for 10 minutes, heating at 90 °C for 5 minutes and heating at 90 °C for 10 minutes. The treated nut water was filled into sterilized glass bottles and aluminum pouches. Bottles and aluminum pouches were stored separately at both ambient (30±2 °C) and refrigerated (4±2 °C) temperatures. The processed nut water was analyzed for TSS, acidity, pH, mineral content, total sugar, microbial infestation and sensory properties. According to the sensory data coconut water pasteurized by heating 80 °C for 10 min was better in colour attribute and pasteurized by heating 80 °C for 5 min had better odour, taste and overall acceptability. There were no any significant difference ($P > 0.05$) in pH, Brix and titratable acidity on storage time, packaging materials, storage condition and Pasteurizing temperatures and time. Though Total Plate Count and yeast and mould count were significantly different on storage time ($P < 0.05$), there was no significant difference on storage conditions, packaging materials, pasteurization temperature and time. Also there was no interaction effect between storage time, storage condition, packaging material, pasteurization temperature and time. The optimum pasteurization condition was 80 °C for 10 minutes, based on microbiological results and sensory parameters. This pasteurization temperature and time combination was better in prolonging the shelf life of DC nut water for eight weeks period and the products were microbiologically safe for consumption.

Key Words: Pasteurization, Shelf life, Liquid endosperm