



**Development of fruit bar made from Wood Apple
(*Limonia acidissima*) & Muskmelon (*Cucumis
melo*) using different sweeteners and determination
of its quality parameter.**

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of Masters of Science in Applied Human Nutrition & Dietetics**

**Department of Applied Food Science and Nutrition
Faculty of Food Science and Technology
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July 2023

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**DEDICATED TO MY BELOVED
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List of Abbreviation

&	: And
AOAC	: Association of Analytical Chemists
DPPH	: 2, 2-diphenyl-1-picrylhydrazyl
EDTA	: Ethyl di amine tetra acetic acid
CMC	: Carboxymethyl cellulose
APM	: Aspartame
GAE	: Gallic Acid Equivalent
SDA	: Saboraud dextrose agar
QE	: Quercetin equivalent
ANOVA	: Analysis of variance
°B	: Degree brix
°C	: Degree celcius
TSS	: Total soluble solids
CHO	: Carbohydrate
etc	: Et cetera
et al	: Et alii / et alia
G	: Gram
Cfu	: Colony forming unit
PPM	: Parts per million
Mg	: Milligram
Kg	: Kilogram

Abstract

Wood apple (*Limonia acidissima*) and muskmelon (*Cucumis melo*) both are highly nutritious fruits with lots of medicinal properties which are seasonally produced in our country. Due to bland taste and higher moisture content of muskmelon every year lots of fruits are wasted. In our country very little study has been conducted on the processing of muskmelon, wood-apple and products made from muskmelon and Wood-apple are hardly available in our market place. That's why current research is done to make a highly nutritious fruits bar to utilize this two common fruits of Bangladesh by using different sweetener. Fruit bar is the product prepared by blending fruit purees or pulp extracted from ripe pulpy fruit, sugar or other nutritive sweeteners and other ingredients and additives desired for product and dehydrated to form sheet which can be cut to desired shape and size. In this study among the different sweeteners made fruit bar sample A, B, C, D, E, F – sample C which was made with wood-apple and muskmelon using dates recorded maximum sensory score and overall acceptability (5.50 ± 0.01). In sample C it was recorded that TSS level (78.89 ± 0.01) °Brix, pH level (3.00 ± 0.02), carbohydrates (71.8 ± 0.01), crude fiber (2.80 ± 0.01), ash (1.30 ± 0.01), protein (2.08 ± 0.01), vitamin (4.54 ± 0.03), Calcium (1.64 ± 0.01), Magnesium (0.23 ± 0.01), Potassium (2.27 ± 0.01), Iron (27.40 ± 0.01) and energy content (312.37 ± 0.01). The overall viable count in the microbiological study was determined to be within allowable limits, and no fungal influence was seen. Making fruit bar from wood-apple and muskmelon can minimize the wastage of muskmelon and ensure the proper utilization of wood-apple and muskmelon while also improving health and being enjoyed by all socioeconomic groups.

Key words: Fruit bar, sensory score, Brix, crude fiber, organoleptic taste, microbial analysis, total viable count, fungal effect.