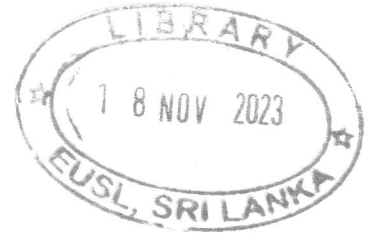


**Product Development of Mango Puree from Different Varieties of Mango  
(*Mangifera indica*) Grown In Sri Lanka**

By

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## ABSTRACT

Thermal processing is a widely used technique to preserve foods, which could be applied to mango to produce a desert food named mango puree.

The study was conducted to extend the shelf life of mango by processing a good quality mango puree. Well ripened firm fruits of "Willard", "karthakolomban" and "gira" mangoes were selected and peeled. Then the pulp was ground and added 0.3% of pulp weight of ascorbic acid followed by thermal processing. The products were subjected mango puree with exhausting treatment and followed by sterilization process at 121 °C for 15-20 minutes.

Ascorbic acid is a natural water-soluble(Vitamin C). Ascorbic acid was used as an effective chemical preservative. It reduces the pH of the product. Thereby, it reduces the growth of food spoilage bacteria, suppresses the enzyme activity, reduce the resistance to heat of several micro-organisms during canning.

Physio-chemical measures analysis using turkey test. Significance different at 5% level were observed in moisture content, pH, reducing sugar and titratable acidity. The chemical composition of fresh mango puree and stored mango puree were analyzed to determine the nutrient preservation ability of the product. The result indicates that the preserved product has not lost its nutritional value.

A sensory evaluation test using Hedonic 9 point scale ranking method based on colour, flavor, texture and overall quality was conducted and data were analyzed using Analysis Of Variance Method (ANOVA). The sensory evaluation showed for the fresh samples, Karthakolomban mango puree sample (T1) had highest preference for the colour, aroma, taste and overall acceptance and T2 gained the highest rate in texture. Therefore most preferred mango puree is T1 sample. (Karthakolomban) After the storage for four weeks, T4 (Karthakolomban) gained the highest rate in colour, aroma, taste and overall acceptability and T5 obtained highest rate in texture. So, the most preferred mango puree sample is the T4 sample after the one month storage period.

The microbial analysis tests showed, there was no growth of micro-organisms in samples. Therefore, shelf life of the mango puree with exhausting treatment is better product with long shelf life.

The study concluded that mango fruits could be preserved as mango puree for one month without losing their nutritional and sensory attributes.

## TABLE OF CONTENTS

ABSTRACT.....	iv
ACKNOWLEDGEMENT.....	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES.....	x
LIST OF FIGURES.....	xii
LIST OF PLATES.....	xiii
ABBREVIATIONS.....	xiv
CHAPTER 01.....	1
1.0 INTRODUCTION.....	1
CHAPTER 02.....	3
2.0 LITERATURE REVIEW.....	3
2.1 Production of Mango.....	3
2.2 Botany of the crop.....	4
2.2.1 Classification of Sri Lankan varieties.....	6
2.3 Biochemical and Nutritional composition.....	10
2.3.1 Carbohydrates.....	13
2.3.2 Pigments.....	14
2.3.3 Flavor constituents.....	15
2.3.4 Organic acids.....	15
2.3.5 Phenolic compounds.....	16
2.3.6 Enzymes.....	16
2.4 Sensory Evaluation.....	17
2.4.1 Definition.....	17
2.4.2 Uses of sensory analysis.....	19

2.4.3 Problems associated with sensory analysis.....	20
2.4.4The rules followed during sensory evaluation.....	21
2.5 Processing of mango.....	22
2.6 Food uses.....	25
<b>CHAPTER 03.....</b>	<b>26</b>
<b>3.0 MATERIALS AND METHODS.....</b>	<b>26</b>
3.1 Experimental Location.....	26
3.2 Experimental Design.....	26
3.3 Materials, Ingredients and Equipments.....	27
3.3.1 Materials.....	27
3.3.2 Material collection.....	27
3.4 Methodology.....	27
3.4.1 Sterilization of glass jars.....	27
3.4.2 Preparation of mango puree .....	28
3.5 Chemical analysis of fresh mango and mango puree samples.....	29
3.5.1 Determination of Titratable Acidity.....	29
3.5.1.1 Principle.....	29
3.5.1.2 Materials.....	29
3.5.1.3 Procedure.....	30
3.5.1.4 Calculation.....	30
3.5.2 Determination of Reducing Sugar.....	31
3.5.2.1 Principle.....	31
3.5.2.2 Materials.....	31
3.5.2.3 Procedure.....	32
3.5.2.4 Calculation.....	32

3.5.3 Determination of pH .....	33
3.5.3.1 Principle.....	33
3.5.3.2 Materials.....	33
3.5.3.3 Procedure.....	33
3.5.4 Determination of Moisture Content.....	34
3.5.4.1 Principle.....	34
3.5.4.2 Materials.....	34
3.5.4.3 Procedure.....	34
3.5.4.4 Calculation.....	34
3.6 Physical analysis of mango puree.....	35
3.6.1 Colour.....	35
3.7 Sensory evaluation of mango puree.....	35
3.7.1 Materials used for sensory evaluation.....	36
3.7.2 Cording sample and serving.....	36
3.7.2 Serving the samples.....	37
3.8 Statistical Analysis.....	37
3.9 Microbial analysis of mango puree .....	38
3.9.1 Bacteria.....	38
3.9.2 Fungus.....	39
<b>CHAPTER 04 .....</b>	<b>40</b>
<b>4.0 RESULT AND DISCUSSION.....</b>	<b>40</b>
4.1 Product Development.....	40
4.2 Quality characteristics of mango puree.....	41
4.2.1 pH.....	42
4.2.2 Moisture content.....	43

4.2.3	Titratable acidity.....	44
4.2.4	Reducing sugar.....	45
4.3	Sensory evaluation of fresh mango puree samples.....	45
4.3.1	Colour.....	46
4.3.2	Aroma.....	46
4.3.3	Texture.....	47
4.3.4	Taste.....	48
4.3.5	Overall acceptability.....	48
4.4	Colour.....	49
4.5	Shelf life of the product.....	49
4.6	Sensory evaluation of mango puree samples after the storage.....	50
4.6.1	Colour.....	50
4.6.2.	Aroma.....	50
4.6.3.	Texture.....	51
4.6.4.	Taste.....	51
4.6.5.	Overall Acceptability.....	52
<b>CHAPTER 05.....</b>		<b>53</b>
<b>5.0 CONCLUSION.....</b>		<b>53</b>
<b>SUGGESTIONS FOR FUTURE RESEARCH.....</b>		<b>55</b>
<b>CHAPTER 06 .....</b>		<b>56</b>
<b>6.0 REFERENCES.....</b>		<b>56</b>
<b>APPENDICES.....</b>		<b>60</b>

## LIST OF TABLES

Table 2.1. Properties of mango varieties.....	7
Table 2.3. Chemical composition of ripe mango fruit.....	9
Table 2.4. Nutrients of mango fruit.....	10
Table 3.1. Experimental design.....	19
Table 3.2. Formulation with respective codes.....	26
Table 3.3. Questionnaire.....	28
Table 4.0. Quality characteristics of mango puree.....	32
Table 4.1. pH of each treatment.....	33
Table 4.2. Moisture content of each treatment.....	34
Table 4.3. Titratable acidity of each treatment.....	34
Table 4.4. Reducing sugar of each treatment.....	35

## LIST OF PLATES

Plate 3.7. Materials for sensory evaluation.....	26
Plate 4.1. Production of mango puree with exhausting treatment.....	32



## LIST OF FIGURES

4.1. Colour of fresh mango puree samples.....	35
4.2. Aroma of fresh mango puree samples.....	36
4.3. Texture of fresh mango puree samples.....	37
4.4. Taste of fresh mango puree samples.....	38
4.5. Overall acceptability of fresh mango puree samples.....	38
4.6. Colour of stored mango puree sample.....	50
4.7. Aroma of stored mango puree sample.....	51
4.8. Texture of stored mango puree sample.....	51
4.9. Taste of stored mango puree sample.....	52
4.10. Overall acceptability of stored mango puree sample.....	52