

**PRODUCTION OF JELLY CRYSTALS WITH THE USE OF ALOE  
VERA**

*(Aloe barbadensis miller)*



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## ABSTRACT

This research study was conducted to produce jelly crystals with the use of aloe vera with an aim to investigate the potential of aloe vera jelly crystals as a functional food ingredient. Aloe vera is a succulent plant that has been used for medicinal purposes for thousands of years. Its jelly-like substance, which is found in the inner part of the leaves, has various health benefits due to its high content of bioactive compounds. This study aimed to investigate the physicochemical properties (such as moisture content, color, texture), functional properties and potential applications of aloe vera jelly crystals. The functional properties of aloe vera jelly crystals including antioxidant activity, antimicrobial activity, and prebiotic effects.

Three treatments were used for this study in equal proportions of desiccated aloe vera, concentrated aloe vera and aloe vera pieces. T1 – 10g of desiccated aloe vera, T2 – 10g of concentrated aloe vera and T3 – 10g of aloe vera pieces. Physicochemical analysis for moisture content, pH, acidity, total soluble solids and sensory analysis for texture, aroma, flavor, appearance and overall acceptability using seven point hedonic scale were conducted to every samples of the treatments.

The pH, titratable acidity, total soluble solids were significantly difference among the treatments. The pH value of jelly ranged from 3.2-3.4. T3 had the higher value of pH. Therefore microbial contamination is prevented. The results of that, the pH was significantly decreased with the addition of aloe vera content. Though T2 sample obtained higher percentage of overall acceptability in sensory analysis, T1 sample is suitable for commercial production as it contained minimum jelly parameter recommended by the EPFO,FAO. The results of this research study confirmed that there is a great potentiality for jelly production from aloe vera extract. Aloe vera can improve the texture of jelly crystals and important part of a healthy diet. Therefore food industries may consider the adoption of aloe vera extracts for jelly production.

## TABLE OF CONTENTS

ABSTRACT.....	i
ACKNOWLEDGEMENT.....	ii
TABLE OF CONTENTS.....	iii
LIST OF TABLES.....	v
LIST OF FIGURES.....	vi
CHAPTER – 01 INTRODUCTION.....	1
1.1 Taxonomy of aloe vera.....	1
1.2 Mechanism of actions.....	2
CHAPTER – 02 LITERATURE REVIEW.....	6
2.1 Jelly.....	6
2.2 The composition of aloe vera.....	7
2.3 Proximate composition of Aloe Vera jelly crystal.....	8
2.4 Phytoconstituents of aloe vera.....	9
2.5 Phytochemistry of the aloe species.....	9
2.6 Biological activity of aloe vera.....	10
2.7 Chemical constituents of aloe vera.....	13
2.8 Antimicrobial activity of aloe vera.....	15
2.9 Food preservative characteristics of aloe vera.....	16
2.10 Raw materials needed to preparation of jelly crystals.....	17
CHAPTER – 03 MATERIALS AND METHODOLOGY.....	19
3.1 Preparation of desiccated aloe vera.....	19
3.1.1 Selection of raw materials.....	19
3.1.2 Washing.....	19
3.1.3 Filleting operation.....	20
3.1.4 Collection of gel.....	20
3.1.5 Blending.....	20

3.1.6 Dehydrating.....	21
3.1.7 Cooling.....	21
3.2 Preparation of concentrated aloe vera.....	21
3.3 Preparation of aloe vera pieces.....	23
3.4 Ingredients and materials.....	25
3.5 Procedure of jelly preparation.....	25
3.6 Physicochemical analysis of aloe vera.....	25
3.6.1 Determination of moisture content in jelly sample.....	26
3.6.2 Measurement of the pH value in jelly sample.....	27
3.6.3 Determination of total soluble solids.....	28
3.6.4 Determination of acidity content.....	28
3.7 Sensory evaluation.....	29
3.8 Statistical analysis.....	30
<b>CHAPTER – 04 RESULTS AND DISCUSSION.....</b>	<b>31</b>
4.1 Physicochemical analysis .....	31
4.1.1.Moisture content.....	31
4.1.2 Titratable acidity content.....	32
4.1.3 pH Value.....	32
4.1.4 Total soluble solids (TSS).....	33
4.2 Sensory evaluation.....	34
4.2.1 Aroma.....	34
4.2.2 Falvor.....	35
4.2.3 Texture.....	36
4.2.4 Appearance.....	36
4.2.5 Overall acceptability of jelly.....	37
<b>CHAPTER – 05 CONCLUSION.....</b>	<b>38</b>
<b>CHAPTER – 06 REFERENCES .....</b>	<b>40</b>

## LIST OF TABLES

Table 1.1 Taxonomy of aloe Vera.....	1
Table 2.1 Proximate composition of aloe vera jelly crystal.....	8

## LIST OF FIGURES

Figure 2.1 Polysaccharides.....	13
Figure 2.2 Anthraquinines.....	14
Figure 2.3 Chromone.....	14
Figure 2.4 Barboloin.....	14
Figure 2.5 Aloc-resin B.....	14
Figure 3.1 Selection of raw materials.....	19
Figure 3.2 Washing.....	20
Figure 3.3 Filleting operation.....	20
Figure 3.4 Blending.....	21
Figure 3.5 Removing of spines.....	21
Figure 3.6 Scoop out of aloe vera gel.....	22
Figure 3.7 Concentrated aloe vera.....	23
Figure 3.8 Aloe vera pieces.....	24
Figure 4.1 Moisture content.....	31
Figure 4.2 Titratable acidity content.....	32
Figure 4.3 Total soluble solids.....	32
Figure 4.4 sensory evaluation in terms of aroma.....	32
Figure 4.5 Sensory evaluation in terms of flavor.....	33
Figure 4.6 Sensory evaluation in terms of Texture.....	34
Figure 4.7 Sensory evaluation in terms of Appearance.....	34
Figure 4.8 Overall acceptability.....	35
Figure 5.1 Jelly samples.....	37