

**DETERMINATION OF REDUCTION IN OXALATE  
CONCENTRATION FOLLOWING DIFFERENT  
PHYSICAL TREATMENTS IN LOCAL *Colocasia esculenta***

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## TABLE OF CONTENTS

|  | <b>PAGE</b> |
|--|-------------|
| <b>ACKNOWLEDGEMENTS</b>  | iii         |
| <b>TABLE OF CONTENTS</b>   | iv          |
| <b>LIST OF TABLES</b>  | vi          |
| <b>LIST OF FIGURES</b>   | vii         |
| <b>LIST OF ABBREVIATIONS</b>   | viii        |
| <b>ABSTRACT</b>  | x           |
| <b>ABSTRAK</b>   | xi          |
| <br>   |             |
| <b>CHAPTER 1: INTRODUCTION</b>   |             |
| 1.1 Background of study  | 1           |
| 1.2 Problem statement  | 3           |
| 1.3 Significance of the study  | 4           |
| 1.4 Objectives of the study  | 4           |
| <br>   |             |
| <b>CHAPTER 2: LITERATURE REVIEW</b>                                      |             |
| 2.1 Introduction to <i>Colocasia esculenta</i>                           | 5           |
| 2.2 Structure of <i>Colocasia esculenta</i>                              | 7           |
| 2.3 Characteristics of <i>Colocasia esculenta</i>                        | 9           |
| 2.4 Effects of consuming <i>Colocasia esculenta</i>                      | 10          |
| 2.5 Treatments to oxalate  | 12          |
| 2.6 Economic contributions of <i>Colocasia esculenta</i>                 | 16          |
| <br>   |             |
| <b>CHAPTER 3: METHODOLOGY</b>  |             |
| 3.1 Materials  | 17          |
| 3.1.1 Raw Material   | 17          |
| 3.1.2 Chemicals  | 18          |
| 3.1.3 Apparatus  | 18          |
| 3.2 Methods  | 18          |
| 3.2.1 Determination of oxalate concentration                             | 19          |
| 3.2.1.1 Digestion  | 19          |
| 3.2.1.2 Oxalate precipitation  | 19          |
| 3.2.1.3 Permanganate titration   | 20          |
| 3.2.2 Physical treatment   | 21          |
| 3.2.2.1 Soaking  | 21          |
| 3.2.2.2 Boiling  | 21          |
| 3.3 Statistical Analysis   | 22          |
| <br>   |             |
| <b>CHAPTER 4: RESULTS AND DISCUSSION</b>                                 |             |
| 4.1 Determination of oxalate concentration in <i>Colocasia esculenta</i> | 23          |

|   |  |           |
|---|--|-----------|
| 4.2   | Determination of reduction degree of oxalate in <i>Colocasia esculenta</i> after physical treatments | 24        |
| 4.3   | Statistical analysis   | 26        |
| <b>CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS</b> |  | <b>28</b> |
| <b>CITED REFERENCES</b>                           |  | <b>30</b> |
| <b>APPENDICES</b>                                 |  | <b>34</b> |
| <b>CURRICULUM VITAE</b>                           |  | <b>37</b> |

## ABSTRACT

### **DETERMINATION OF REDUCTION IN OXALATE CONCENTRATION FOLLOWING DIFFERENT PHYSICAL TREATMENTS IN LOCAL *Colocasia esculenta***

*Colocasia esculenta* or else known as yam is a stem tuber that have been consumed for ages by human colonials due to its carbohydrate's important source and results in itchy lips, mouth and swelling throat after consuming. Oxalate is toxic to skin, this is due to calcium oxalate content in yam. In this project, the concentrations of oxalates in yam was evaluated and comparison between oxalate contents in yam with different handling process following soaking and boiling was run. Oxalate contents of leaf and stem of the yam were detected using quantitative chemical analysis. Results showed that leaf and stem has higher oxalate content in their raw form which were 85.03 mg/100 g and 214.64 mg/100 g. After physical treatments through soaking and boiling, the concentration of oxalates were found. Based on boiling treatment, 25.74% of reduction for leaf and 11.99% reduction for stem were observed. There was significant difference ( $p < 0.05$ ) for all the physical treatments data analysed by one-way analysis of variance (ANOVA). In conclusion, boiling was found to be the best method to reduce the concentration of oxalates in leaf and stem of yam.