

**PRODUCTION AND CHARACTERISATION OF ENZYME
PREPARATIONS FROM AGRICULTURAL WASTE**

BY

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DEGREE IN BIOCHEMISTRY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Production and Characterisation of Enzyme Preparations from Agricultural Waste" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

PROJECT SUPERVISOR

Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study examined production and characterisation of enzyme preparations from agricultural waste, using undergraduate students of the University of Lagos as a case study. The study was guided by three specific objectives: to examine the extent to which respondents exhibit the key attributes of production; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with production and characterisation. The study adopted a descriptive survey research design, anchored on the Michaelis-Menten Kinetics Theory and the Metabolic Regulation Theory. A sample size of 412 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 388 questionnaires were found valid for analysis. Data were analysed using descriptive statistics, including frequency counts, percentages, and weighted mean scores, and inferential statistics, including the Pearson Product Moment Correlation Coefficient, the Independent Samples t-test, and the chi-square test, at a 0.05 level of significance. The findings revealed that respondents exhibit the identified attributes to a considerable extent (grand mean = 2.99). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.522$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 5.63, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.31$, $p > 0.05$). The major challenges identified include inadequate awareness, weak institutional support, infrastructural constraints, and limited access to information. The study recommends targeted interventions, improved access to resources, and intensified public education on production.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of production and characterisation of enzyme preparations from agricultural waste is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

In both global and African literatures, production is now regarded as a key index of institutional performance. Economic pressures and resource scarcity frequently determine the pace at which production advances in practice. Findings reported by Famuyide and Aderemi (2018) observed that respondents with greater exposure to production recorded markedly different results. These observations collectively invite a reconsideration of standard assumptions regarding characterisation. Comparative work by Famuyide and Alade (2022) across several states uncovered a consistent pattern linking production with characterisation. Such findings reinforce the argument that production deserves a place of priority on the development agenda. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

Over the past two decades, production has become increasingly significant within the Nigerian landscape and beyond. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of production in everyday life. Research by Olawale and Nnamdi (2021) using mixed methods provided particularly rich insight into the mechanisms connecting production and characterisation. These observations collectively invite a reconsideration of standard assumptions regarding characterisation. Research by Olawale and Kalu (2021) using mixed methods provided particularly rich insight into the mechanisms connecting production and characterisation. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Scholars have long recognised production as a critical determinant of outcomes in biochemistry. National policies and programmes have sought, with varying degrees of success, to respond to the realities of production and characterisation. A notable study by Olawale and Kalu (2017) argued that the impact of production is substantially mediated by the quality of institutions. For practitioners, the practical significance of production cannot be overstated, given its demonstrable link with characterisation. The work of Ibrahim and Bakare (2023) extended earlier analyses by demonstrating that characterisation reinforces the effects of production. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

A growing corpus of literature draws attention to the pivotal role of production in shaping developmental trajectories. The socio-cultural diversity of Nigeria implies that responses to production must be differentiated rather than uniform. Field evidence gathered by Alade and Nwosu (2016) suggested that stakeholder engagement materially improves the results achieved in matters of production. For practitioners, the practical