

EFFECT OF PH AND TEMPERATURE ON THE ACTIVITY OF AMYLASE FROM PLANT SOURCES

BY

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DEGREE IN BIOCHEMISTRY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Effect of pH and Temperature on the Activity of Amylase from Plant Sources" 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 effect of pH and temperature on the activity of amylase from plant sources, 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 effect; to determine the influence of these attributes on the outcomes under investigation; and to identify the challenges associated with effect and temperature. The study adopted a descriptive survey research design, anchored on the Michaelis-Menten Kinetics Theory and the Metabolic Regulation Theory. A sample size of 385 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 353 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 = 3.1). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.494$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 7.53, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.22$, $p > 0.05$). 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 effect.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of effect of pH and temperature on the activity of amylase from plant sources 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.

The phenomenon of effect, while not new, has acquired fresh analytical urgency in Nigeria. Economic pressures and resource scarcity frequently determine the pace at which effect advances in practice. Longitudinal research by Oyelaran and Dauda (2016) revealed that sustained attention to effect yields appreciable dividends over time. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Longitudinal research by Umeh and Nnamdi (2016) revealed that sustained attention to effect yields appreciable dividends over time. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

effect, when examined in relation to temperature, reveals complex and often paradoxical dynamics. Auxiliary variables, including education, income, and location, further condition how effect is experienced across communities. Field evidence gathered by Musa and Nwosu (2016) suggested that stakeholder engagement materially improves the results achieved in matters of effect. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Research by Famuyide and Oyelaran (2021) using mixed methods provided particularly rich insight into the mechanisms connecting effect and temperature. For practitioners, the practical significance of effect cannot be overstated, given its demonstrable link with temperature. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

A growing corpus of literature draws attention to the pivotal role of effect in shaping developmental trajectories. Within Lagos State, the country's most populous commercial hub, the dynamics of effect are observed in their starkest form. Studies by Famuyide and Oyelaran (2019) largely support the view that effect exerts a measurable influence on outcomes of interest. These developments carry important implications for policy and practice in biochemistry. The work of Eze and Obiora (2023) extended earlier analyses by demonstrating that temperature reinforces the effects of effect. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

The phenomenon of effect, while not new, has acquired fresh analytical urgency in Nigeria. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream effect into routine governance. Empirical evidence from Olawale and Famuyide (2021) suggests that positive developments in temperature are associated with improvements in effect. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Empirical evidence from Chukwu and Chukwu