

EFFECT OF NEEM LEAF EXTRACTS AS CORROSION INHIBITORS ON MILD STEEL IN ACIDIC MEDIA

BY

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DEGREE IN CHEMISTRY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Effect of Neem Leaf Extracts as Corrosion Inhibitors on Mild Steel in Acidic Media" 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 neem leaf extracts as corrosion inhibitors on mild steel in acidic media, 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 neem. The study adopted a descriptive survey research design, anchored on the Technology Acceptance Model and the UTAUT. A sample size of 403 respondents was determined using the Taro Yamane formula and selected through stratified and simple random sampling techniques, out of which 374 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 = 3.16). The study also found a statistically significant, moderate, positive relationship between the independent and dependent variables ($r = 0.518$, $p < 0.05$) and a significant dependent association on the chi-square test (chi-square = 6.27, $p < 0.05$). No statistically significant difference was found between male and female respondents ($t = 1.07$, $p > 0.05$). 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.

TABLE OF CONTENTS

Title Page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	v
Table of Contents	vi
List of Tables	vii
List of Figures	viii
CHAPTER ONE: INTRODUCTION	1
1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	7
1.4 Research Questions	7
1.5 Research Hypotheses	7
1.6 Significance of the Study	7
1.7 Scope and Limitation of the Study	10
1.8 Definition of Terms	12
CHAPTER TWO: LITERATURE REVIEW	14
2.1 Conceptual Review	14
2.1.1 Concept of Effect	14
2.1.2 Concept of Neem	15
2.1.3 Concept of Leaf	17
2.2 Theoretical Framework	19
2.2.1 Technology Acceptance Model	19
2.2.2 UTAUT	20
2.2.3 Diffusion of Innovation Theory	21
2.2.4 Systems Development Life Cycle	22
2.3 Empirical Review	23
2.3.1 Early Studies on effect	23
2.3.2 Recent Nigerian Evidence on effect	25
2.3.3 Effect and neem	27
2.3.4 Comparative Perspectives across Africa	28
2.4 Summary of Literature Review	30
CHAPTER THREE: RESEARCH METHODOLOGY	33
3.1 Research Design	33
3.2 Population of the Study	33
3.3 Sample Size and Sampling Technique	34
3.4 Sources of Data Collection	35
3.5 Research Instrument	36
3.6 Validity and Reliability of the Instrument	37
3.7 Method of Data Analysis	38
3.7.1 Administration of the Instrument	39

3.8 Ethical Considerations	39
CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION	44
4.1 Data Presentation	44
4.2 Demographic Characteristics of Respondents	44
4.3 Analysis of Research Questions	45
4.4 Test of Hypotheses	46
4.5 Discussion of Findings	47
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	52
5.1 Summary	52
5.2 Conclusion	53
5.3 Recommendations	54
5.4 Suggestions for Further Studies	54
REFERENCES	56
APPENDIX	58

LIST OF TABLES

Table 2.1: Summary of the Review of Related Literature	31
Table 2.2: Operationalisation of the Study Variables	31
Table 3.1: Population of the Study and Sampling Technique	40
Table 3.2: Validity and Reliability of the Research Instrument	40
Table 4.1: Gender Distribution of Respondents	50
Table 4.2: Age Distribution of Respondents	50
Table 4.3: Educational Attainment of Respondents	50
Table 4.4: Weighted Mean Analysis of Research Question One	51
Table 4.5: Weighted Mean Analysis of Research Question Two	51
Table 4.6: Correlation Summary between the Independent and Dependent Variables	51
Table 4.7: Independent Samples t-test by Gender	51
Table 4.8: Chi-square Test of Association	51

LIST OF FIGURES

Figure 1.1: Conceptual Framework of the Study	13
Figure 2.1: Effect in Chemistry Research Context	32
Figure 2.2: Neem in Chemistry Research Context	32
Figure 3.1: Chemistry Research Context	42
Figure 4.1: Gender Distribution of Respondents	50
Figure 4.2: Age Distribution of Respondents	50

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of effect of neem leaf extracts as corrosion inhibitors on mild steel in acidic media 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.

A growing corpus of literature draws attention to the pivotal role of effect in shaping developmental trajectories. Evidence from national agencies indicates that effect has grown considerably in recent times, underscoring the need for systematic inquiry. Studies conducted within the West African subregion by Adeniyi and Adekunle (2018) reached conclusions broadly consistent with the Nigerian evidence. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Longitudinal research by Famuyide and Olawale (2016) revealed that sustained attention to effect yields appreciable dividends over time. Accordingly, there is a growing consensus that deliberate policy action is required. 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. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of effect. A notable study by Nnamdi and Adekunle (2017) argued that the impact of effect is substantially mediated by the quality of institutions. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Evidence assembled by Adebayo and Oyelaran (2015) across twelve states underscored the heterogeneity of outcomes linked to effect. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

effect continues to command considerable attention among researchers, policymakers, and practitioners in chemistry. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of effect in everyday life. The aggregate picture emerging from Adebayo and Oyelaran (2023) points to a modest but consistent association between effect and the outcomes of interest. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. The work of Olawale and Chukwu (2023) extended earlier analyses by demonstrating that neem reinforces the effects of effect. Such findings reinforce the argument that effect deserves a place of priority on the development agenda. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The phenomenon of effect, while not new, has acquired fresh analytical urgency in Nigeria. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of effect. Findings reported by Eze and Umeh (2018) observed that respondents with greater exposure to effect recorded markedly different results. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Studies conducted within the West African subregion by Bello and