

Contents

Chapter No.	Title	Page No.
	List of Tables	
	List of Figures	
	List of Abbreviations	
1.0	Introduction	1
	1.1 Impact of corrosion	2
	1.2 The Effects of Corrosion in Society	2
	1.3 Classification of Inhibitors	3
	1.4 Cost of corrosion	4
	1.5 Natural products are utilized for corrosion inhibition studies-An Experimental approach	4
	1.6 Objectives	6
2.0	Review of Literature	8
	2.1 Natural products and its inhibition efficiency on MS corrosion in acidic medium	8
	2.2 Organic compounds used as Corrosion Inhibitors for MS corrosion in aggressive acid solution	12
	2.3 Biomass extracts as corrosion inhibitor for Aluminium corrosion in acid medium	15
	2.4 Organic Inhibitors used as corrosion inhibitor for Al corrosion in acidic and alkaline solution	18
	2.5 Inhibitive action of Eco-friendly inhibitors for Al corrosion in alkaline solution	20
3.0	Materials and Methods	24
	3.1 Selection of Metal, Media, Inhibitors and characterization of inhibitors	24
	3.2 Instrumentation Techniques adopted	27
	3.3 Surface Analytical Techniques	30
	3.4 Quantum chemical studies using Mopac software	30
	3.5 Work plan	32
4.0	Results and Discussion	33
	4.1 Characterization of selected Biomass extracts	35
	4.2 Electrochemical Measurements	63
	4.3 Mass Loss Measurements	96

Chapter No.	Title	Page No.
	4.4 Surface Analytical Techniques	140
	4.5 Theoretical calculation using Mopac software	167
	4.6 Mechanism of Inhibition Process	173
5.0	Summary And Conclusion	177
	Bibliography	180
	Appendix I	202
	Appendix II	204
	Publications	208
