DECOLOURIZATION OF REACTIVE RED 120 DYE USING Zn-Al-CO_3 LAYERED DOUBLE HYDROXIDE

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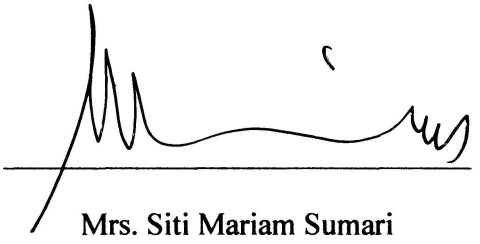
This Final Year Project report entitled **"Decolourization of Reactive Red 120 dye using Zn – Al – CO_3 Layered Double Hydroxide"** was submitted by Hairul Safley Hamdan, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in Faculty of Applied Sciences, and was approved by



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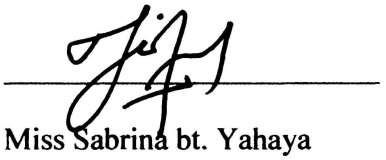

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TABLE OF CONTENTS

		PAGE
ACKNOWLEDGEMENT		iii
TABLE OF CONTENTS		iv
LIST OF TABLES		vi
LIST OF FIGURES		vii
LIST OF ABREVIATIONS		viii
ABSTRACT		ix
ABSTRAK		x
CHAPTER 1 INTRODUCTION		
1.1	Background	2
1.2	Problem Statement	2
1.3	Significance of Study	5
1.4	Objectives of Study	6
CHAPTER 2 LITERATURE REVIEW		
2.1	Layered Double hydroxides	7
2.2	Structure of Layered Double Hydroxides	9
2.3	Reactive Dyes	11
2.4	Adsorption	13
2.5	Previous Study	14
CHAPTER 3 METHODOLOGY		
3.1	Chemicals	17
3.2	Equipments	17
3.3	Preparation of Layered Double Hydroxides ($Zn - Al - CO_3$)	18
3.4	Characterizations of the Layered Double Hydroxides (LDHs) using X-Ray Diffractometer (XRD)	19
3.5	Fourier Transform Infrared Spectrometry (FTIR)	20
3.6	Adsorption Properties Calculation	20
3.7	UV- Vis Spectrophotometer	21
3.8	Field Emission Scanning Electron Microscope (FESEM)	22

ABSTRACT

DECOLOURIZATION OF REACTIVE RED 120 DYE USING Zn-Al-CO_3 LAYERED DOUBLE HYDROXIDE

The application of Layered Double Hydroxides (LDHs) as adsorbent removal of Reactive Red 120 from aqueous solutions at various parameters. These include initial concentration, contact time, temperature, pH and different adsorbent dosage. The adsorption isotherms could be defined with Langmuir Model and Freundlich model. Characterization of Layered Double Hydroxides using X-Ray Diffractogram showed the presence sharp peaks which signifying high crystallinity. The presence of sharp and intense lines is indicated with d-spacing of 7.9 Å. Adsorption experiments confirmed that layered double hydroxide was effective in uptake of Reactive Red 120 from aqueous solution.