

**THE DECOLORIZATION OF PAINT WASTEWATER BY USING
TITANIUM DIOXIDE AND UV RADIATION (PHOTOCATALYSIS)**

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
TABLE CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	viii
ABSTRACT	ix
ABSTRAK	x
CHAPTER 1 INTRODUCTION	
1.1 Background and problem statements	1
1.2 Significance of study	2
1.3 Objectives of study	2
CHAPTER 2 LITERATURE REVIEW	
2.1 Water-based paint	3
2.2 Manufacturing process of water-based paint	4
2.3 Sources of waste water	5
2.4 Treatment of water-based paint wastewater	6
2.4.1 Physical treatment	7
2.4.2 Chemical treatment	7
2.4.2.1 Coagulation	8
2.4.2.2 Flocculation	8
2.4.2.3 Mechanism of Coagulation	8
2.4.3 Modified coagulation-flocculation	9
2.5 Biological treatment	10
2.5.1 Activated Sludge	10
2.6 Photocatalysis	11
2.6.1 Chemical structure of Titanium Oxide	12
2.6.2 Effect of ultraviolet rays in activating titanium oxide	13
2.6.3 Decomposing power of titanium oxide photocatalysis	14
2.6.4 Example of Photocatalysis	14
2.6.5 Advantages using TiO ₂ in the photocatalysis	15
2.7 Various current treatment process of water-based paint wastewater	16
CHAPTER 3 METHODOLOGY	
3.1 Materials	17
3.1.2 Chemicals	18
3.1.3 The list of instrument	18
3.2 Methods	18
3.2.1 Characteristics of paint wastewater	19
3.2.2 Coagulation and flocculation of wastewater(jar test)	20
3.2.3 Overall treatment of emulsion paint wastewater	21

ABSTRACT

DECOLORIZATION OF PAINT WASTEWATER BY USING TITANIUM DIOXIDE AND UV RADIATION (PHOTOCATALYSIS)

This study is to investigate the feasibility of using a combination of chemical coagulation and photocatalysis for decolourization and COD reduction of emulsion paint wastewater. The optimum pH, dosages of coagulant and flocculant in the jar test are 6.5, 0.024% of alum and 0.024% of CaCO₃. The resulting supernatant was subsequently treated with TiO₂ and UV radiation for a fixed duration of 24 hours. It was observed that the average reductions of color and COD achieved are 93.4% and 97.1% respectively for both samples. However, the quality of the final effluent still exceed the discharge limits of Department of Environment (DOE). Thus, further studies should be conducted in photocatalysis to improve the quality of the treated effluent.