CONTENTS

CHAPTER: 1

INTRODUCTION

1.1	What is adsorption ?	2
1.2	Applications	3
1.3	Rubbers, fillers, and reinforcement	6
1.4	Adsorption isotherms	
	[a] Small molecules	10
	[b] Polymer molecules	16
1.5	Effect of molecular Weight	19
1.6	Effect of solvent	21
1.7	Effect of adsorbent	24
1.8	Effect of temperature	31
1.9	Thermodynamics of adsorption	32
1.10	Kinetics of adsorption	34
1.11	Experimental data and various proposed theories	36
	CHAPTER : 2	
	CHARACTERIZATION OF POLYMERS AND ADSORBENTS	
2.1	Preview	39
2.2	Experimental	
	[a] Characterization of polymers	47
	[b] Characterization of adsorbents	49

2.3	Results and Discussions	
	[a] IR and NMR spectra	51
	[b] Contact angle measurements	63
	[c] Thermal analysis	66
	[d] Viscosity study of polymer solutions	71
	CHAPTER: 3	
	ADSORPTION OF POLYMERS AT SOLID-LIQUID INTERFACE	
3.1	Experimental	85
	Results and Discussions	
3.2	Adsorption of PBR	88
3.3	Adsorption of GR	125
3.4	Adsorption of InR	146
3.5	Polymer-surfactant interaction	174
	REFERENCES	188
	SUMMARY	209

PUBLICATIONS