

CONTENTS

	<u>Page</u>
 <u>CHAPTER I</u>	
Section A : Introduction and Review of Previous Work. ..	1-9
Section B : Ion exchange Formulations ..	10-16
Section C : Exchange studies and selectivities of clay minerals and resins. ..	17-20
 <u>CHAPTER II</u>	
Scope and object of the work. ..	21-24
 <u>CHAPTER III</u>	
Experimental ..	25-32
 <u>CHAPTER IV</u>	
Sorption and Desorption of $[\text{Coen}_3]^{3+}$, $[\text{Co}(\text{NH}_3)_6]^{3+}$ and Mg^{2+} on Bentonite system. ..	33-53
Section A : Sorption of $[\text{Coen}_3]^{3+}$ and $[\text{Co}(\text{NH}_3)_6]^{3+}$ on bentonite. ..	34-37
Section B : Desorption of $[\text{Coen}_3]^{3+}$, $[\text{Co}(\text{NH}_3)_6]^{3+}$ and Mg^{2+} from bentonite complexes. ..	38-53
 <u>CHAPTER V</u>	
Sorption and Desorption of $[\text{Coen}_3]^{3+}$, $[\text{Co}(\text{NH}_3)_6]^{3+}$ and Mg^{2+} on vermiculite-system. ..	54-72
Section A : Sorption of $[\text{Coen}_3]^{3+}$ and $[\text{Co}(\text{NH}_3)_6]^{3+}$ on vermiculite ..	56-58
Section B : Desorption of $[\text{Coen}_3]^{3+}$, $[\text{Co}(\text{NH}_3)_6]^{3+}$ and Mg^{2+} from vermiculite complexes ..	59-72

CHAPTER VI

Sorption and Desorption of $[\text{Coen}_3]^{3+}$.. 73-84
and $[\text{Co}(\text{NH}_3)_6]^{3+}$ on Na-IRC-50-system.

Section A: Sorption of $[\text{Coen}_3]^{3+}$ and
 $[\text{Co}(\text{NH}_3)_6]^{3+}$ on Na-IRC-50. .. 75-76

Section B: Desorption of $[\text{Coen}_3]^{3+}$ and
 $[\text{Co}(\text{NH}_3)_6]^{3+}$ from Na-IRC-50-
complexes. .. 77-84

CHAPTER VII

Summary and Conclusion .. 85-92

Bibliography .. (i -viii)
