

# CONTENTS

<b>CHAPTER -1 Introduction</b>	<b>Page No.</b>
1.1. Controlled Release Technology	3
1.2. Drug Delivery	3
1.3. Drug levels in the blood	5
1.4. Basic components of controlled delivery formulations	5
1.5. Controlled released mechanism	6
1.6. Natural Polymer	7
1.7. Carrageenan	8
1.8. Sodium Carboxymethyl cellulose	11
1.9. Hydrogel beads of Carrageenan/sodium carboxymethyl cellulose(NaCMC)	13
1.9.1. Crosslinking of Carrageenan/sodium carboxymethyl cellulose(NaCMC) hydrogel beads	14
1.10. Carrageenan in pharmaceutical application	14
1.11. Sodium Carboxymethylcellulose in pharmaceutical application	14
1.12. 1. Use of polymer composites in controlled drug delivery	15
1.13. Isoniazid Drug	17
<b>CHAPTER-2 Literature Survey</b>	19
<b>CHAPTER-3 Objective and plane of work</b>	
3.1. Objective of work	24
3.2. Plan of the work	25
<b>CHAPTER -4 Materials and Methods:</b>	
4.1. Materials	27
4.2: Preparation of Isoniazid loaded carrageenan-sodium caroxymethyl	

cellulose hydrogel beads	27
4.3. Characterization of beads	28
4.4. Calculation of Process Yield	28
4.5. Calculation of Encapsulation efficiency of the beads	28
4.6. Calibration curve of isoniazid	29
4.7. Swelling studies	29
4.8. In vitro drug release studies	29
<b>CHAPTER 5</b>	
5.1. Preparation of samples	31
5.2. Preparation of calibration curve	32
5.3. FTIR Study	33
5.4. XRD analysis	34
5.5. SEM analysis	36
5.6. Percentage of swelling	37
5.7. Drug release study	42
<b>Conclusion</b>	45
<b>Future Prospect</b>	46
<b>References and Notes</b>	47