CONTENTS

CERTIFICATE

ACKNOWLEDGEMENT

ABSTRACT

	Page No
1. CHARTER 1 Introduction	1-15
1.1 Nitroaldol reaction and its mechanism	1-2
1.2 Stereochemical course	3-4
1.3 Synthetic and pharmacological significance	4-5
1.4 Usefulness of water as reaction medium	5-6
1.5 Advantages of heterogeneous catalysts	6
1.6 Reported methods for the synthesis of nitro-aldol products	7-15
1.6.1 Reactions in aqueous medium	7-10
1.6.2 Reactions in organic medium using heterogeneous	11-15
catalysts	
2. CHAPTER 2 Aim and objective of the project work	16
3. CHAPTER 3 Experimental section	17-19
3.1 Plan of work	17-18
3.2 General information	19
3.3 General method for Henry reaction in aqueous medium	19
4. CHAPTER 4 Results and Discussions	20-25
4.1 Table 1: P4VP catalysed nitro- aldol reaction of nitrometh	ane 20
with 0-NO2 benzaldehyde in different solvents	·
4.2 Table 2: Catalytic activities of two different N- containing	21

polymeric basic catalyst in aqueous medium for nitro-aldol reaction of aromatic aldehydes with nitromethane

4.3 Table 3: Effect of different amount of the base, P4VP	22
& nirtomethane against 1 mmol of 0- NO2 bezaldehyde	
4.4 Table 4: Recycling of the catalyst	23
4.5 Catalytic Henry reaction between nitromethane & three different	23
aromatic aldehydes	
4.6 Characterization of the prepared compounds	24-25
5. Conclusion and Future Scope of the present work	26
6. References	27-28
7. Spectra	