

## SYNOPSIS

The dissertation entitled, "STUDIES OF ENZYME CATALYSED REACTIONS" consists of three chapters and embodies accounts of 1) A brief review on enzyme catalysed reactions 2) Study of enzyme catalysed reactions 3) Results and discussions.

The dissertation begins with the Chapter – I. A brief review on enzyme catalysed reactions. In this chapter introduction, advantages and disadvantages of biocatalysts, properties, classification, sources of enzymes have been discussed. Mechanism and applications of enzyme catalysed reaction are given in Chapter– I.

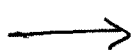
Chapter–II includes the study of enzyme catalysed reaction.

Introduction, preparation of various substrates e.g.  $\beta$ -benzoyl propionic acid etc. using Friedel-crafts acylation reaction (Chart-I) have been given in this chapter.  $\beta$ -Benzoyl propionic acid was prepared by the

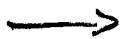
Friedel Crafts acylation of benzene with succinic anhydride in presence of anhydrous aluminium chloride.  <sup>$\beta$ -Methyl</sup> P-methyl benzoyl propionic acid,

<sup>was</sup> p-methoxy-benzoyl propionic acid were also prepared by using Friedel Crafts reaction. The esters of above acid were prepared by usual esterification method. 3-Nitro-4-methylacetophenone was prepared by

the nitration of 4-methylacetophenone. Material and method regarding



~~with~~ microbial transformation have been described in the same chapter.

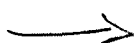


The Chapter-III deals with <sup>2</sup>Results and discussions. The results of

biotransformations using *Rhizopus arrhizus* have been discussed (Chart-

→ *is this chart-3*  
(II).

The products obtained were isolated and purified and then



characterized by IR, NMR and optical rotation studies. The structure of

synthesized compounds were confirmed by IR and NMR spectra and this

data is mentioned in the same chapter.

*R. S. Salunkhe*

Research Guide

(Dr. (Mrs.) R. S. SALUNKHE)

*V. B. Patil*

Research Student

(V. B. PATIL)