## CONTENTS

### INTRODUCTION

1.1 Nitrosoarenes
   - 1.1.1 Generation of Nitrosoarenes
   - 1.1.2 Carcinogenicity and Mutagenicity of Nitrosoarenes
   - 1.1.3 Interaction of Nitrosoarenes with Proteins
   - 1.1.4 Origin of Hydroxamic Acids from Nitrosoarenes
   - 1.1.5 Synthesis of Nitrosoarenes

1.2 Metabolism of Nitrosamines

1.3 NADH/NAD(P)H Models

### REFERENCES

### OBJECTIVES AND RESEARCH ENVISAGED

### RESULTS AND DISCUSSION

2.1.1 Reaction of $\beta$-Nitrosophenetole and $\gamma$-Nitrosotoluene with DTB and Characterisation of Products

2.1.2 Probable Mechanism of Origin of Products (2-30)

2.2.1 Reaction of $N,N'$-Diphenylnitrosamine and $N$-Methyl-$N'$-Phenylnitrosamine with DTB and Characterisation of Products
3.1.1 Synthesis of p-Nitrosophenetole
3.1.2 Reaction of p-Nitrosophenetole with DTB at 0°
3.1.3 Reaction of p-Nitrosophenetole with DTB at 30°
3.1.4 Reaction of p-Nitrosophenetole with DTB in CHCl₃-MeOH-buffer (pH 7.0; 0.067 M)
3.2.1 Synthesis of o-Nitrosotoluene
3.2.2 Reaction of o-Nitrosotoluene with DTB at 0°
3.2.3 Reaction of o-Nitrosotoluene with DTB at 30°
3.2.4 Reaction of o-Nitrosotoluene with DTB in CHCl₃-MeOH-buffer (pH 7.0; 0.067 M)
3.3.1 Synthesis of N,N-Diphenylnitrosamine
3.3.2 Reaction of N,N-Diphenylnitrosamine with DTB
3.4.1 Synthesis of N-Methyl-N-Phenylnitrosamine
3.4.2 Reaction of N-Methyl-N-Phenylnitrosamine with DTB

REFERENCES