# CONTENTS

1. INTRODUCTION 1  
2. AIM & OBJECTIVES 24  
3. LITERATURE REVIEW 26  
  3.1 Plant Profile 26  
  3.2 Literature review 40  
4. PLAN OF THE WORK 60  
5. MATERIALS AND METHODS 62  
  5.1 Collection and authentication of plants 62  
    5.1.1 Microscopic (Powder) analysis 62  
  5.2 Preparation of Siddha Formulation 63  
  5.3 Standardization of Formulation 63  
    5.3.1 Description 63  
    5.3.2 Loss on Drying 64  
    5.3.3 Ash Values 64  
      5.3.3.1 Total ash 65  
      5.3.3.2 Acid insoluble ash 65  
    5.3.4 Extractive Values 65  
      5.3.4.1 Water soluble extractive 66  
      5.3.4.2 Alcohol soluble extractive 66  
    5.3.5 Particle size 66  
    5.3.6 Identifications – HPLC / HPTLC 67  
    5.3.7 Test for heavy metals 76  
    5.3.8 Microbial Contamination 76  
    5.3.9 Pesticide residue 78  
    5.3.10 Test for aflatoxins 79  
6. IN-VITRO ANTI-OXIDANT STUDIES 80  
  6.1 Nitric oxide scavenging activity 80  
  6.2 DPPH radical scavenging activity 80  

7. **EVALUATION OF FORMULATION FOR ASTHMA**
   7.1 Safety profile study
      7.1.1 Acute Toxicity study
      7.1.2 Sub acute Toxicity study
   7.2 Anti – Asthmatic activity
      7.2.1 Histamine-induced bronchospasm
      7.2.2 Acetylcholine-induced bronchospasm
      7.2.3 Mast cell degranulation by compound 48/80
   7.3 Anti – inflammatory activity
      7.3.1 Carrageenan - Induced Hind Paw Oedema
      7.3.2 Formaldehyde Induced Hind Paw Oedema
      7.3.3 Cotton Pellet Granuloma

8. **ANTI MICROBIAL STUDIES**
   8.1 Anti bacterial
   8.2 Anti fungal

9. **RESULTS**
10. **DISCUSSION**
11. **SUMMARY**
12. **CONCLUSION**

REFERENCES
ANNEXURE
LIST OF TABLES
LIST OF FIGURES
ABBREVIATIONS
PUBLICATIONS