The present thesis deals with the studies on Cardiotonic constituents on the (1) Rhizomes of Convallaria majalis Linn. and (2) Bulbs of Urginea indica Roxb. and consists of five chapters. A brief resume of each one is described below.

CHAPTER - I

INTRODUCTION

This chapter which is an introductory one gives a brief account of the scope of cardiac glycoside along with physiological importance of cardenolides and scilladienolides of plant origin. It also incorporates the available the available phytochemical investigations already carried out on (1) Convallaria majalis Linn. and (2) Urginea indica Roxb. and also refers to the some recent phytochemical investigations carried out on cardenolides.
CHAPTER II

ISOLATION AND STUDY OF A NOVEL CARDIOPHENOIN (5-deoxy strophanthidin) FROM THE RHIZOMES OF CONVALLARIA MAJALIS LINN.

This chapter incorporates the details of isolation and structural elucidation of a novel cardiogenicin (0.072%) molecular formula C$_{23}$H$_{32}$O$_{7}$, m.p. 235-237° and $M^+ = 388$ isolated by subjecting to column chromatography, the methanol soluble part of the concentrated 95% ethanolic extract of rhizomes Convallaria majalis Linn.

Various chemical degradation and colour reactions along with spectral studies (UV, IR, $^1$H NMR and Mass) established its structure as: 5-deoxy strophanthidin (I).
CHAPTER - III

ISOLATION AND STUDY OF A NOVEL CARDENOLIDE (4:5-Anhydroperiplogenin 3-0-α(-L-rhamnopyranosyl (1\rightarrow 5) O-β-D-xylofuranoside) FROM RHIZOMES OF CONVALARIA MAJALIS LINN.

This part deals with the isolation and structural elucidation of a novel cardenolide (0.086%), molecular formula C_{34}H_{50}O_{12}, m.p. 174-176° and M^+ = 650 isolated from the ethyl acetate soluble part of the concentrated 95% ethanolic extract of rhizomes of Convallaria majalis Linn. Usual chemical degradations colour reactions and UV, IR, \textsuperscript{1}H NMR and Mass spectral studies led to its identification as: 4:5-anhydroperiplogenin-3-0-α(-L-rhamnopyranosyl (1\rightarrow 5) O-β-D-xylofuranoside (II).
CHAPTER - IV

ISOLATION AND STUDY OF A NOVEL CARDIOGENIN (6-desacetoxy scillirosidin) FROM THE BULBS OF URGINEA INDICA Roxb.

The study of a novel cardiogenin (0.082%) molecular formula $C_{24}H_{32}O_{5}$, m.p. 200-202° and $M^+ = 400$ obtained by subjecting to column chromatography the methanol soluble part of the concentrated 95% ethanolic extract of the bulbs of Urginea indica Roxb. has been dealt in this chapter.

Various colour reactions, usual chemical degradation and spectral studies (UV, IR, $^1$H NMR and Mass) identified it as 6-desacetoxy scillirosidin (III).
CHAPTER V

ISOLATION AND STUDY OF A SCILLADIENOLIDE (4:5-dehydro-14β-hydroxy scilladienolide 3-O-β-D-glucopyranosyl (1→4) O-α-(L-rhamnopyranoside) FROM THE BULBS OF URGINEA INDICA Roxb.

The study of a scilladienolide (0.084%), molecular formula C_{36}H_{52}O_{13}, m.p. 186-188° and M^+ = 692 obtained by subjecting to column chromatography the chloroform:ethyle acetate (7:4) soluble part of the concentrated 95% ethanolic extract of the bulbs of Urginea indica Roxb. has been dealt in this chapter.

Various chemical degradations, colour reactions and UV, IR, ^1H NMR and Mass spectral studs, identified it as: 4:5-dehydro-14β-hydroxy scilladienolide 3-O-β-D-glucopyranosyl (1→4) O-α-(L-rhamnopyranoside (IV).