Abstract
The present thesis entitled "Structural Investigations on Flavonoidal and Quinonoidal Constituents of Some Impatiens Plants" consists of five chapters.

A brief resume of each one is given below:

CHAPTER - I

INTRODUCTION

The introductory chapter deals with the medicinal significance of Impatiens plants and the importance of flavonoids and quinonoids isolated from Impatiens plants. It also includes application of modern separation and spectral techniques for the isolation and structural elucidation of flavonoids and quinonoids along with salient features of problem taken and work done and relevant bibliography.

CHAPTER - II

ISOLATION AND STUDY OF A NOVEL ANTHRAQUINONE GLYCOSIDE; 1,3, DIMETHOXY-6-METHYL ANTHRAQUINONE-8-O-β-D-GLUCOPYRANOSYL (1→4)-O-α-L-RHAMNOPYRANOSIDE FROM THE SEEDS OF IMPATIENS BALSAMINA LINN (FAM. BALSAMINACEAE).
The rectified spirit extract of the water soluble part of the concentrated 95% ethanolic extract of dried and powdered seeds of Impatiens balsamina Linn when it yielded a novel anthraquinone glycoside (0.66%), molecular formula C$_{29}$H$_{34}$O$_{14}$, m.p. 238-240°C and M$^+$ 606 (EIMS) has been described in this chapter.

Various colour reactions, chemical degradations and spectral data led to the identification of the compound as; 1,3, dimethoxy-6-methyl anthraquinine-8-O-β-D-glucopyranosyl (1→4)-O-α-L-rhamnopyranoside (I).

![Chemical Structure](image)

(I)

**CHAPTER - III**

ISOLATION AND STUDY OF A NOVEL APIGENIN GLYCOSIDE; APIGENIN-4′-O-β-D-XYLOFURANOSYL (1→4)-O-β-D-GLUCOPYRANOSIDE FROM THE SEEDS OF IMPATIENS BALSAMINA LINN (FAM. BALSAMINACEAE).
The ethylacetate soluble fraction of the water soluble part of the concentrated 95% ethanolic extract of dried and powdered seeds of *Impatiens balsamina* Linn when worked up, yielded a flavonoidal glycoside (0.086%), molecular formula, $C_{26}H_{28}O_{14}$, molecular weight, $M^+564$ (EIMS). It was identified on the basis of different colour reactions, chemical degradations and UV, IR, $^1$HNMR and Mass spectroscopy as; Apigenin-4'-O-$\beta$-D-xylofuranosyl (1→4)-O-$\beta$-D-glucopyranoside (II).
CHAPTER - IV

ISOLATION AND STUDY OF A NOVEL LUTEOLIN GLYCOSIDE; LUTEOLIN-5-O-\(\alpha\)-L-RHAMNOPYRANOSYL (1\(\rightarrow\)4)-O-\(\beta\)-D-GLUCOPYRANOSIDE FROM THE STEMS OF IMPATIENS SCABRIDA D.C. (FAM. BALSAMINACEAE).

The methanolic extract of the water soluble part of concentrated 95% ethanolic extract of the stems of *Impatiens scabrida* D.C. yielded a novel Luteolin glycoside (0.096%), molecular formula, \(C_{27}H_{30}O_{15}\), m.p. 227°C and \(M^+\) 594 (EIMS) which was identified as; Luteolin-5-O-\(\alpha\)-L-rhamnopyranosyl (1\(\rightarrow\)4)-O-\(\beta\)-D-glucopyranoside (III)
CHAPTER V

ISOLATION AND STUDY OF A NOVEL GOSSYPETIN GLYCOSIDE; GOSSYPETIN-7-O-β-D-GLUCOPYRANOSIDE FROM IMPATIENS SCABRIDA D.C. (FAM. BALSAMINACEAE).

The methanolic extract of the water soluble part of concentrated 95% ethanolic extract of the stems of Impatiens scabrida D.C. yielded a novel flavonoidal glycoside (0.084%), molecular formula, C_{21}H_{20}O_{13}, m.p. 208°C and M^+ 480 (EIMS). It was identified on the basis of different colour reactions, chemical degradations and UV, IR, $^1$HNMR and Mass spectroscopy as; Gossypetin-7-O-β-D-glucopyranoside (IV).

![Chemical Structure](image-url)