INTRODUCTION

Regular use of plant based drug as a medicine for the purpose of preventive and curative treatment is a well known since ancient time in our country. Among such plant Plumbago zeylanica Linn., have got special importance regarding their use of Antifertility, Anti-implantation, 100% Abortifacient, Ovulation Inhibitory, Antitumour, Antiepidermoid Carcinoma, Mitotic Inhibitor, Anticoagulant, Appetizing, Digestive, Intestinal flora Normalizer and in Common warts. Lawsonia alba Linn., useful for Diarrhea, Sore throat, Common ear infections, Astringent, Deodorant in Menorrhoea Vaginal discharge and Leucorrhea, and also external application in headache and others. These plants are found to be very common in the area of Marathwada. It is quite evident from the literature that very few attempts have been made to study in details with respect to these biological activity of active components of these plants. In the present investigation emphasis have been given to study few of these aspects in detail. The present work has been divided in to two parts.

The first part has been fully devoted for the Extraction, Isolation, Purification, Identification and Characterization of active constituents from the plants selected. The results are found to be very much useful in deciding the isolation and purifications of active principles, Plumbagin and Lawsonian. The roots and leaves of the plants were successively extracted with petroleum ether (B.P. 60-80 °C), by cold extraction method. The solvent were removed from the extracts and dried in vacuum. The dried residue was chromatograph over silica gel with solvent systems petroleum ether (B.P. 60-80°C) : benzene (4:1); elution being continued with solvents. The eluted fractions which were recrystallized from dry ether resulting in fine short needles.
Introduction

Second part of the thesis has been devoted to study Anti-Microbial, Anti-inflammatory and Hepatoprotective nature of Plumbagin and Lawsonia from *Plumbago zeylanica* Linn., and *Lawsonia alba* Linn.

Plumbagin and Lawsonia have been studied further for antibacterial and antifungal activity by disc-assay method on Nutrient agar and Sabourand’s glucose agar medium respectively. It was observed that Plumbagin exhibited a great degree of antibacterial and antifungal activity *in vitro* against both Gram-positive and Gram-negative micro-organisms. The anti-inflammatory activity of Plumbagin (1 mg/100 g) and Lawsonia (50 mg / 100 g) and also against Carrageenan induced inflammation in Albino rats revealed very significant effect as comparable to Acetylsalicylic acid (10mg/100g), through oral route. The Hepatoprotective effect of Plumbagin (1 mg/100 g), and Lawsonia (50 mg/100g) respectively in albino rats through oral route, using Carbon tetrachloride induced toxicity were found to be very significant.

It seems from the study that Lawsonia significantly as Anti-Microbial, and Anti-inflammatory while Plumbagin as Hepatoprotective agent.

It is quite evident that these two agents can be used efficiently on the above Disorders.