

Prodigiosin is a brick red colored tripyrrole secondary metabolite obtained from *Serratia marcescens*. Prodigiosin was produced in Casien enriched medium in which it gave higher yield as compared to Luria- Bertini medium. Prodigiosin was first extracted in acidified methanol and subsequently in 3.0 M chloroform. Further impurities from the extract were removed by Silica gel column chromatography and Thin layer chromatography. About 38.078 $\mu\text{g mL}^{-1}$ of Prodigiosin was obtained by using casein enriched media after 24 h incubation period and after 48 h its yield was slightly decrease. In casein enriched medium the bacteria was fastly reached the stationary phase at about 10 h period as compared to Luria-Bertini medium and Casaminoacids medium in which it was taken 24-30 h to reach the stationary phase. By using Casein and acid hydrolysate form of casein used for production of prodigiosin it was seen that production was higher in casein medium as compared to casaminoacids medium, so it was suggested that pigment production may be due its acid hydrolyase activity of prodigiosin in casein enriched medium. Prodigiosin was shown to have potent antibacterial activity against *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Streptococcus pyogenes*. *S. epidermidis* and *S. pyogenes* were most susceptible to Prodigiosin at 8 and 4 $\mu\text{g mL}^{-1}$ as compared to *S. aureus* (17.5 $\mu\text{g mL}^{-1}$). At this concentration 90 % of growth reduction of pathogenic bacteria was observed. It was also shown to have potent antifungal activity against three Palnt pathogenic fungus, *Botrytis cinerea*, *Bipolaris bicolor* and *Rhizoctonia solani*. *Bipolaris bicolor* was most susceptible to Prodigiosin at range of 9.0-18.0 $\mu\text{g mL}^{-1}$ as compared to *Botrytis cinerea* and *Rhizoctonia solani* at range of 36.0-72.0 $\mu\text{g mL}^{-1}$ and 80-160 $\mu\text{g mL}^{-1}$, respectively.