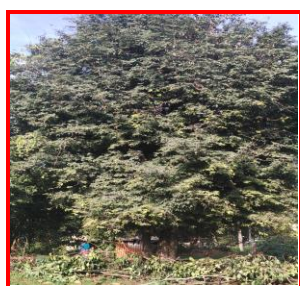


GPF14403	Study of Haematinic Activity of Oral Indiffusible Mixture of Tamarindus Indica L. Leaf Extract in Phenylhydrazine Induced Anemia		
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Anemia affects 1.62 billion individuals world-wide every year. Prevalence of anemia is higher in India as compared to other developing countries. Traditionally Tamarindus indica L. (T. indica) is being used as blood tonic. Since there is no scientific evaluation on this, the present study was designed to substantiate the traditional claim of hematinic activity of T. indica in phenylhydrazine induced anaemia. This study dealt with the evaluation of haematinic activity of oral indiffusible mixture of T. indica leaf extract in phenylhydrazine (PHZ-Single dose of 10 mg/kg p.o. for 8 days) induced anaemia in Wistar albino rats.

The ethanolic extract of T. indica was formulated into oral indiffusible mixture (at the dose of 100, 200 and 400 mg/ kg respectively) based on its physicochemical properties. The ingredients of the formulations were ethanolic extract of T. indica, sodium CMC, cross povidone, glycerine, calcium chloride, methyl paraben, propyl paraben, raspberry flavour, sunset yellow colour and purified water. Further, the formulations were evaluated for pH, flow rate, sedimentation volume, redispersibility and viscosity. Acute toxicity studies were carried out to evaluate the safety of formulated oral indiffusible mixture and found to be safe. For the evaluation of hematinic activity, the Wistar albino rats were grouped into six (n=6). Group I and II served as normal and disease control respectively. Group III served as standard and received Hematinic suspension. Group IV, V, VI received formulated oral indiffusible mixture of T. indica at the dose range of 100, 200 and 400 mg/kg for 14 days. After 14th day of treatment blood was collected from retro orbital plexus of animals under light ether anaesthesia and subjected to the haematological parameters (RBC, Hb, PCV) and further MCV, MCH and MCHC were derived from haematological estimations. T. indica produced significant increase in the level of RBC, Hb and PCV while decrease in MCV. There was a statistically significant improvement in the level of RBC and Hb ($p < 0.05$) at the dose of 200 mg/kg. It is postulated that the presence of flavonoids, phenols, saponins and tannins may be responsible for haematinic activity, which was confirmed by preliminary phytochemical analysis. Thus, the oral indiffusible mixture of T. indica L. leaf extract was proven to possess haematinic activity.



T. indica tree



Dried leaves of *T. indica*



T. indica leaf extract



Hematinic activity of *Tamarindus indica*