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Pharmaceutical Analysis:  
Global Perspectives and Future Trends**



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## **Formulation Of Turkey Berry Gummies For Treatment Of Anemia**

**Dr.Uma Devi\*<sup>1</sup>, Poomika. R, Anees Mohammed. A, Haridoss. V**

**<sup>1</sup>Professor, School of Pharmaceutical Sciences, VELS Institute of Science  
Technology and Advanced Studies, Chennai -600 117**

**<sup>2</sup>PG Scholar, School of Pharmaceutical Sciences, VELS Institute of Science  
Technology and Advanced Studies, Chennai - 600 117**

**Corresponding author E-mail: [umdevi.sps@vistas.ac.in](mailto:umdevi.sps@vistas.ac.in)**

### **ABSTRACT**

Iron deficiency anemia continues to be one of the most widespread nutritional disorders globally, especially among women and children. In developing countries such as India, nutritional inadequacies and poor dietary iron intake significantly contribute to reduced hemoglobin levels and impaired red blood cell production. Safe, affordable, and nutritionally enriched alternatives are therefore needed to support hematopoiesis. Herbal interventions rich in micronutrients provide a promising complementary approach. *Solanum torvum* (Turkey berry), widely used in traditional Indian medicine, is recognized for its high iron content and hematinic properties. It is traditionally consumed to improve hemoglobin levels, enhance red blood cell production, and manage symptoms associated with iron deficiency. The present study focuses on the formulation and evaluation of herbal gummies incorporated with *Solanum torvum* extract as a novel nutraceutical delivery system aimed at promoting blood cell production. Fresh Turkey berries were processed to obtain aqueous and ethanolic extracts. Preliminary phytochemical screening was performed to confirm the presence of iron, flavonoids, alkaloids, and phenolic compounds, which are known to contribute to antioxidant activity and improved iron bioavailability. Herbal gummies were prepared using gelatin as gelling agents, along with suitable sweeteners, flavoring agents, and preservatives to enhance acceptability and shelf life. The formulation was optimized based on organoleptic properties (color, taste, texture), pH, viscosity, drug content uniformity, and stability parameters. In vitro iron estimation and preliminary hematinic activity assessment were conducted to evaluate the efficacy of the developed formulation. The formulated gummies exhibited acceptable physicochemical characteristics, palatability, uniformity, and stability. The confirmed presence of bioactive constituents supports their potential role in enhancing hematopoiesis and assisting in the management of mild iron deficiency. Overall, the study suggests that Turkey berry-based herbal gummies represent an effective, patient-friendly, and nutritionally enriched nutraceutical approach for improving blood cell production and supporting iron supplementation therapy.

**Keywords:** Iron Deficiency Anemia, *Solanum torvum*, Turkey Berry, Herbal Gummies, Herbal Supplement.

