

# Formulation and Evaluation of Ayurvedic Neem (Azadirachta Indica) Tablet as a Diabetic Mellitus

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**Abstract:** Diabetes mellitus (DM) is a global health concern marked by chronic hyperglycemia due to insulin resistance or deficiency. Type 2 diabetes mellitus (T2DM) constitutes the majority of cases and is often linked to lifestyle and genetic factors. While conventional antidiabetic medications are effective, they frequently present adverse effects such as hypoglycemia and gastrointestinal discomfort. This study explores the formulation, standardization, and evaluation of an Ayurvedic tablet using Neem (*Azadirachta indica*) leaf extract, known for its hypoglycemic, antioxidant, and anti-inflammatory properties. A wet granulation method was employed to prepare three batches of 450 mg tablets using pharmaceutically acceptable excipients. The tablets were subjected to various physicochemical evaluations including hardness, friability, disintegration, weight variation, drug content, and in-vitro drug release. Preformulation parameters confirmed the suitability of the Neem extract for tablet formulation. The resulting formulation met official pharmacopeial standards, demonstrating its potential as a safe, effective, and natural alternative or adjunct to conventional diabetes therapy..

**Keywords:** Diabetes mellitus

