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Preparation of Jamun Seed Tablet as Natural Antidiabetic Agent

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Abstract: The increasing prevalence of diabetes mellitus worldwide has intensified the demand for safer and more effective natural alternatives to synthetic antidiabetic drugs. Jamun (Syzygium cumini) seed is known for its potent hypoglycemic properties attributed to bioactive compounds such as jamboline and ellagic acid. The present study focuses on the formulation and preparation of Jamun seed tablets as a natural antidiabetic agent. Jamun seeds were shade-dried, pulverized into fine powder, and subjected to pre-formulation studies. Tablets were prepared using the direct compression method and evaluated for various physical parameters including hardness, friability, weight variation, and disintegration time. The prepared tablets were found to comply with pharmacopeial standards and showed promising potential for blood glucose regulation. The findings suggest that Jamun seed tablets can serve as a natural, safe, and effective supplement for managing diabetes mellitus.

Keywords: Jamun seed, *Syzygium cumini*, natural antidiabetic agent, herbal tablet, diabetes mellitus, hypoglycemic effect, phytochemicals, jamboline, ellagic acid, herbal formulation

