

Green biosynthesis of nanoparticle from herbal sources

ABSTRACT

Green synthesis of nanoparticles is an eco-friendly and sustainable method for preparing nanoparticles using natural materials such as plants, fungi, and bacteria. This method has gained significant attention in recent years due to its several advantages over traditional methods, including its cost-effectiveness, non-toxicity, and biocompatibility. The green synthesis method involves the reduction of metal salts using plant extracts or other natural materials as reducing agents. This process is facilitated by the presence of various phytochemicals in the plant extracts, such as flavonoids, terpenoids, and phenolic compounds, which act as reducing and stabilizing agents. The resulting nanoparticles have unique physical and chemical properties that make them suitable for various applications in fields such as medicine, electronics, and environmental remediation. The green synthesis method also provides a sustainable approach to nanoparticle production, reducing the environmental impact of traditional methods that involve the use of hazardous chemicals and high energy consumption. Overall, the green synthesis method shows great potential for the large-scale production of nanoparticles with minimal environmental impact and high biocompatibility.