DEVELOPMENT OF THE COMPOSITION AND TECHNOLOGY OF SEDATIVE CAPSULES

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Introduction. Valeriana, commonly known as valerian, is a natural sedative herb that has been used for centuries to promote relaxation and treat insomnia and anxiety. The use of valeriana as an active ingredient in sedative capsules can offer a natural and safe alternative to synthetic sedatives. The aim of this study is to develop a capsule formulation of valeriana with improved sedative properties and evaluate its physicochemical properties.

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Methods of research. Valeriana capsules were prepared using the direct compression method with various excipients such as microcrystalline cellulose, lactose, and magnesium stearate. The prepared capsules were evaluated for their physicochemical properties including weight variation, friability, disintegration time, and drug content.

Main results. The valeriana capsules prepared using microcrystalline cellulose and lactose showed acceptable physicochemical properties such as weight variation, friability, and disintegration time. The optimized formulation containing valeriana (300 mg), microcrystalline cellulose (100 mg), lactose (60 mg), and magnesium stearate (5 mg) exhibited high drug content and a desirable release profile in vitro. The optimized formulation showed that the majority of the drug was released within 30 minutes.

Conclusions. The developed capsule formulation of valeriana using microcrystalline cellulose and lactose as excipients showed acceptable physicochemical properties and a desirable in vitro drug release profile. The optimized formulation can be a promising alternative to synthetic sedatives for the treatment of insomnia and anxiety. Further studies such as stability testing and in vivo evaluation are recommended to assess the clinical efficacy and safety of the developed formulation.