



ChemTech

## International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.6, pp 500-505, 2017

# Tamarind Seed Polysaccharide Applicable in the Formulation and Characterization of Zolpidem Tartrate Mouth Dissolving Films

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**Abstract :** Zolpidem is used for the treatment of insomnia and some brain disorders. The purpose of the present work is to formulate and enhance the drug release of zolpidem tartrate by the incorporation of natural and synthetic polymer in the oral dissolving films for use in patients experiencing difficulty in swallowing. The oral dissolving films loaded with zolpidem tartrate were prepared by solvent evaporation method by using tamarind seed polysaccharide and blanose (sodium CMC) by adding suitable plasticizer PEG 400 and glycerin. The prepared oral dissolving films were evaluated for drug content, weight variation, thickness, pH, folding endurance, *In vitro* drug release and stability studies. The evaluation parameters of zolpidem tartrate were found to be satisfactory in terms of drug content, thickness and pH. Comparison of the dissolution profiles of zolpidem tartrate oral dissolving films in phosphate buffer (pH 6.8). Effective drug release was achieved for zolpidem tartrate by way of preparation of oral dissolving films by solvent evaporation method. The ZOL6 showed the highest drug release 99.73% at the 15 min time point. The ZOL6 oral dissolving film with higher amount of superdisintegrant CCS showed fastest onset of drug release.

**Keywords :** Zolpidem tartrate oral dissolving films, solvent evaporation method and Dissolution rate.

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