



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.12 No.03, pp 17-27, 2019

Formulation Development and Evaluation of Captopril Mouth Dissolving Films

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Abstract : Captopril is an oral drug belonging to the class of ACE inhibitors, the enzyme which is responsible for the conversion of Angiotensin I to Angiotensin II. Captopril is used in the treatment of Hypertension. The purpose of this was to develop mouth dissolving films of captopril (12.5mg). The Mouth Dissolving Films were prepared with different polymers like HPMC E₅, MC, PVP, PVA, and SCMC with super disintegrants like SSG, CCS and polyplasdone XL-10. The prepared films were evaluated for film mass, pH, thickness, folding endurance, % elongation and tensile strength, drug content, FTIR study and *in-vitro* drug release. The films readily dissolved in the dissolution medium. The release of captopril from the films was 100 percent in 15mins in the dissolution medium of pH 6.8 phosphate buffer. The release profiles of films were analyzed by using UV-visible spectrophotometer at 271nm. *In-vitro* parameters like thickness, disintegration, folding endurance, assay and weight of the films were evaluated. Preformulation studies of captopril like compatibility studies with polymers using FTIR, DSC studies were carried out. The drug and polymers were found to be compatible with each other. These results strongly suggested that the water soluble polymers were suitable for the formulation of mouth dissolving films of captopril.

Key words : captopril, oral drug delivery, mouth dissolving films.

N. Swathi *et al* / International Journal of ChemTech Research, 2019,12(3): 17-27.

DOI= <http://dx.doi.org/10.20902/IJCTR.2019.120303>
