



Formulation, Optimization and In-vitro Evaluation of Fast Dissolving Oral films of Metoclopramide Hydrochloride by Solvent Casting method

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Abstract : The Present study aimed to prepare fast dissolving oral films (FDFs) of metoclopramide hydrochloride, because of its application in emesis condition where fast onset of action and avoidance of water is highly desirable. Moreover, this dosage form is highly useful in pediatrics, geriatrics and unconscious patients. FDFs were prepared by solvent casting technique with film forming polymers HPMC, PVA & Sodium alginate in varying concentrations with excipients like SLS as surfactant, Glycerol as plasticizer, citric acid as saliva stimulating agent, Sodium Saccharin as sweetening agent. The film of 2×3 cm was prepared by casting into a petridish of calculated size and dried in dryer at temperature 40°C. The In-Vitro evaluation of characteristics like Film Thickness, Weight Variation, disintegration time, dissolution study, surface pH, content uniformity was studied. The best formulation was found to be F5 containing polymer PVA and Sodium alginate in the ratio 2:1, with disintegration time 24 seconds, and dissolution profile of 75% in 60 seconds and 90% in 90 seconds. The content uniformity of all the formulations was found to be within the limit (98-101%). The disintegration time of all the formulations was found to be below 30 seconds except F4 (26 sec.). Thus, fast dissolving Films of Metoclopramide hydrochloride can be successfully formulated and will be used as a novel drug dosage form for paediatric and geriatric with improved patient compliance and enhanced bioavailability.

Keywords : FDFs, Metoclopramide, HPMC, PVA, Sodium Alginate, Solvent Casting.

Chandrajeet Kumar Yadav *et al* /International Journal of PharmTech Research, 2020,13(3): 229-241.

DOI= <http://dx.doi.org/10.20902/IJPTR.2019.130314>
