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**Drug printed oral thin films: Future trend in drug delivery technology**Vaishali Kilor<sup>1,2</sup>, Priya Dule<sup>1</sup>, Nidhi Sapkal<sup>2</sup> and Anwar Daud<sup>1</sup><sup>1</sup>Guru Nanak College of Pharmacy, India<sup>2</sup>Zim Labs Ltd, India

Thin films are relatively a recent addition in the pharmaceutical dosage forms. These can be used to administer drugs via various routes like oral, buccal, sublingual, transdermal, vaginal, rectal etc. When given by oral route these are meant for rapid disintegration and release of the drug in the oral cavity for quick therapeutic effect without use of water for swallowing. These are gaining popularity amongst the patient population of all ages, specially pediatric and geriatric patients. Though overcoming drawbacks of many oral solid dosage forms thin film technology faces certain limitations for drugs prone to hydrolytic and thermal degradation. Many drugs when loaded onto thin films using the conventional casting method results in films with poor mechanical properties. Manufacturing thin films by printing actives onto placebo substrates can overcome these limitations increasing the production yield and quality. The technology has the ability to process actives which are otherwise restricted to be formulated as thin film formulations. In the present investigation drop on demand printing technology was used for the printing of OTF of model drug cholecalciferol which is prone to degradation in solvent casted films. Drug loaded printing ink was developed with optimized properties and printing was carried out on the placebo substrate. Stability studies of solvent casted vitamin D3 films as well as printed vitamin D3 films were carried out to observe significant improvement in the stability of printed films as compared to solvent casted films which showed up to 50% degradation.

**Biography**

Vaishali Kilor is currently working as an Associate Professor at Guru Nanak College of Pharmacy, Nagpur. She has about 15 original research papers published in peer reviewed journals. She is a Reviewer of many reputed journals and has worked on many industrial projects. She is also working as a Consultant at Zim Laboratories Ltd. Her research interests include developing novel drug delivery systems using novel technologies.

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