INTRODUCTION
Diverse types of drug delivery systems based on matrix principle, osmotic pump, reservoir types with different coating compositions, monolithic and for multiple units in the form of capsules, drug combinations, tablets of varying geometries and configurations for delivery of drugs with different physicochemical characteristics, dose and pharmacokinetics have been developed, researched and marketed. Some of these systems are shown in Figure 1.

OBJECTIVES
To develop a modified release delivery system for controlled delivery of drug throughout the GI tract in compliance with physiological constraints (i.e. transit time, pH variations and contraction forces of GI tract) using a new approach.

RESULTS
Figures 2 shows the configurations of coating layers and dissolution profiles of plain tablet and coated tablets in acid environment (pH 2) for 2 hours followed by buffer stage (pH 5.8).

CONCLUSIONS
➢ Both EC/PEG+Eu and Eu+Eu coated tablets resulted in a controlled release rates over 20 hours and supported the erosion-parameters of release mechanism when compared to the un-coated reference tablets during entire dissolution (pH 2 and 5.8) studies (~20 hours) based on kinetics analysis.
➢ Since both EC and Eudragit coatings are insoluble, inclusion of pore-formers and higher levels of soluble components allowed for manipulation of their physicochemical properties with resulting tailored drug release rates and duration of release for the set goals.
➢ This work illustrates that partial application of coating to design a constant fast-slow or constant slow-fast biphasic drug release rates and durations to target different regions of GI tract is achievable to satisfy a particular biopharmaceutics and PK characteristic of a drug

REFERENCE

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