International Journal of PharmTech Research
CODEN (USA): IJPRIF, ISSN: 0974-4304, ISSN(Online): 2455-9563
Vol.9, No.7, pp 200-206, 2016

Development and Validation of RP-HPLC method for the Simultaneous Estimation of Paracetamol, Domperidone and Esomeprazole magnesium in Tablet Dosage Form

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Abstract : A simple, precise, accurate and rapid reverse phase high performance liquid chromatographic (RP-HPLC) method was developed and validated for the simultaneous estimation of paracetamol (PCM), domperidone (DOM) and esomeprazole magnesium (ESO) in tablet dosage form. The chromatographic separation was achieved on Sunfire C18 column (150mm × 4.6mm, 3.5 µ) as stationary phase with mobile phase consist 0.02 M phosphate buffer along with ortho- phosphoric acid adjusted to pH-3.0 and acetonitrile in the ratio of 70:30 v/v with a flow rate of 0.5 ml/min, UV detection at 277 nm. The retention times of paracetamol, domperidone, and esomeprazole magnesium were 4.1 min, 6.3 min and 9.5 min respectively. The linearity of paracetamol, domperidone, and esomeprazole magnesium were in the range of 10-100µg/ml with correlation co-efficient greater than 0.999. Assay recoveries for paracetamol, domperidone, and esomeprazole magnesium were found to be 99.92%, 100.03%, 99.40% respectively. The results of study show that the proposed RP-HPLC method was found to be simple, accurate, precise and rapid which can be success fully used for the determination of paracetamol, domperidone, and esomeprazole magnesium in pharmaceutical dosage forms.
Key words: HPLC, Paracetamol, Domperidone, Esomeprazole magnesium.

Keerthibala.K *et al* /International Journal of PharmTech Research**,** 2016,9(7),pp 200-206.

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