



Novel Liquid Chromatographic Method for the Simultaneous Estimation of Dextromethorphan and Amylmetacresol

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Abstract:The aim of the present work is to develop a simple, rapid, accurate and precise reverse phase-high performance liquid chromatographic (RP-HPLC) method for simultaneous estimation of Dextromethorphan and Amylmetacresol and to validate as per international conference on harmonization (ICH) guidelines. The chromatographic separation was performed on Discovery C18 column (250 mm×4.6 mm, 5 μm), a mobile phase comprising of mixed phosphate buffer: acetonitrile (50:50) pumped at a flow rate of 1.0 ml/min and a detection wavelength of 220 nm using a PDA detector. The developed method resulted in elution of Dextromethorphan at 4.120±0.01 min and Amylmetacresol at 5.300±0.01 min. The calibration curves were linear ($r^2=0.999$) in the concentration range of 2.5-7.5 μg/ml and 0.3-0.9 μg/ml for Dextromethorphan and Amylmetacresol respectively. The percentage recoveries were found to be 99.29-100.46 % for Dextromethorphan and 99.80-101.36 % for Amylmetacresol. The LOD was found to be 0.29 μg/ml and 0.86 μg/ml for Dextromethorphan and Amylmetacresol respectively. LOQ was found to be 0.05 μg/ml and 0.15 μg/ml for Dextromethorphan and Amylmetacresol respectively. A simple, rapid, accurate and precise RP-HPLC method was developed for simultaneous estimation of DM and AMC in bulk and pharmaceutical formulation and validated as per ICH guidelines. Hence the method holds good for the routine quality control of DM and AMC in bulk and pharmaceutical formulation.
Keywords:Dextromethorphan, Amylmetacresol, RP-HPLC, method development, validation.

C. Prasanthi et al/International Journal of ChemTech Research, 2018,11(01): 141-147.
