TWO SENSITIVE CHROMAGENIC METHOD DEVELOPMENT AND VALIDATION OF MOLNUPIRAVIR IN BULK AND PHARMACEUTICAL DOSAGE FORM

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ABSTRACT

Molnupiravir is an antiviral medication which is utilized to treat COVID-19. Mechanism of action involves increasing the occurrence of mutations in viral RNA, which subsequently hampers the replication of SARS-CoV-2 in humans. This study focuses on the visible method development & validation for analyzing molnupiravir in bulk & dosage form using visible spectroscopy. To assess the chromogenic properties of molnupiravir, different reagents were employed. Notably, a color change was observed with the FC reagent and MBTH reagent. An ELICO SL-210 UV-Visible spectrometer was employed in this investigation. Double distilled water was used as the diluent for molnupiravir determination. The maximum absorbance observed and the concentration range tested with FC reagent and MBTH reagent were 680.5nm and 605.5nm, and 10-2000 µg mL^{-1} and 100-2000 µg mL^{-1}, respectively. All validation parameters, including linearity, precision, accuracy, detection limit, quantification limit, robustness, specificity and range, were evaluated in accordance with the ICH Guidelines Q2 (R2). The results obtained adhered to the limits specified in the ICH guidelines.