DEVELOPMENT AND VALIDATION OF UV SPECTROPHOTOMETRIC METHOD FOR ESTIMATION OF FAVIPIRAVIR

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ABSTRACT:

A sensitive ultraviolet spectrophotometric method was developed and validated according to ICH guidelines for quantitative estimation of Favipiravir. The solvent used was 0.1 N HCl, and the analysis was performed at 323 nm. The calibration curve was linear over the concentration range 1 to 25 µg/mL. various validation parameters like accuracy, precision, LOD, LOQ, recovery study, range were determined The proposed method was simple, rapid, precise, accurate and sensitive, and can be used for the routine analysis of favipiravir.

Keywords: Favipiravir, UV spectrophotometry, validation

INTRODUCTION:

Favipiravir is an antiviral drug which is indicated for the treatment of patients with mild to moderate COVID-19 disease[1]. It is a RNA-dependent RNA polymerase inhibitor. It is activated in its phosphoribosylated form (Favipiravir-RTP) in cells, inhibiting viral RNA polymerase activity[2]. Chemically favipiravir is 6-fluoro-3-hydroxypyrazine-2-carboxamide (fig.1). The RNA-dependent RNA-polymerase enzyme uses this molecule as a substrate; however, the enzyme misinterprets it for a purine nucleotide, which inhibits its activity and stops the synthesis of viral proteins.

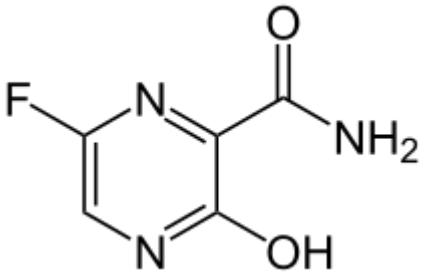

Fig 1: Structure of favipiravir

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