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RESEARCH ARTICLE

UV Spectroscopy Assay Method Development and Validation of Dimethyl Fumarate and Cyclosporine Drugs in Nano Dosage Forms

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ABSTRACT

An easy, precise and accurate spectroscopic technique for the estimation of cyclosporine and dimethylfumarate in pure form and nano dosage form has been developed. The proposed method involves dissolving dimethylfumarate in distilled water and cyclosporine in ethanol and subjecting resulting solution to UV spectroscopic assessment. Absorption maximum was found 210 and 214 nm respectively. Beer's law was obeyed in the concentration range of 1 to 5 and 1 to 8 $\mu\text{g/mL}$ for dimethylfumarate and cyclosporine. Calibration curve showed linearity between absorbance and concentration as per line equation with R^2 value near 1. Validation was performed as ICH guidelines for linearity, accuracy, precision, Robustness, System suitability.

Keywords: Cyclosporine, Dimethyl fumarate, Spectrophotometry, Validation.

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