



Research article

Simultaneous content analysis of Rifampicin, Isoniazid and Pyrazinamide in tablet dosage form by spectrophotometry ultraviolet with area under curve method

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Abstract

The goal of this research was to use spectrophotometry specifically area under curve (AUC) method for simultaneous determination of rifampicin (RFP), isoniazid (INH) and pyrazinamide (PRZ) on tablets. This method can be used to determine the level of a single compound or mixture of two substances with no separation of first and derivative spectrum. This method uses two wavelength regions. Area under the curve where spectra of both the substance of spectrum overlap is the selected wavelength region to determine the levels of both substances. The AUC method begins by calculating the level of each spectrum with various concentrations at each the range absorptionspectrum. Absorption spectrum range (248-258) nm for RFP, (260.2-270.2) nm for INH and ranges (271.8 – 281.8) nm for PRZ with methanol as solvent. Absorption spectrum range (248.8-258.8) nm for RFP, (261.2-271.2) nm for INH and ranges (272.8 – 282.8) nm for PRZ with methanol and methanol phosphate buffer pH 6 as solvent. The spectrophotometry UV with AUC method can be used for simultaneous determination of RFP, INH and PRZ mixture. The validation test results can be described as test results that have good linearity, accuracy and precision.