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Two Novel Ultraviolet Spectrophotometric Method For Determination Binary Mixture Of Isoniazide And Rifampicin In Tablet Dosage Form.

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Abstract : A combination of INH and RIF is one of the combination dosage in the treatment of tuberculosis. Each INH and RIF can be assayed by ultraviolet spectrophotometry. This study aims to establish the levels of both these drugs by comparing the derivative spectrophotometric method with zero crossing and spectrophotometry ultraviolet with multiple wavelength method in the matrix calculation.

The methodology used to determine the assay of INH and RIF in tablet dosage form is conducted by derivative spectrophotometric method with zero crossing, using 0.1N HCl solvent and spectrophotometric method with multiple wavelength in the matrix calculation with HCl 0.1 N as a solvent.The result showed that with the method of zero crossing, the two substances is measured at the second derivative in wavelength analysis of 300.80 nm for RIF and 240.20 nm to INH, while the multiple wavelength method measured at wavelength 215 nm, 225 nm, 232 nm , 250 nm, and 267 nm. Using the zero crossing method, the RIF levels obtained in Rimactazide® tablet was 100.51% ± 4:43% and INH levels was 99.7% ± 1:52% with recovery percentage for RIF was 100.39% with RSD=0.63%, and for INH, the recovery percentage was 101.05%, with RSD= 0.57%. Using the matrix calculation method by multiple wavelength, the levels of INH (97.83±0,12)%, with the value of CV= 0.0787% and RIF (97.40 ± 0.30)% with CV= 0.1951%. So it can be concluded that the derivative spectrophotometric method in zero crossing and matrix calculation in multiple wavelength can be used to determine of INH and RIF in tablet dosage form.

Keywords : RIF, INH, Derivative spectrophotometry, Zero Crossing, multiple wavelength, matrix calculation.

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