



# New Simple Spectrophotometric Method for the Simultaneous Estimation of Paracetamol and Flupirtine Maleate in Pure and Pharmaceutical Dosage Form

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## Abstract

A new simple spectrophotometric method has been developed for the simultaneous estimation of Paracetamol and Flupirtine Maleate in pure and pharmaceutical dosage forms. The method is based on the principle of absorbance measurement at two different wavelengths, namely,  $\lambda_1 = 246 \text{ nm}$  and  $\lambda_2 = 271 \text{ nm}$ . The absorption spectra of the two drugs were recorded in the range of 200-400 nm, and the overlain spectra showed minimal spectral interference, allowing for their simultaneous analysis. Calibration curves were constructed for both drugs at each wavelength, and the linearity was found to be in the concentration range of 2-20  $\mu\text{g/mL}$  for Paracetamol and 5-30  $\mu\text{g/mL}$  for Flupirtine Maleate. The accuracy and precision of the method were validated according to ICH guidelines, and the results were found to be within the acceptable limits. The proposed method was successfully applied to the analysis of commercially available tablet formulations, and the results were in good agreement with the labeled amounts. The developed method offers a rapid, cost-effective, and reliable alternative for the simultaneous estimation of Paracetamol and Flupirtine Maleate in pharmaceutical formulations.

