

Determinación simultánea de paracetamol y codeína por espectrofotometría derivada de primer orden

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A simple first derivative spectrophotometric method has been developed for the simultaneous determination of paracetamol and codeine in pharmaceutical formulations. Dimethylformamide was used as solvent for extracting the drugs from the formulations and subsequently the samples were evaluated directly by first order derivative spectrophotometry. Simultaneous determination of the both drugs can be carried out using the graphical and zero-crossing methods for paracetamol and codeine, respectively. The method does not require simultaneous equations to be solved as it is commonly necessary in zero-order spectrophotometry. The calibration graphs were linear between the ranges $4.3 \cdot 10^{-5}$ M to $1.0 \cdot 10^{-3}$ M for codeine and $6.1 \cdot 10^{-5}$ M to $1.6 \cdot 10^{-3}$ M for paracetamol. The simultaneous determination is reliable only when the molar ratio of paracetamol to codeine is lower than 4/1. Commonly the pharmaceutical formulations contain both drugs in a mass ratio between 5/1 to 33/1, therefore a previous enrichment