

“SOLID AS SOLVENT”- NOVEL SPECTROPHOTOMETRIC ANALYSIS OF FRUSEMIDE TABLETS USING PHENOL AS SOLVENT

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The pollution and toxicity caused by most of the organic solvents is a big challenge. Using mixed-solvency concept, innumerable solvent systems can be developed based on an assumption that each substance possesses solubilizing power which can be further explored to develop eco-friendly methods in the area of drug estimations and formulations precluding the use of toxic organic solvents. The present research work provides an eco-friendly method to estimate spectrophotometrically, the poorly water soluble drug frusemide in tablet formulation. For this purpose, melted phenol (50-60°C) was utilized to extract out (dissolve) the drug from powder of frusemide tablets. Absorbances of standard solutions containing 20, 40, 60, 80 and 100 µg/ml were noted at 330 nm against reagent blanks to obtain calibration curve. Recovery studies and statistical data proved the accuracy, reproducibility and precision of the proposed method. The presence of tablet excipients and phenol did not interfere in the spectrophotometric estimation of frusemide at 330 nm. Proposed method was found to be novel, economic, eco-friendly, rapid, free from toxicity of organic solvent, accurate and reproducible.

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