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Quantitation of pregabalin by hplc-uv method using ninhydrin derivatization: Development and validation (Article)

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Abstract

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Introduction: A simple and reliable high performance liquid chromatographic method has been developed for the quantitative determination of pregabalin in bulk and dosage form. Pregabalin, a γ amino butyric acid analogue, has negligible sensitivity to UV or fluorescence detection. Hence, it has been derivatized by ninhydrin to form a chromophoric complex that could be quantified by UV detection. **Materials and Methods:** The concentration of ninhydrin was set to 5 mg/ml and a phosphate buffer solution (pH 7.4) was used as a solvent for the reaction. The resultant complex was separated by HPLC and detected by a UV detector at 569nm wavelength. **Results:** The developed method showed a linear response within 50 to 600 $\mu\text{g/mL}$ of pregabalin. The method was accurate with mean recovery values within $100 \pm 2\%$. The repeatability of the method was established by intra-day and inter-day precision study. Finally, a commercial pregabalin capsule was assayed by the developed HPLC method including ninhydrin derivatization. The result of the mean assay was found to be $100.37 \pm 2.94\%$. **Conclusion:** This is the first time we are reporting pregabalin analysis using ninhydrin derivatization for HPLC analysis. Therefore, the developed method can be considered as a significant improvement in pregabalin quantitation and it can be easily applied for routine quality control tests of pregabalin. © 2020 Bentham Science Publishers.

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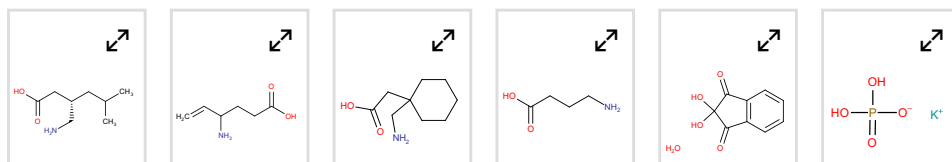
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