

PREFORMULATION STUDIES AND PROSPECTIVE VALIDATION OF UV-SPECTROPHOTOMETRIC METHOD OF AMOXICILLIN TRIHYDRATE

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ABSTRACT

The current study was embarked upon to evaluate and assess the physicochemical characteristics of amoxicillin trihydrate. The determination and validation of UV-spectrophotometric for amoxicillin trihydrate was included in the study. The different physical characteristics used in preformulation, including solubility, FTIR, loss on drying, melting point, pH, flow qualities, moisture content and partition coefficient, were carefully evaluated and scrutinized. The proposed methods of analysis for amoxicillin trihydrate provide a simple, accurate, and reliable way of analyzing salivary fluid in a simulated buffer solution (pH 6.8) employing a UV spectrophotometer. The UV spectrophotometric method for amoxicillin trihydrate was developed and validated in salivary fluid simulated at pH 6.8. The intraday and interday RSD values both being less than 2 demonstrated that the method is accurate. The recovery study of drug obtained implies the robustness and durability of the method.