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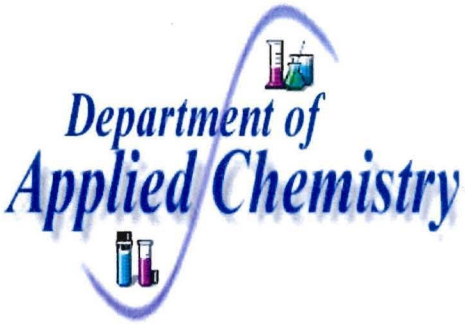

FINAL YEAR PROJECT

BY

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QUANTITATIVE ANALYTICAL METHOD DESIGN AND VALIDATION FOR PROCAINE AND PROCAINE BENZYL PENICILLIN IN PROCILLIN INJECTION USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

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ABSTRACT

A high performance liquid chromatography method for the analysis of procaine and procaine benzylpenicillin was developed. The greater part of the method development was spent in the determination of a suitable mobile phase and an appropriate flowrate to achieve good separation of the two active ingredients in procillin injection. Variation of mobile phase composition was done in order to investigate the effects of increasing or reducing the organic phase (Acetonitrile) or aqueous phase (buffer). UV-VIS spectroscopy scan was used in the determination of suitable detector wavelength.

System suitability was done to determine if the system is well behaved. Parameters such as capacity factors, RSD, Tailing, resolution and theoretical number etc were determined and analysed.

The developed method was also validated under several parameters i.e. comparative study, linearity and range, assay precision, method precision etc. This was done to make sure that the method is precise, accurate, selective, sensitive and reproducible.

The results showed that the analysis of the two active ingredients using the HPLC method can be achieved since procaine and procaine benzylpenicillin separate on varying the mobile phase and the flowrate and keeping them at the recommended values.