High Performance Liquid Chromatography (HPLC) in the Pharmaceutical Analysis

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1 INTRODUCTION

Drug manufacturing control requires high level and intensive analytical and chemical support of all stages to ensure the drug's quality and safety [1]. The pharmacopeia constitutes a collection of recommended procedures for analysis and specifications for the determination of pharmaceutical substances, excipients, and dosage forms that is intended to serve as source material for reference or adaptation by anyone wishing to fulfill pharmaceutical requirements. The most important analytical technique used during the various steps of drug development and manufacturing is the separation technique: high performance liquid chromatography (HPLC).

The key to a proper HPLC system operation is knowledge of the principles of the chromatographic process, as well as understanding the reasons behind the choice of the components of the chromatographic systems such as column, mobile phase, and detectors. A scheme of an HPLC system is shown in Fig. 1. A high pressure pump is

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