3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during year 2022-23

S.No.	Name of the teacher	Title of the book/chapter published	Year of Publication	ISBN No	Name of the Publisher
01	Dr. M. D Dhanaraju	Pharmaceutical Inorganic chemistry	2022	978-93-94457-86-7	Clever Fox
02	Dr. AR. Magesh	Pharmaceutical Inorganic chemistry	2022	978-93-94457-86-7	Clever Fox
03	Dr. V. D Sundar	Quality Evaluation of Selected Drug in Pharmaceutical Formulations by Spectrophotometric Estimation of Imatinib Mesylate in Pure and Tablet Dosage Form.	2023	978-81-960551-3-4	BP International
04	Dr. V. D Sundar	Core-Shell media: A trandsetter in LC separation	2023	978-81-963114-9-0	BP International
05	Dr. R. Vijayalakshmi	Core-Shell media: A trandsetter in LC separation	2023	978-81-963114-9-0	BP International

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Dr. AR. Magesh is working as a Professor & Head, Department of Pharmaceutical Analysis & Quality Assurance, GIET School of Pharmacy, Rajahmundry, Andhra Pradesh. He has completed Ph.D., from Jawaharlal Nehru Technological University, Hyderabad, Andhra Pradesh. He has 15 years of teaching & research experience in the field of pharmaceutical sciences and had handled various pharmaceutical analysis subjects. He has several publications to his credit in both national and international journals, published a patent. He is a life member of APTI.

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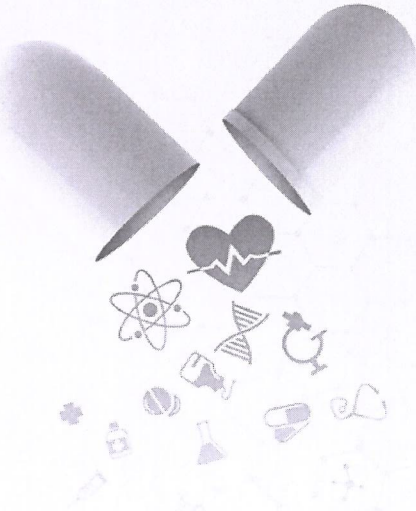

PHARMACEUTICAL
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DR. A R MAGESH

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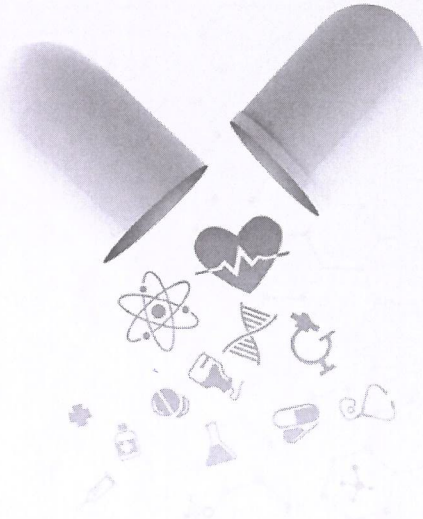

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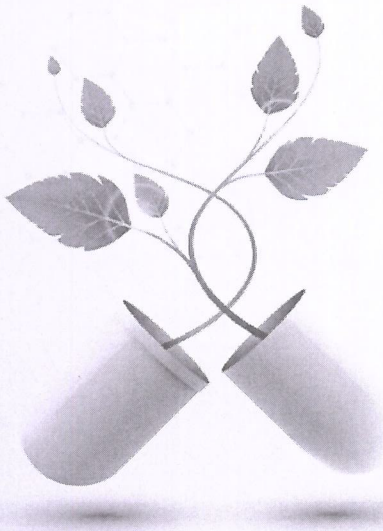

DR. M D DHANARAJU
DR. A R MAGESH

Chapter 7
Print ISBN: 978-81-960551-2-7, eBook ISBN: 978-81-960551-3-4

Quality Evaluation of Selected Drug in Pharmaceutical Formulations by Spectrophotometric Estimation of Imatinib Mesylate in Pure and Tablet Dosage Form

Kumar Raja Jayavarapu [a*] and V. D. Sundar [b]

DOI: 10.9734/bpi/cops/v1/4704A

ABSTRACT

For the determination of imatinib mesylate in both its pure and tablet dose forms, a simple and sensitive spectrophotometric approach has been established. Imatinib mesylate is a white crystalline powder. The suggested approach is founded on the measurement of ultraviolet light absorption in distilled water. The UV spectrum of Imatinib mesylate in distilled water showed λmax at 256 nm. Beer's law is valid in the concentration range of 2-12 µg/ml. In terms of precision, accuracy, ruggedness, and robustness, this method has been validated. The procedure is reproducible and selective for the estimation of the given drug, according to statistical analysis.

Keywords: Spectrophotometry; imatinib mesylate; tablet dosage form; evaluation.

1. INTRODUCTION

Imatinib mesylate is a 2-phenylamino pyrimidine derivative that acts as a selective inhibitor of many tyrosine kinase enzymes. It occupies the TK active site, resulting in a reduction in activity [1-4]. Chemical name of imatinib is 4-4[(4-methyl-1- piperazinyl) methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2- pyrimidinyl] amino] phenyl] – benzamide mono methane sulfonate. It has a molecular formula of C_{29} $H_{31}N_7O.CH_4O_3S$ and a molecular weight of 589.71. It includes the structural formula (Fig. 1). Imatinib mesylateis a white crystalline powder which in freely soluble is distilled water, 0.1 N Hcl, methanol and sparingly soluble in dimethyl ether [5,6]. The drug is officially listed in Martindale, the Extra Pharmacopoeia. Several analytical methods had been reported for the estimation of Imatinib mesylate in biological fluids and in tumor cells but no UV-Spectrophotometric method was reported for the estimation in pharmaceutical dosage forms [7-9].

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Core-shell Media: A Trendsetter in LC Separation

R. Vijayalakshmi [a*], V. D. Sundar [b], N. Appala Raju [c] and S. Princely E. Gnanakani [d]

DOI: 10.9734/bpi/pcsr/v8/18986D

ABSTRACT

Liquid chromatography (LC) is an efficient quantitative technique with strong roots in analytical disciplines. Small particle advances in ultra-high performance liquid chromatography (UHPLC) have improved column performance and improved analytical properties, but the small particle size is problematic and generates a high back pressure. To overcome this issue, an alternate approach employing core-shell particles was devised that could overcome the drawback of back pressure and obtain similarly efficient results to UHPLC. Core-shell particles are the most cost-effective alternative to porous particles, resulting in substantial savings. Recent advances in particle technology for liquid chromatography have generated significant interest in the usage of shell particles. The core diameter was lowered and active layer thickness was reduced to 0.5 µm, allowing for fast separation of peptides and proteins. The core of the packing material is a solid sphere, which has a weaker axial diffusion effect and reduces the peak's axial expansion. Additionally, the radial temperature transfer is enhanced, making the temperature distribution more uniform and accelerating the mass transfer speed. The particle size distribution of core-shell column is more continuous and uniform than that of full porous column, resulting in a lesser eddy current diffusion effect and higher column efficiency. This book chapter focuses on concept of core-shell particle columns, its uses and restrictions; effect of devising techniques, physical characteristics size and thickness of core shell particles on the separation performance.

Keywords: Coreshell particles; sizes; preparation methods; expanded applications; automation; limitations.

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