IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 8, May 2025
Impact Factor: 7.67

Analytical Method Development & Validation of Azelnidipine By using RP-HPLC

Abhishek Shinde[1], Ankita Walunj[2], Snehal Wagh[3], Shritej Varhadi[4], Dr. Tambe Sagar. E.[5]
Department of Pharmaceutical Analysis[1-5]
Samarth Institute of Pharmacy, Belhe, Junnar
abhishinde1034@gmail.com

Abstract: *A precise and reliable high-performance liquid chromatography (HPLC) method was developed and validated for the quantitative determination of Azelnidipine in pharmaceutical formulations. The method employed a reverse-phase chromatographic separation using a C18 column, with a mixture of mobile phase. Detection was performed at a wavelength of 240 nm. This study presents a comprehensive theoretical and practical framework for the development and validation of a high-performance liquid chromatography (HPLC) method for the quantitative analysis of Azelnidipine in pharmaceutical formulations. The theoretical aspects of HPLC, including chromatographic theory, column chemistry, and detector principles, are discussed in relation to the development of a robust and reliable analytical method. The validated method can be readily applied for the routine analysis of Azelnidipine in pharmaceutical products, ensuring the quality and purity of the active pharmaceutical ingredient.*

Keywords: Azelnidipine, HPLC, Method development, Method validation, pharmaceutical analysis, Chromatography, Quantitative analysis

DOI: 10.48175/IJARSCT-26918