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Quantitative Analysis of Alprazolam in Rat Plasma Using ACQUITY UPLC Coupled with Xevo G2 QTof

Waters Corporation

This is an Application Brief and does not contain a detailed Experimental section.

Abstract

This application brief demonstrates the quantitative analysis of alprazolam in rat plasma with four orders of magnitude linearity using ACQUITY UPLC coupled with Xevo G2 QTof.

Benefits

Xevo G2 QTof has the ability to acquire both quantitative and qualitative data on the same instrument, increasing laboratory productivity significantly.

Introduction

In drug discovery and metabolism studies there is a requirement to carry out both metabolite identification and quantitation experiments. These are typically achieved using separate workflows on tandem quadrupole instruments operated in the multiple reaction monitoring (MRM) mode for quantitative studies and full scan, exact mass instruments such as quadrupole time of flight (QTof) for metabolite identification. The goal of many laboratories is to streamline their studies into a single workflow that encompasses both quantitative and qualitative experiments. The QuanTof technology incorporated in the Xevo G2 QTof allows sensitive, exact mass quantitative and qualitative experiments to be carried out simultaneously.

Alprazolam is a small drug molecule that is primarily used to treat moderate to severe anxiety disorders and panic attacks, and is used as an adjunctive treatment for anxiety associated with moderate depression. In this technical brief, we present a study using ACQUITY UPLC coupled with Xevo G2 QTof to quantify alprazolam in rat plasma.

Metabolism Study of Rate and Routes of Clearance for Ritonavir using UPLC coupled with the Xevo QTof MS System, Castro-Perez, J., Yu, K., Shockcor, J., Shion, H., Marsden-Edwards, E., Goshawk, J., Yamada, Y., and Oshikata, M. Waters 2009 application note 720003025en.

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ACQUITY UPLC System <https://www.waters.com/514207>

720003426, May 2010