



## Development of a LC-MS/MS Method for the Determination of Dasatinib in Rat Plasma

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**SUMMARY.** In this study, a simple, rapid and sensitive liquid chromatography tandem mass spectrometry (LC-MS/MS) method is described for the determination and pharmacokinetic study of dasatinib in rat plasma samples using imatinib as the internal standard (IS). Sample preparation was accomplished through a simple protein precipitation with acetonitrile, and chromatographic separation was performed on an Acquity BEH C18 column (2.1 mm × 50 mm, 1.7 μm) with gradient profile at a flow of 0.4 mL/min. The linearity of this method was found to be within the concentration range of 10-1000 ng/mL for dasatinib in rat plasma. Only 4.0 min were needed for an analytical run. The method was applied to a pharmacokinetic study of dasatinib in rats.

**RESUMEN.** En este estudio se describe un método de cromatografía líquida en tándem con espectrometría de masas (LC-MS/MS) simple, rápido y sensible para el estudio la determinación y farmacocinética de dasatinib en muestras de plasma de rata utilizando imatinib como estándar interno (IS). La preparación de la muestra se llevó a cabo mediante una simple precipitación de proteínas con acetonitrilo y la separación cromatográfica se realizó en una columna Acquity BEH C18 (2,1 mm × 50 mm, 1,7 μm) con perfil de gradiente a un caudal de 0,4 mL/min. Se encontró que este método era lineal dentro del intervalo de concentración de 10-1000 ng/mL para dasatinib en plasma de rata. Sólo se necesitan 4,0 min para una serie de análisis. El método se aplicó con éxito a un estudio farmacocinético de dasatinib en ratas.

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**KEY WORDS:** dasatinib, LC-MS/MS, pharmacokinetics, rat plasma.

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