

Application Note

GC-MS/MS Analysis Made Easy with Xevo TQ-GC and Quanpedia Database

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

Abstract

In this technology brief, learn how Quanpedia Database can simplify GC-MS/MS method development and analysis in food and environmental laboratories. The Xevo TQ-GC is equipped with Quanpedia, a compound-centric GC EI MRM database that acts as a starting point to reduce method development time. Customized GC-MS/MS methods can be created or modified quickly as required.

Benefits

Simplify GC-MS/MS method development and analysis using Quanpedia

Introduction

Generating multiple reaction monitoring (MRM) transitions for GC-MS/MS analyses which cover a wide range of target compounds can be a time-consuming challenge. Laboratories often have to generate these methods or regularly update existing methods to meet regulatory and customer demands. This method development process is not only time-consuming, but it also requires expert knowledge of compounds and the use of expensive standards. Traditionally, the use of product ion scans at various collision energies has been implemented to generate MRM transitions. This is a very manual process that is susceptible to user error. Even utilizing existing method information of MRM transitions collated in spreadsheets could introduce transcription errors. Waters Xevo TQ-GC is enabled with Quanpedia, a compound-centric GC EI MRM database that acts as a starting point to reduce method development time. Customized GC-MS/MS methods can be created or modified quickly as required.

Results and Discussion

Quanpedia employs a compound-centric database that holds GC chromatographic conditions, MRM transitions, and TargetLynx quantitation information all in one place. Information may be imported from existing methods, third-party files, or supplemented manually. Compounds can be searched within the

database to retrieve compound specific MRMs to drive analytical method development. MRMs can also be imported easily into the Quanpedia Database from legacy methods. Retention times for all of the compounds in each method can be updated within Quanpedia to compensate for any shifts in retention times due to column maintenance. The Quanpedia functionality for the Xevo TQ-GC is exactly the same as that of the Xevo tandem quadrupole -MS product lines. This reduces the need for training users who already use Waters' Xevo TQ-MS Systems.

Conclusion

Use the Quanpedia Database to quickly generate GC-MS/MS methods without the need for manual input of MRM transitions, GC methods, or data processing methods. Quanpedia covers a wide range of key compounds of concern for food and environmental contaminant testing labs. By considerably simplifying GC-MS/MS analysis and having a compound centric database containing over 1000 compounds, lab productivity can be increased.

Featured Products

Xevo TQ-GC Mass Spectrometry System <<https://www.waters.com/134977323>>

Quanpedia <<https://www.waters.com/10148049>>

TargetLynx <<https://www.waters.com/513791>>

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