Thermo Scientific VetDrugs Explorer Collection

Start-to-finish targeted quantitation workflows
for today and tomorrow's veterinary drugs analysis

Transforming Complex Assays into Simple Workflows

The Thermo Scientific™ VetDrugs Explorer Collection is a pre-tested, validated start-to-finish multi-residue veterinary drug analysis solution that offers robust, reliable, and sensitive quantitation addressing global regulatory requirements. For laboratories focused on starting or expanding their veterinary-drug testing capability, this solution ensures confident quantitation of more than 160 veterinary drugs in a variety of matrices, regardless of user expertise.

The comprehensive VetDrugs Explorer Collection includes:

- Quality control (QC) and reference standard mixes

- QuEChERS kit with sample preparation procedure

- Industry leading triple quadrupole mass spectrometers with state of the art UHPLC and columns

- Data acquisition and processing methods, with an extensive compound database, tested and validated by industry thought leaders in multiple laboratories
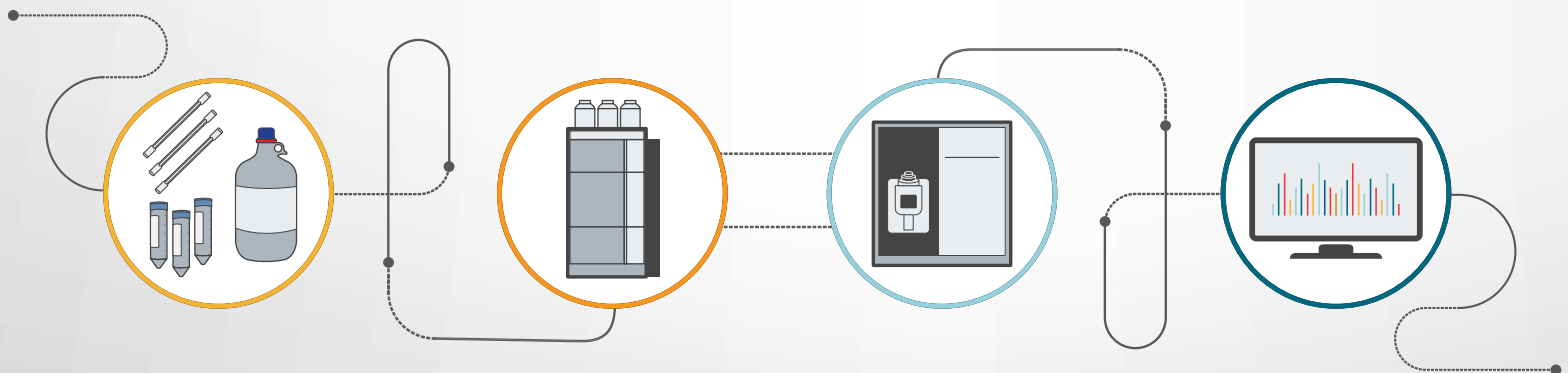
A premium LC/MS/MS system to meet your requirements for multiclass veterinary drug residue analysis
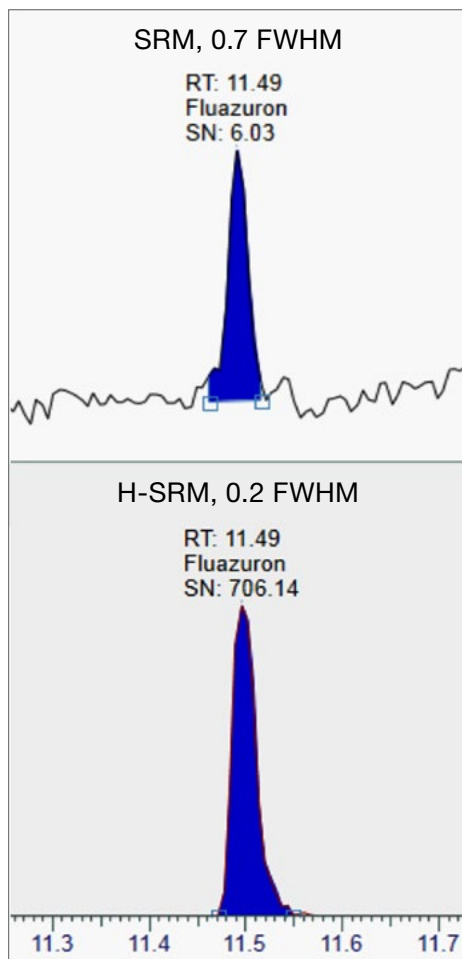
The challenges of developing robust, sensitive quantitation workflows for multiclass veterinary drugs analysis are numerous. Add to it the complexity of reducing cost per sample while achieving the highest performance capability. The VetDrugs Explorer Collection offers an optimized, total solution to ensure successful quantification of veterinary drugs in animal matrices.

The Thermo Scientific™ TSQ Altis™ triple quadrupole mass spectrometer provides the highest possible sensitivity and scan speed, enabling your lab to meet current and future regulations for veterinary drugs analysis.

Thermo Scientific triple quadrupole systems offer unique benefits including Highly Selective Reaction Monitoring (H-SRM), with class leading sensitivity and features that will help every food safety laboratory, regardless of expertise, address their scientific and business goals with ease.

VetDrugs Explorer Solution

Premium Quantitation
MS Systems
TSQ Altis triple quadrupole mass spectrometer
LC Systems
Thermo Scientific™ Vanquish™ Flex Binary UHPLC
Software
Thermo Scientific™ TraceFinder™ software including acquisition and processing methods, and comprehensive compound database
Accesories Included
QuEChERS kit
VetDrugs QC sample kit
VetDrugs standard kit
Thermo Scientific™ Accucore™ VDXcolumn
Quick Start and User Guides

Advantage of H-SRM for Fluazuron in salmon filet extract: Noise is significantly reduced allowing improved selectivity against the matrix with high ion transmission

> *It is estimated that more than half of the chicken sold in the United States in 2018 will be produced without the use of any antibiotics, and the focus of consumers and retailers is now extending to "No Antibiotics Ever" pork and beef production systems. To ensure compliance in these production flows, analytical testing for drug residues with the lowest possible detection and quantitation limits are the key metric.*

David J. Borts, PhD, VDPAM
Section Leader, Analytical Chemistry
Veterinary Diagnostic Laboratory
Iowa State University

Single-Provider Workflow Solutions: Customized to Ensure Your Success

The VetDrugs Explorer Collection is a single-provider solution built by scientists for scientists working in food safety laboratories around the world. This comprehensive collection provides a reliable, high-quality LC-MS/MS based solution for targeted quantitation of hundreds of veterinary drugs in a wide range of matrices.
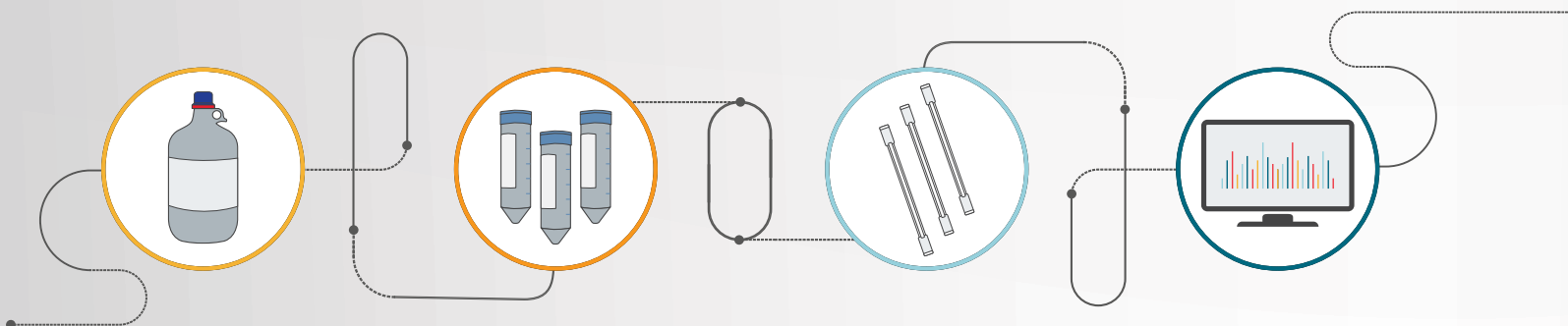
Benefits of QuEChERS Sample Preparation

Characteristic	Traditional Approaches	QuEChERS Methods
Variability	**High**, depends on user expertise, sample, and matrix type.	**Low**, reproducible results for hundreds of vet drugs across multiple matrices.
Protocol Portability	**Low**, users implementing the method should have similar expertise and understanding.	**High**, one method can be implemented in multiple laboratories across different geographies
Convenience	All components ordered separately	All necessary components included
Cost Per Sample	Expertise dependent and labor intensive.	Economical and protocol driven. Users with varied expertise can achieve similar results.
Ease of Use	Depends on familiarity with the components, sample type, and user. Expertise required.	**High**. Can be implemented with ease across laboratories and users.

Sample Preparation
Convenient, Easy, and Effective

QuEChERS is a convenient and effective sample preparation approach for determining veterinary drug residues in a variety of matrices such as animal tissues, seafood, and milk. QuEChERS products are easy to use and reproducible, factors that are essential to all food safety laboratories.

## Liquid Chromatography
Resolution, Speed, and More

Thermo Scientific™ Accucore™ LC columns coupled with the Vanquish UHPLC system take advantage of the system's extended pressure capabilities and robustness, allowing high throughput LC-MS/MS analysis.

The Thermo Scientific™ Vanquish™ Flex Binary UHPLC system offers increased uptime, robustness, and reliability for every targeted quantitation workflow. From state-of-the-art binary high-pressure pumps to Thermo Scientific™ Viper™ fingertight fFitting connections, every component enables laboratories to address quantitation challenges with ease and confidence.

Triple Quadrupole MS
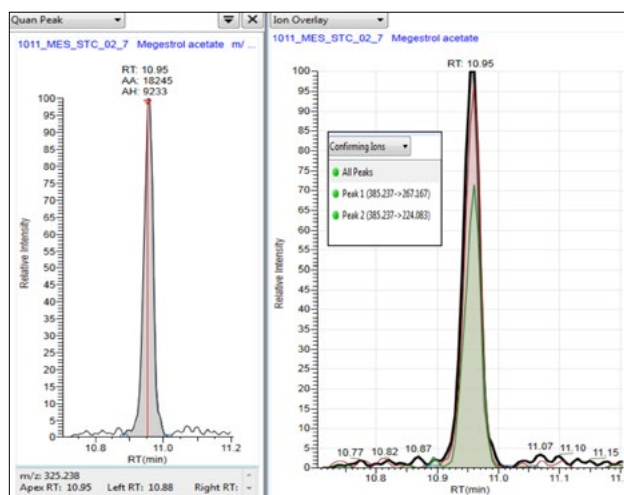### Confident Quantitation

To help address critical challenges in today's food residue analysis, the TSQ Altis triple quadrupole mass spectrometer system delivers best-in-class sensitivity and speed, as well as the robustness and reliability required for fast and accurate quantitation of hundreds of analytes in a variety of matrices. Any molecule, any matrix, any user.
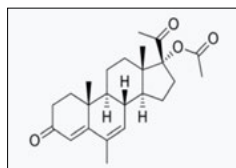
Application Software
Five Clicks to Success

TraceFinder software provides an extensive built-in compound database; the ability to screen and quantify analytes; streamlined data review; customized, editable report templates; and automatically generated reports—tailored for food safety applications. From data acquisition to the final report, TraceFinder software makes workflows fast and simple.


Megestrol Acetate

Steroid hormone Megestrol Acetate in milk sample at 0.04 ng/g, quantitation peak (left) with confirming ions (right).

# Robust Targeted Quantitation Workflows for Trip

The VetDrugs explorer solution is a premium, comprehensive package that allows scientists to perform robust targeted quantitation workflows for multiclass veterinary drug residues in food matrices. All pre-configured methods are easily accessed in TraceFinder software.
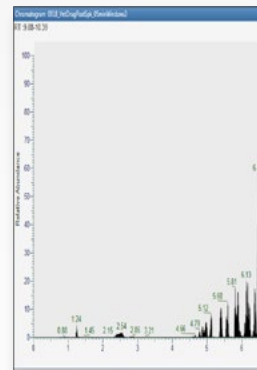
Select Compounds
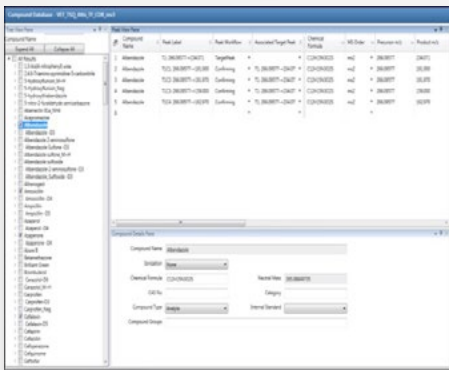
Select from over 160 compounds from the compound database to automatically create a data collection and processing method for LC-MS/MS-based targeted quantification.

Load Method
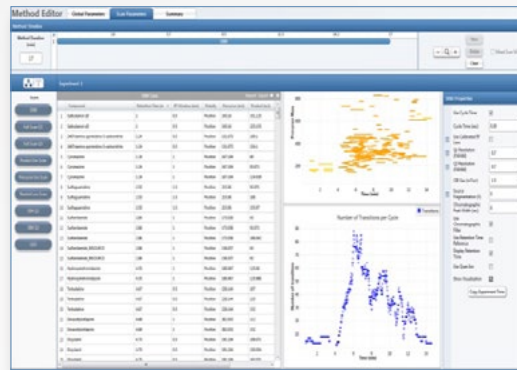
LC-MS/MS method flexibility allows you to easily create or edit pre-configured methods that include SRM transitions and retention times.
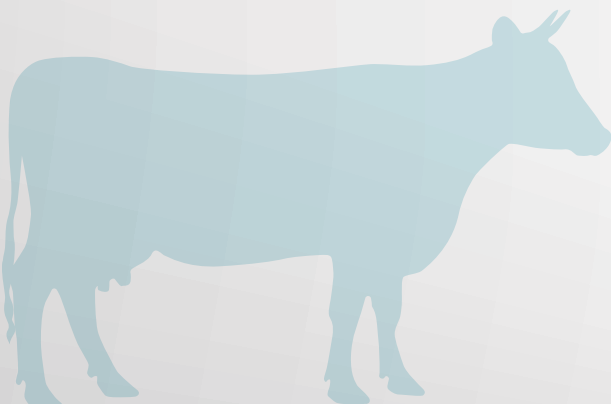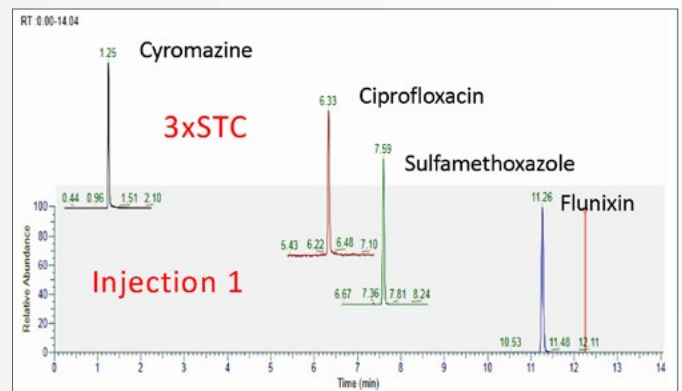
Acquire Data

Data is acquired under optim veterinary medicine residue a

VetDrugs Explorer Robustness

Stable peak shape and response over 500 injections in bovine muscle extract
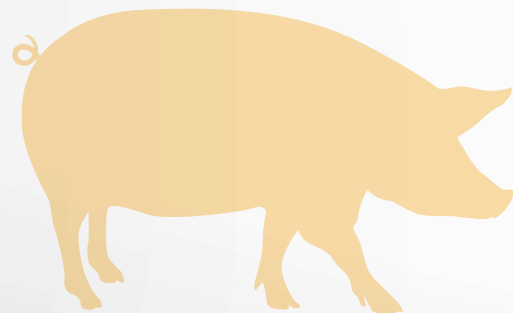
le Quadrupole MS

Users are able to quickly and easily develop customized methods using the TraceFinder software compound database, or can substantially reduce time to results using TraceFinder software's preconfigured methods. Select one of the pre-tested and validated TSQ Altis mass spectrometer methods with LC conditions, then load and go.
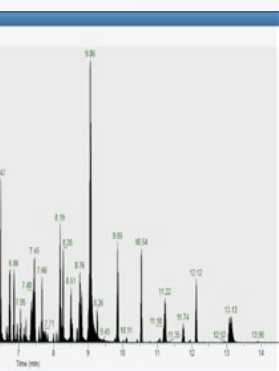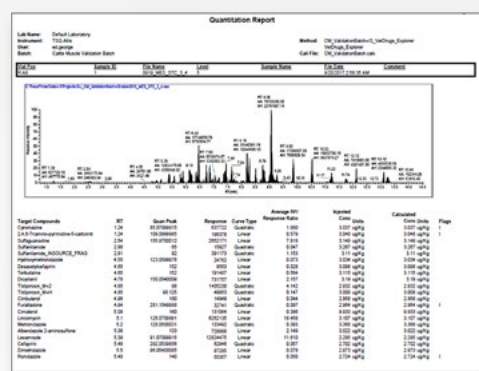

al conditions for multiclass
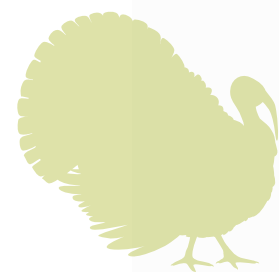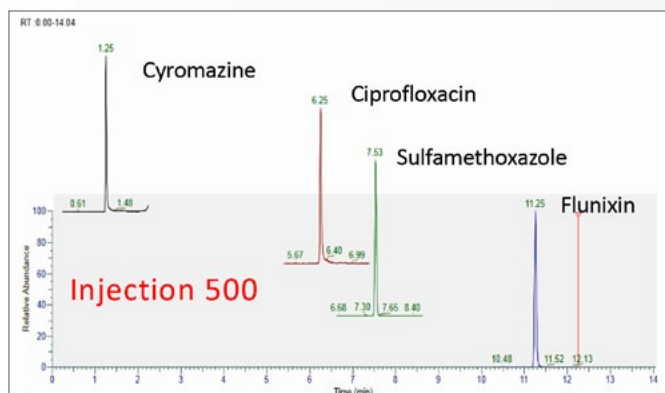analysis.

Review Data

The color-flagging feature of TraceFinder software enables the analyst to quickly review and confirm results.

Generate Report

After data review, use high-quality standard and custom reports to rapidly generate useful reports.

TSQ Series

The TSQ Altis triple quadrupole mass spectrometer delivers best-in-class sensitivity and speed, as well as the robustness and reliability required for fast and accurate quantitation of hundreds of analytes in a variety of matrices. The Vanquish Flex Binary UHPLC system offers increased uptime, robustness, and reliability for every targeted quantitation workflow.

The Thermo Scientific™ TSQ Quantis™ triple quadrupole mass spectrometer delivers unprecedented robustness with best-in-class sensitivity for everyday use and for every user.

The Thermo Scientific™ TSQ Fortis™ triple quadrupole mass spectrometerr helps increase productivity, with reliability and robustness, for labs focused on performing targeted quantitation.
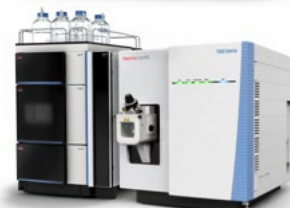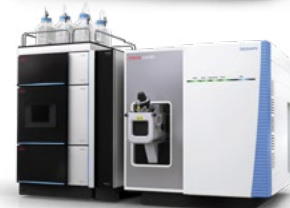
QuEChERs

The quality of your results is highly dependent on all stages of your workflow. Sample preparation is a fundamental part in delivering high quality analytical results. Thermo Scientific QuEChERs products provide a wide range of easy to use and flexible sample preparation extraction and clean up solutions to ensure that you achieve the results you need when combined with the VetDrugs Explorer Collection.


Accucore HPLC and UHPLC columns

Accucore HPLC and UHPLC columns are designed to provide high efficiency peaks and high resolution separations. These solid core particle columns provide a robust platform for the most challenging matrices in food and beverage applications, delivering consistent results injection after injection. With a wide portfolio of 15 phase chemistries to maximize selectivity, these columns deliver fast separations without the high backpressures associated with a sub-2µm particle.

TraceFinder Software

TraceFinder Software is tailored for food safety applications and maximizes your lab's productivity by enabling comprehensive reporting, and the development of expert methods regardless of user experience withthe software.
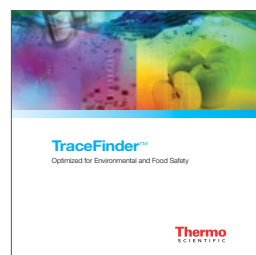
Find out more at **thermofisher.com/VetDrugTesting**

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