



Food & beverage solutions

LC/MS/MS SOLUTIONS FOR FOOD TESTING



Food suppliers, producers, manufacturers, and regulatory agencies are required to test more products for more analytes, with greater accuracy, in less time. The farm-to-fork approach to food safety is being adopted by food and farming industries alike, from raw material and process control to finished product inspection and distribution.

Whether you're analyzing drug residues, pesticides, toxins, or potential adulterants, AB SCIEX Food Testing Solutions speed the adoption of LC/MS/MS in your lab, delivering fast, accurate results in weeks instead of months. Our Food Testing solutions are optimized to identify and quantify hundreds of analytes in a single run, providing throughput and performance to help you to meet and exceed regulatory demands.

- Raw Material Testing
- Food Processing and Manufacturing
- Finished Products
- Import and Export Regulatory requirements

LC/MS/MS solution for veterinary drug residue analysis

The AB SCIEX Food and Beverage Solution for Veterinary Drug Analysis provides better compound coverage, better sensitivity, and reduced sample preparation compared to traditional techniques such as GC/MS.

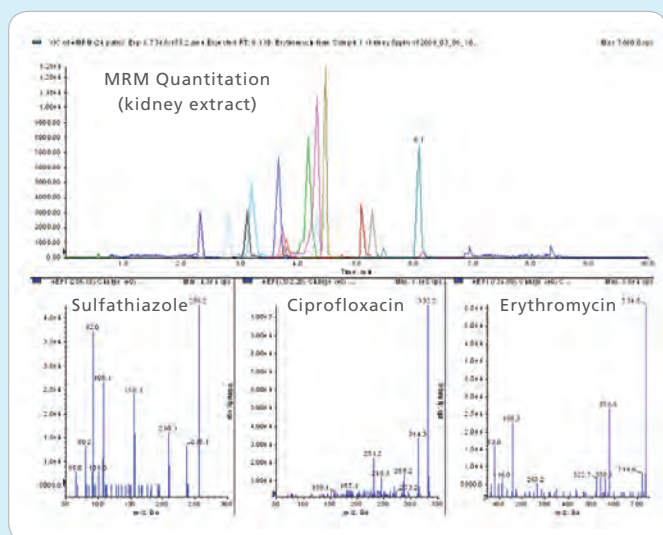
Detect regulated and banned substances at trace levels

The 4000 QTRAP® System provides the ability to accurately screen for, identify, and quantify residues at trace levels, enabling the detection of both regulated and banned substances. Cliquid® Software simplifies the use of LC/MS/MS and enables automatic reporting for quantitation and identification as specified by regulatory agencies. The iMethod™ tests further help to speed up adaptation of LC/MS/MS for detection and analysis of these compounds.

The 4000 QTRAP® System easily meets regulatory requirements for identification and quantitation of dozens of residues in a single run.

- Automatically perform MRM ratio calculation and library searches with the simple, four-step Cliquid® Software workflow.

- Identify compounds with confidence using a Comprehensive MS/MS library of veterinarian drugs.
- Easy adapt the iMethod™ Test for antibiotic screening:
 - > Antibiotic screening
 - > Chloramphenicol
 - > Fluoroquinolones
 - > Malachite Green
 - > Nitrofurane metabolites
- Perform additional tests for pesticides, mycotoxins, and other contaminants and food additives with a single solution



“Our daily work is to enable our company to prevent and control chemical contaminants from entering the supply chain from farm to fork, in various raw materials, but also in finished products. The AB SCIEX systems used in our laboratory give great performance in terms of sensitivity, selectivity, ruggedness, reproducibility, and maintenance.”

DR. PHILIPPE A. GUY, SENIOR PROJECT MANAGER
CONTAMINANTS GROUP NESTEC LTD., LAUSANNE, SWITZERLAND

Identify and quantify veterinary drugs in a single run: Analysis performed on 4000 QTRAP® System using Cliquid® Software for automatic MRM ratio calculation and library searching. Antibiotic screening method adapted from iMethod test.

LC/MS/MS solution for pesticide residue analysis

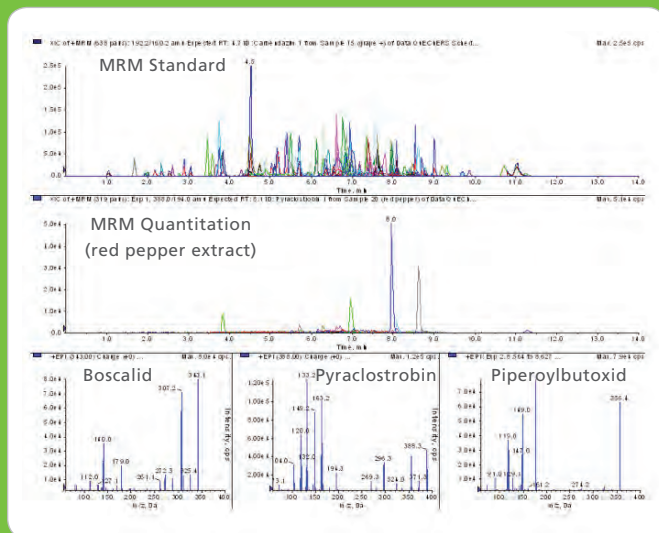
Screen, identify, and quantify hundreds of pesticides in a single analysis

The AB SCIEX Food and Beverage Solution for Pesticide Residue Analysis is optimized to screen for, identify, and quantify hundreds of pesticides in a single analysis, with better compound coverage and less sample preparation than GC/MS.

The 3200 QTRAP® System has the unique ability to identify and quantitate on a single platform, in a single analysis. Cliquant® Software simplifies the use of LC/MS/MS and enables automatic reporting for quantitation and identification as specified by regulatory agencies. The available iMethod™ Test for Pesticide Screening comes standard with individual methods to screen for and quantify carbamate, phenyl urea, triazine, organophosphorus, and acidic pesticides.

Screen, quantify, and identify hundreds of pesticides in a single analysis with the 3200 QTRAP® System.

- Automatically perform MRM ratio calculation and library searches with the simple, four-step Cliquant® Software workflow.
- Speed up methods development with standard iMethod™ Tests for pesticide screening:
 - > Carbamates
 - > Phenyl urea
 - > Triazines
 - > Organophosphorus
 - > Acidic pesticides
- Access the iMethod™ Test MRM catalog of over 540 pesticides.
- Identify compounds with confidence using the comprehensive 600 compound LC/MS/MS pesticide identification library.



“We are looking for greater value and higher performance mass spectrometry systems for food safety monitoring. The API 4000™ and 4000 QTRAP® Systems from AB SCIEX enable rapid screening, identification, and quantitation of hundreds of compounds in a single analysis in complex food matrices with great sensitivity.”

PROFESSOR JING-CHUAN CHEN, AIMEX SCIENCE TECHNOLOGY INC., PINGTUNG, TAIWAN.

Detect large panels of compounds across different compound classes: With QTRAP® System technology you can screen, identify, and quantify hundreds of pesticides in a single analysis via library search and automated MRM ratio calculation.

LC/MS/MS solutions for ingredient analysis

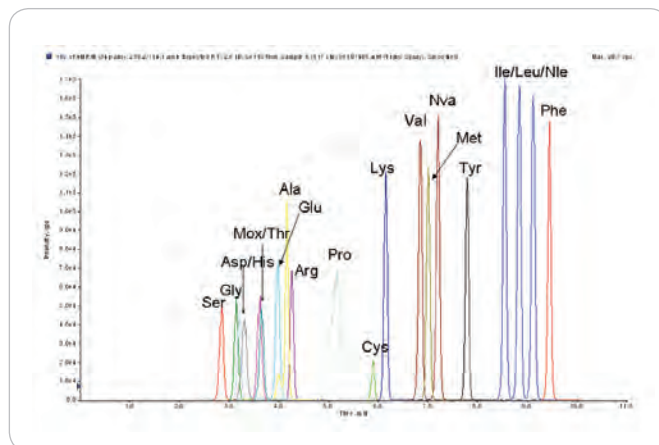
Quantify ingredients accurately

The AB SCIEX Food & Beverage Solution for Ingredient Analysis delivers the capability to accurately quantify ingredients in finished products and provide the high level of accuracy needed to meet labeling requirements and differentiate based upon nutritional content.

The 3200 QTRAP® System provides higher throughput, better sensitivity, and reduced sample preparation compared to traditional techniques such as HPLC, and gives you the ability to quantify a wide range of ingredients in a single run with a high level of accuracy.

Use the API 3200™ System to quantify a wide range of ingredients in a single run with a high level of accuracy.

- Automatically perform MRM ratio calculation and library searches with the simple, four-step Cliquid® Software workflow.
- Use the iMethod™ Test for amino acids and aTRAQ® Reagent chemistry to selectively tag up to 44 amino acids for analysis.



Better sensitivity, selectivity, and throughput than HPLC: AB SCIEX systems and iMethod™ Tests simplify identification and analysis of amino acids, vitamins, allergens, and other ingredients, additives, and contaminants in food samples.



Food labeling laws and consumer demand for higher quality food require a higher level of selectivity, sensitivity, and accuracy for ingredient analysis. The AB SCIEX LC/MS/MS Solution for Ingredient Analysis provides the performance required to accurately measure ingredients such as amino acids, vitamins and allergens – even in finished products that contain a wide range of proteins, fats, and other components.

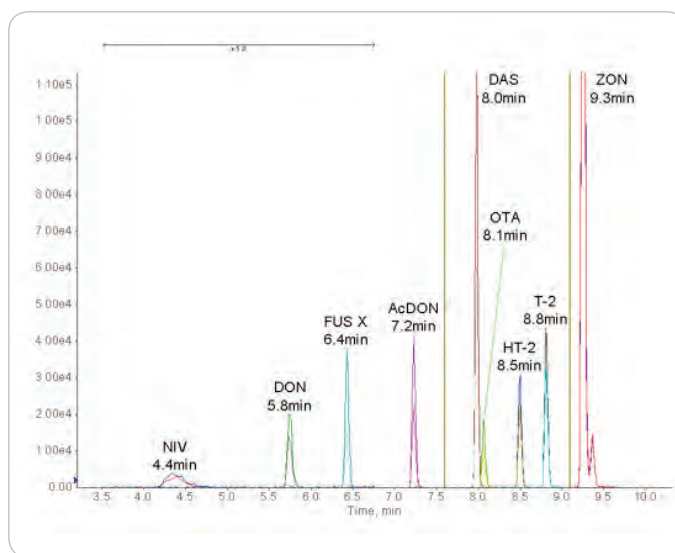
LC/MS/MS solutions for toxin analysis

Exceed regulatory requirements for toxin quantitation

The AB SCIEX Food & Beverage Solution for Toxin Analysis easily exceeds the quantitative sensitivity required to meet regulatory guidelines for most toxins. The 4000 QTRAP® System offers the performance required to screen, identify, and quantify dozens of toxins in a single analysis, allowing you to minimize sample preparation and matrix effects for accurate quantitation of shellfish toxins, microcystins, and mycotoxins.

The 4000 QTRAP® System exceeds regulatory requirements for sensitivity and accuracy for the quantification and identification of multiple toxins in a single run.

- Automatically perform MRM ratio calculation and library searches with the simple, four-step Cliquid® Software workflow.
- Easy adapt the iMethod™ Test for mycotoxin screening.
- Perform additional tests for antibiotics, pesticides, and other contaminants and food additives.



Improve sensitivity and selectivity, reduce sample preparation: AB SCIEX LC/MS/MS solutions make quantitative toxin analysis fast and accurate.



Naturally occurring toxins represent some of the most lethal chemicals known to humans when consumed. Some examples include shellfish poisoning and mycotoxin contamination of field crops. Because these compounds can be cytotoxic or even carcinogenic, they are highly regulated.

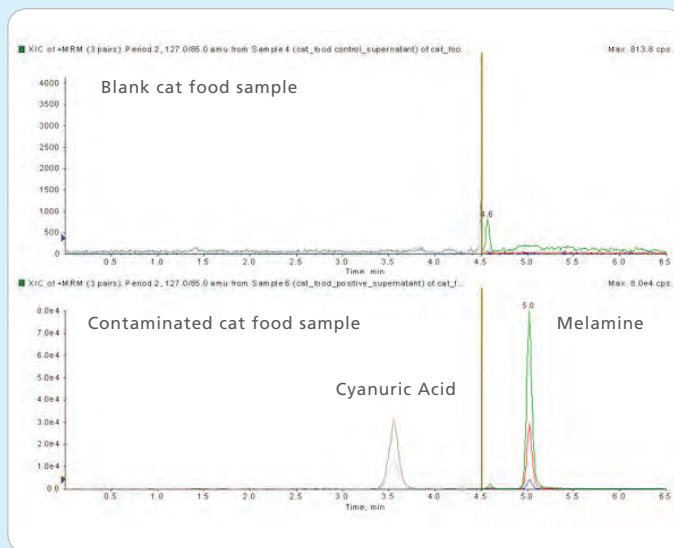
LC/MS/MS solutions for contaminant analysis

Identify and quantify a wide range of contaminants

The AB SCIEX Food and Beverage Solution for Contaminant Analysis identifies and quantifies a wider molecular weight and polarity range of contaminants in a single analysis with high sensitivity, and easily meets regulatory requirements. The 3200 QTRAP® System can detect and quantify targeted or unknown adulterants and use advanced statistical analysis to identify adulterants, providing better compound coverage and sensitivity than GC/MS or LC.

The 3200 QTRAP® System screens, quantifies, and identifies targeted or unknown adulterants in a single run.

- Automatically perform MRM ratio calculation and library searches with the simple, four-step Cliquid® Software workflow.
- Easily adapt the iMethod™ Test for the detection of melamine and cyanuric acid, and the quantitation of banned azo-dyes.
- Easily identify adulteration using statistical data analysis with MarkerView™ software.



Ensure food safety and quality: Easy-to-implement, and easy-to-use, the AB SCIEX Food and Beverage Solution for Contaminant Analysis has the sensitivity and specificity to detect and quantify food adulterants to ensure consumer safety.

More than 94,000 infants and young children have been treated for health issues related to tainted infant formula and other products. The Chinese General Administration of Quality Supervision, Inspection, and Quarantine and two dairy manufacturers—Shanxi Gucheng and Yashili Dairy Company—have deployed five API 3200™ mass spectrometry systems to lead efforts to establish the highest standards of food safety.

LC/MS/MS solutions for identification of unknown adulterants and residues

Identify adulterants you didn't expect to find

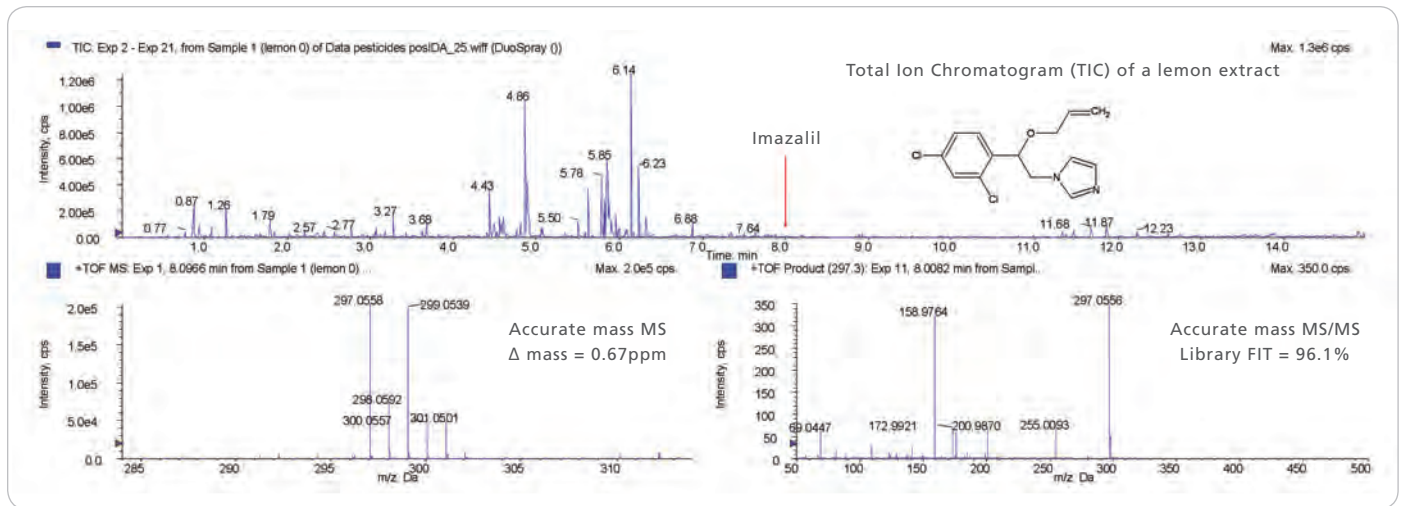
The AB SCIEX TripleTOF™ 5600 System screens, quantifies and confirms the presence of known adulterants, and positively identifies unexpected or unknown contaminants, all in a single analysis. Powerful system software tools allow you to perform background subtraction, statistical comparisons, library searching and empirical formula calculation for the detection and identification of unknown compounds without any prior knowledge. You can also review samples post-analysis with retrospective data mining tools.

The TripleTOF™ 5600 System positively identifies the presence of targeted and non-targeted food contaminants.

- Use high-resolution and accurate MS and MS/MS for targeted screening and quantitation.
- Identify compounds using accurate mass MS and empirical formula calculation or accurate mass MS/MS spectra and library searching.
- Mine data retrospectively for analytes not initially targeted.
- Use a selection of software tools to assist data processing and screening of general unknowns.



Illegal carcinogenic adulterants pose a serious threat to consumer health. The increased presence of illegal adulterants in raw materials has highlighted the need for comprehensive testing to avoid expensive product recalls and eliminate potential damage to brand equity.



Identify known and unknown compounds in a single run:

The AB SCIEX TripleTOF™ 5600 System provides the tools you need to find both expected and unexpected contaminants in food.



There is increased need to screen for, detect and positively identify unknown or unexpected contaminants in food for pet and human consumption. This is to both preserve the reputation of food producers and to ensure product safety.

Accelerate results with starter solutions

Whether you're an expert or a newcomer to food testing, our industry-leading Starter Solutions make it easy to deploy new methods in your lab and to immediately begin realizing the benefits of LC/MS/MS for routine testing.

Ready-made

Our complete preconfigured food testing Starter Solutions has been developed to meet or exceed regulatory requirements for typical food testing and includes everything you need to get up and running in your lab—all at a competitive price. With the option to purchase additional iMethod™ Tests, our complete Starter Solution meets both your immediate requirements and provides scope for the future, should your laboratories needs grow.

Customizable

Using best-in-class technologies you can tailor a complete food testing solution or optimize your existing laboratory setup to simplify testing. Expert users can access comprehensive MS/MS libraries and use the data to create new or customized methods that they can then easily share with colleagues. All of this translates to more time to manage other laboratory priorities.

Starter Solution components

- An AB SCIEX Triple Quad™ or QTRAP® LC/MS/MS System
- One of a number of industry-leading front-end HPLC systems
- Analyst® Software Version 1.5 with Scheduled MRM™ Algorithm
- Cliiquid® Software with easy four-step workflow that simplifies routine analysis
- Preconfigured, lab-proven iMethod™ Tests to eliminate the need for method development
- Access to a continually updated portfolio of downloadable iMethod™ Tests dedicated global application support from our expert team
- Additional on-site training to speed implementation
- A service contract that reflects the uptime and level of response required

iMethod™ tests

With iMethod™ Tests you can easily run samples, create new tests, or customize existing methods. iMethod™ Tests eliminate the need for method development—simply download from the Internet or a CD into Cliiquid® Software and start running samples. The expanding portfolio of iMethod™ tests includes:

- Acrylamide
- Azo Dyes
- Chloramphenicol
- Fluoroquinolones
- Nitrofurans
- Melamine
- Malachite Green
- Pesticides
- Veterinary antibiotics

“After we purchased the LC/MS/MS system from AB SCIEX, their application specialists provided excellent support for us. The methods developed as a result of our collaboration with them all became the national or ministerial standards for China.”

LAB TEAM LEADER, CHINA INSPECTION AND QUARANTINE (CIQ), SOUTHERN CHINA

iMethod™ store

The iMethod™ Store give you access to an entire portfolio of preconfigured iMethod™ Tests for a broad range of compounds, each optimized for your LC/MS/MS system. The iMethod™ Tests portfolio is continually updated with the latest lab-proven methods, as well as methods contributed by labs from around the world. To learn more, visit info.absciex.com/iMethods.

“The ready availability of test methods saves our laboratory the cost of developing and verifying tests that have already been adopted by other laboratories with specialized expertise. iMethod™ Tests enable us to quickly obtain answers with great confidence in the data we generate.”

PERRY MARTOS, DIRECTOR OF THE FOOD TESTING LABORATORY
AT THE UNIVERSITY OF GUELPH, CANADA

Software

Analyst® 1.5 Software delivers state-of-the-art functionality for instrument control, data analysis, and reporting. Scheduled MRM™ Algorithm makes it easy to schedule overlapping MRM monitoring periods, which maximizes performance, accuracy, and throughput.

Cliquid® Software 3.0 is an essential tool for simplifying routine analyses. The point-and-click operation and four-step workflow greatly simplify even complex LC/MS/MS analysis.

MarkerView™ Software provides the ability to identify the presence of unknown food impurities and contaminants within a given sample type using principle components analysis to statistically identify unique compounds.

Upgrade your LC/MS/MS Solution with the sensitivity and speed of the 5500 System

Available in QTRAP® and Triple Quad configurations

With industry-leading sensitivity and high speed MS/MS you can simplify sample preparation and even combine screening assays to increase productivity.

The AB SCIEX QTRAP® 5500 System and the AB SCIEX Triple Quad™ 5500 System deliver the ultimate in mass spec performance, reliability, and throughput.



3200 System



4000 System



5500 System

PERFORMANCE

You invest in our technology; we invest in your success.

As the world leader in mass spectrometry, AB SCIEX solutions are backed by the industry's most extensive service and support organization. With more than 1000 service professionals, experienced compliance specialists, and over 150 PhD application scientists worldwide, we are dedicated to supporting your technical needs and helping you get the most out of your AB SCIEX systems.

AB SCIEX service professionals are recognized as the most highly qualified in the industry. They are certified on our instrument platforms through a rigorous 4-step certification program, with re-certification occurring every two years. This award-winning program helps to ensure that you receive the most efficient, highest-quality, and most up-to-date service available for AB SCIEX products and technology. Choose from flexible service plans and a variety of services for the right level of support for your laboratory's needs and budget.

Our customer support network is available to provide expert assistance in the use and application of AB SCIEX products through a comprehensive range of services, including application support, technical service, and training.

Whether you access our service and support team by phone, email, on-site visits, or through our innovative remote monitoring technology, you can be confident that the AB SCIEX organization will be there for you 24x7.

For more information, visit www.absciex.com

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