

Characterize with confidence

Multiple applications in a single platform
Proteins • RNA • Cell and gene therapy • Glycans



Consistent, compliant analysis —faster than ever

Confidently safeguard the success of your biologics with a system that fully enables regulatory compliance: the PA 800 Plus system from SCIEX.

Repeatability matters

Even small variations in temperature can affect migration time. The PA 800 Plus system delivers repeatable results with exclusive recirculating liquid coolant to precisely control separation temperature.

Portability matters

Develop and lock down methods applicable to QC or regulated environments. The PA 800 Plus system easily transfers methods using robust, automated assays with proven portability—perfect for global multi-user, multi-instrument organizations.

Direct control matters

Reduce regulatory risk and maximize method transfer efficiency. Enable advanced integration of your PA 800 Plus system with the Empower Chromatography Data System using the PA 800 Plus driver for Empower software.

Boost your laboratory's productivity by seamlessly integrating it into a single software solution. Take control of your PA 800 Plus system with the Thermo Scientific™ Chromeleon™ driver and unleash next-level performance with powerful processing, customizable reporting, and robust compliance tools.



Results you can trust

With SCIEX, you can characterize any modality with industry- and regulatory-accepted CE technology. This is one of the many reasons why pharma and biopharma manufacturers choose CE systems from SCIEX for their protein, RNA and cell and gene therapy work.



I can do all this on my PA 800 Plus system

- » Monoclonal antibody [mAb] and complex protein applications
 - Purity/heterogeneity with gold-standard CE-SDS in minutes
 - Glycan analysis with award-winning fast glycan technology
 - Charge heterogeneity with fast and simple capillary zone electrophoresis [CZE] or with ultra-high-resolution capillary isoelectric focusing [cIEF]
- » Cell and gene therapy applications
 - Capsid protein purity
 - RNA purity and integrity for small and large species
 - Plasmid isoform and linear double-stranded DNA [dsDNA] analysis
 - Empty vs. full adeno-associated virus [AAV] analysis
 - Single-stranded oligonucleotide analysis down to single-base resolution

...with expert worldwide support

Rely on SCIEX to provide world-class global support, delivered consistently across all geographies. Let SCIEX help you develop your next breakthrough therapeutic.

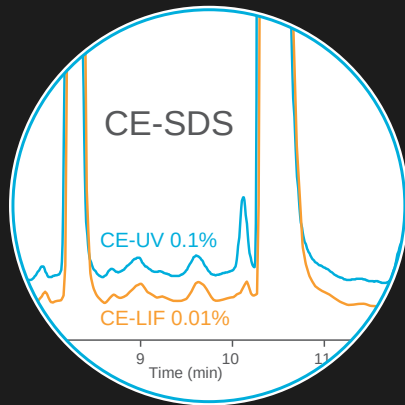
This is all possible on a single platform biopharma labs can depend on.

I can do more...

Accurate | Reliable | Consistent

Purity/heterogeneity with gold-standard CE-SDS

Reduced <15 minutes / Non-reduced <18 minutes



- Fastest CE-SDS separation time [12-18 minutes]
- Quantitation of impurities down to 0.01%
- Reproducible to 3 or more orders of magnitude sample concentration

Glycan analysis with award-winning fast glycan technology

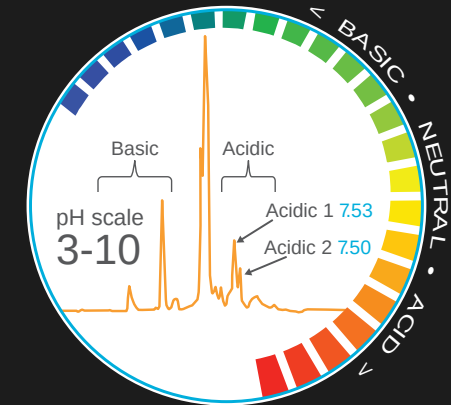
Glycoprotein to glycan ID in 65 minutes



- Up to 2x faster than HILIC
- 1-hour sample prep
- Automated glycan ID
- Cost- and resource-effective

Protein charge heterogeneity with ultra-high-resolution cIEF

Isoelectric point [pI] range and accuracy in 1 run



- High pI accuracy on extreme acidic and basic variants
- High resolution throughout the pI range

... with incredible flexibility

Robust | Fast | Quantitative | Automated | Stress-free

Charge variant analysis by CZE

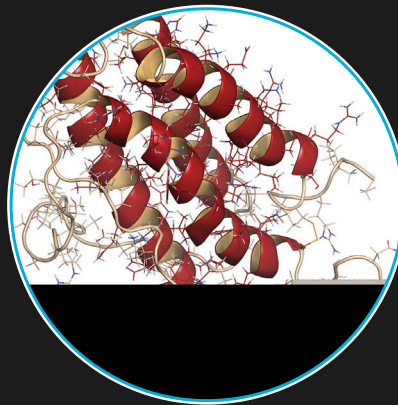
Quick and simple



- Screen charge variants in 10 minutes
- Save time with fast, straightforward sample preparation
- Same method applies to a wide range of pI

Pharmacopoeial protein characterization

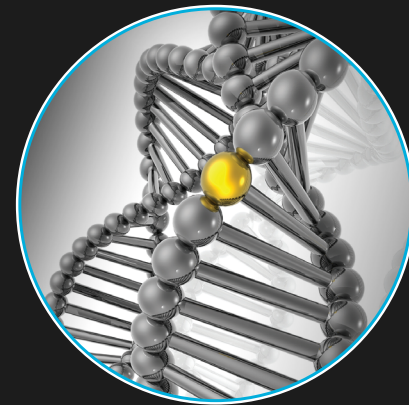
Beyond mAb characterization



- Increased confidence in regulatory submissions using pharmacopoeia methods
- Automated, quantitative and sensitive profiling of erythropoietins [EPO], somatropin [human growth hormone] and aprotinin using pharmacopoeia methods

Cell and gene therapy

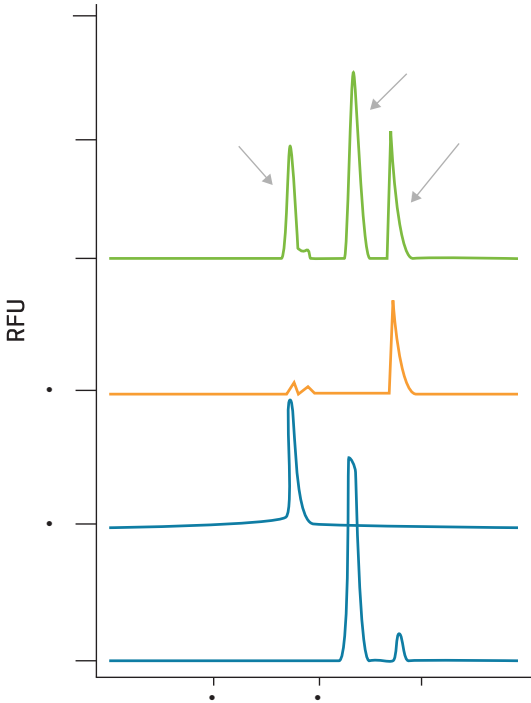
Robust, flexible solutions



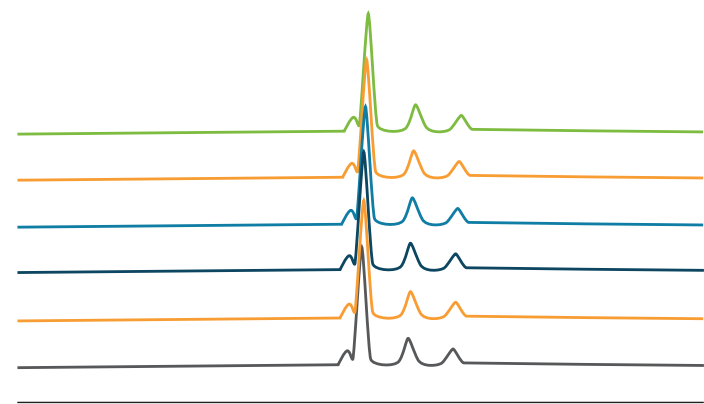
- Assess size, purity and capsid protein ratios
- Multiple kit-based chemistries available to assess the quality and impurities of nucleic acids through the use of ultra-sensitive fluorescence detection

Cell and gene therapy...

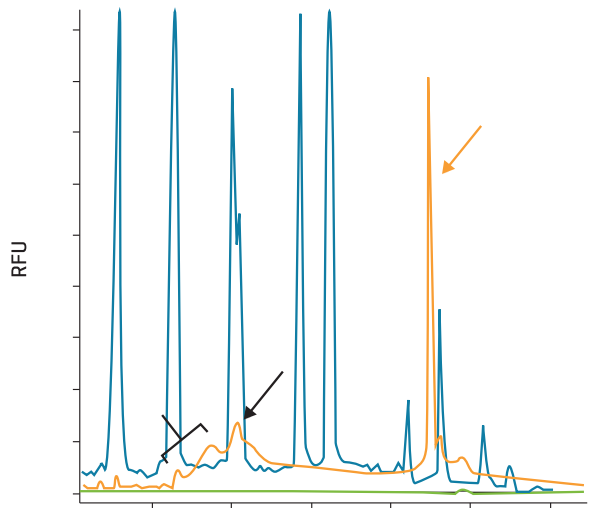
Plasmid isoforms



AAV capsid protein purity



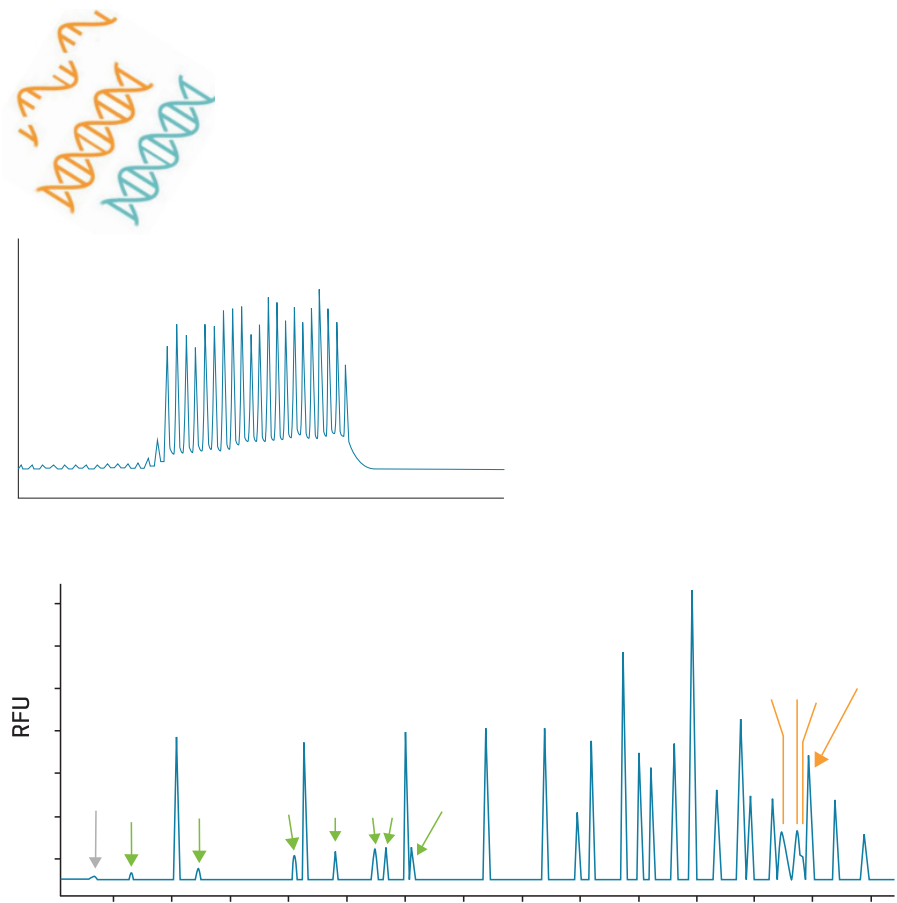
Genome integrity



...made easy

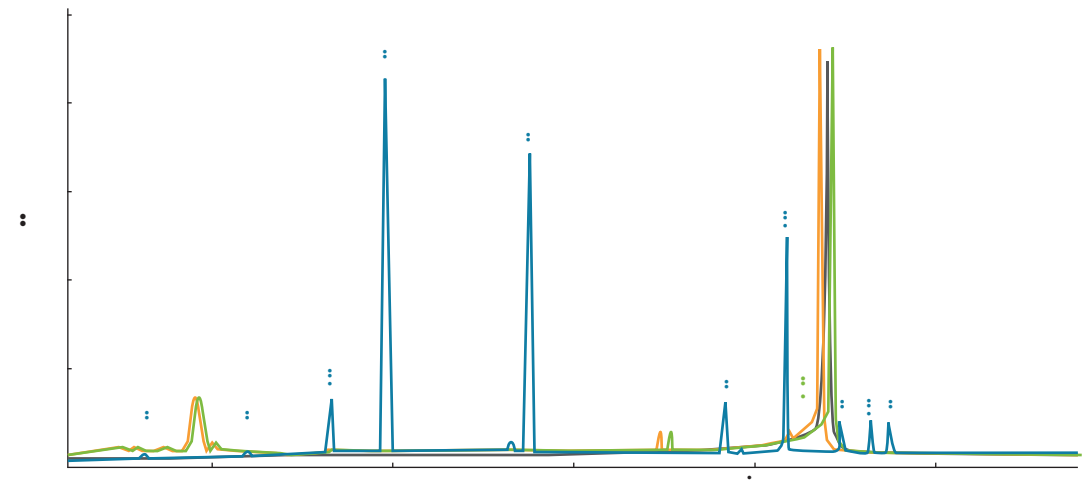
Nucleic acid

Single-stranded oligonucleotides and double-stranded nucleic acid purity

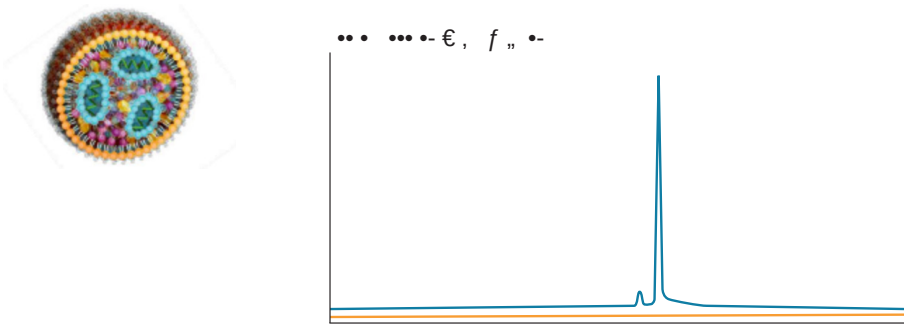


mRNA characterization

CRISPR/Cas9



Lipid nanoparticle [LNP]



I can get the job done...

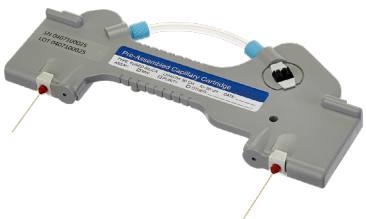
Quick | Easy | Cost-effective

Flexible workflows to help you do more

When you can do it all on a single instrument you know well, you can accomplish a lot before noon.

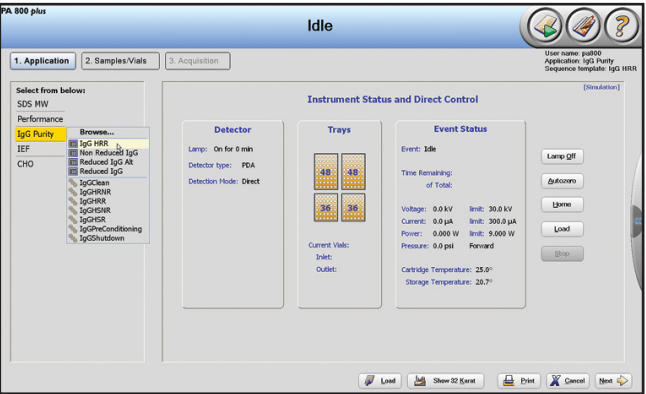
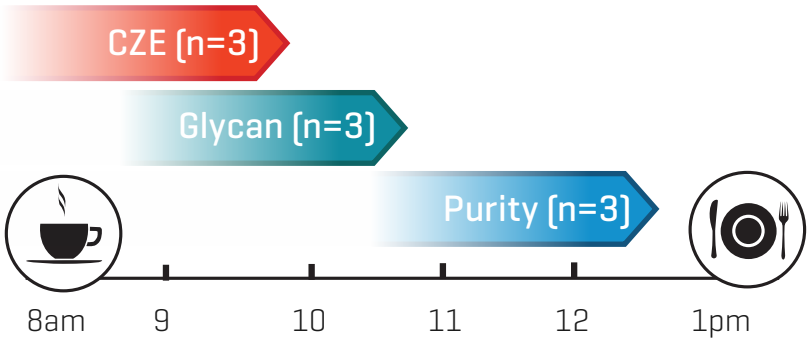
One cartridge, multiple applications

The agile EZ-CE cartridge functions across multiple applications, streamlining your workflow and simplifying your inventory process.

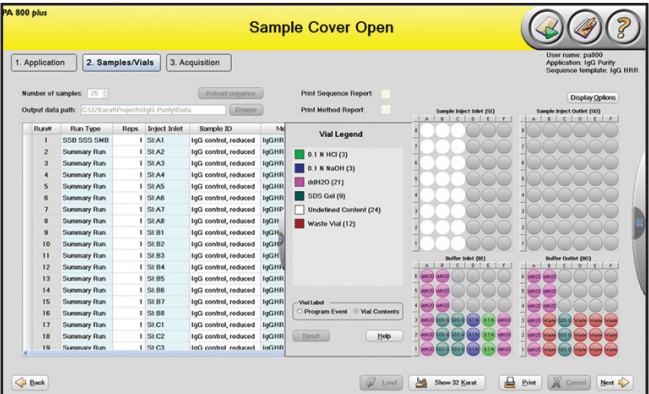


Software as easy as 1,2,3...

SCIEX software reduces operational complexity so you achieve more, faster, for exceptional productivity.



Select application



Load samples and reagents



Acquire data



...and trust my results

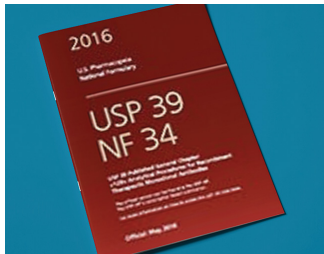
Industry- and regulatory-proven CE technology

Extensive intercompany studies have assessed the practical application of CE-SDS, cIEF, CZE and glycan analysis across the biopharmaceutical industry, demonstrating the methods are validation-ready.



The best technology application

"This year's winner is SCIEX's high-throughput glycosylation analysis ...it is a fully automated sample preparation for ultrafast N-glycosylation analysis of antibody therapeutics." – BioProcess International



USP referenced

USP 39 NF 34 Chapter <129> recognizes CE-SDS from SCIEX as "a sensitive, analytical method for quantitative estimation of product-related impurities such as nonglycosylated molecules, half antibodies, and fragments."
<http://www.usp.org/sites/default/files/usp/document/our-work/biologics/GC-129.pdf#page=9>



Held to the highest quality standards

CE systems from SCIEX have earned a global reputation for consistently meeting or exceeding our customers' quality expectations. Our commitment to excellence and continuous improvement is reflected in our comprehensive quality management system, which complies with the requirements of ISO 9001:2008.

Multi-site N-glycan mapping study 1: Capillary electrophoresis – laser induced fluorescence

<http://www.tandfonline.com/doi/abs/10.1080/19420862.2015.107687>



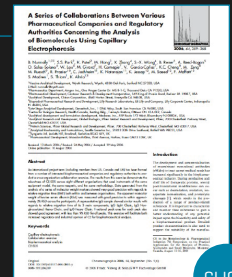
Evaluation of capillary zone electrophoresis for charge heterogeneity testing of monoclonal antibodies

<http://www.sciencedirect.com/science/article/pii/S1570023214007764>



A series of collaborations between various pharmaceutical companies and regulatory authorities concerning the analysis of biomolecules using capillary electrophoresis

<https://link.springer.com/article/10.1365/s10337-006-0003-y>



Intercompany study to evaluate the robustness of capillary isoelectric focusing technology for the analysis of monoclonal antibodies

<http://link.springer.com/article/10.1007%2Fs10337-011-2017-3>



Supplies and resources

Items can be ordered at store.sciex.com

Kits and reagents	
Purity	
IgG Purity and Heterogeneity kit	A10663
SDS-gel buffer multi-pack (4 bottles)	A30341
10 kD internal standard	A26487
IgG control standard (3 pack)	391734
CE grade water	C48034
Low pH SDS sample buffer	C44807
Low pH phosphate SDS sample buffer	C57805
Mineral oil	608114
Sizing	
SDS-MW Analysis kit	390953
MW sizing standard	A22196
CE grade water	C48034
Low pH SDS sample buffer	C44807
Low pH phosphate SDS sample buffer	C57805
Mineral oil	608114
RNA, cell and gene therapy	
ssDNA 100-R kit	477480
RNA 9000 Purity & Integrity kit	C48231
CE grade water	C48034
dsDNA 1,000 gel kit	477628
dsDNA 1,000 test mix	477414
dsDNA 1,000 LIF Enhance dye	477409
ssDNA 100-R gel pack	477621
ssDNA 100-R 100-R Buffer kit	338481
dsDNA 1000 kit	477410
Charge heterogeneity	
CZE Rapid Charge Variant Analysis kit	C44790
cIEF kit	A80976

cIEF Peptide Marker kit	A58481
Neutral capillary	477441
Glycan	
Fast Glycan Labeling and Analysis Kit	B94499PT0
Carbohydrate Labeling and Analysis kit	477600
N-linked Carbohydrate separation gel buffer	477623
N-CHO capillary	477601
Supplies and accessories	
Universal vials (100 pack)	A62251
PCR microvials (100 pack)	144709
NanoVials (100 pack)	5043467
Universal vial caps (100 pack)	A62250
Electrode assembly	A47775
Pre-assembled capillary cartridge	A55625
Capillary Cartridge, Semi Assembled (No Capillary) - 30 cm	A11147
Standard capillary cartridge assembly	144738
Bare fused silica capillary, 50 µM x 67 cm (3 pack)	338451
Cartridge rebuilding kit	144645
Cartridge tubing kit	144689
Capillary cartridge coolant (450 mL)	359976

Hardware and consumables are manufactured under ISO 9001:2008.



RNA 9000 Purity & Integrity kit



Pre-assembled cartridge



Need to connect to a mass spectrometer?

CESI 8000 Plus system

With CESI-MS, you can effectively integrate high-efficiency capillary electrophoresis [CE] and electrospray ionization [ESI] into a single dynamic process—within the same device.

Specifications and ordering information

Reach out to your local SCIEX representative to order today.

System specifications

Dimensions:

Height: 29.2 in [74.2 cm]

Door open: 38.8 in [98.6 cm]

Width: 25 in [63.5 cm]

Depth: 28.4 in [72.1 cm]

Weight (uncrated): 188 lbs [85.3 kg]
[includes photodiode array detector]

Electrical requirements:

Voltage: 100–240 V; 50/60 Hz

Voltage range:

1–30 kV programmable
in 0.1 kV increments

Current range:

3–300 μ A programmable
in 0.1 μ A increments

Pressure delivery range:

–5 to +100 psi

Sample temperature control:

4°C–60°C

Capillary temperature control:

15°C–60°C

System capacity

Sample trays:

2 x 96-well plates

2 x 48 universal vials

Buffer tray:

2 x 36 universal vials

Detection capability

UV/Vis

200, 214, 254, 280 nm standard filter

190–600 nm [custom filter option]

Diode array:

190–600 nm [programmable]

0.5–32 Hz scan collection frequency [programmable]

Laser-induced fluorescence (LIF):

300–700 nm excitation range

350–750 nm emission range

0–1000 RFU

Source lasers with 3 mW power output:

488 nm solid-state laser
[included in A66528 and A66528EMP]

Ordering information

A66528 PA 800 Plus system

Includes separation module with UV, photodiode array and LIF detection; system controller with PA 800 Plus system software

A66527 PA 800S Plus system

Includes separation module with photodiode array detection; system controller with PA 800 Plus system software

A66528EMPPA 800 Plus Empower Pharmaceutical Analysis System

Includes PA 800 Plus driver for Empower software, separation module with UV, photodiode array and LIF detection; system controller with PA 800 Plus system software

A66527EMP PA 800S Plus Empower Pharmaceutical Analysis System

Empower™ powered system Includes separation module with photodiode array detection; system controller with PA 800 Plus system software

SCIEX Now support network

SCIEX Now

- Manage your instruments
- Submit and manage support cases, track status and view history
- Access online training courses and articles
- Manage software licenses linked to your registered instruments
- View and report critical instrument statistics when connected to the StatusScope remote monitoring service
- Be a part of the SCIEX community by submitting questions and comments
- Receive notifications from SCIEX with content based on your preferences

→ **CONTACT SCIEX NOW**

SCIEX Now Learning Hub

- SCIEX Now Learning Hub success programs provide LC-MS and CE training customized to meet your exact needs
- With a selection of training methods and certifications available, you can build a mass spectrometry learning program that is most suited to your lab and users
- By starting with a clear understanding of your desired learning outcomes, we help you improve lab productivity and consistency by designing and delivering a program that is focused on knowledge advancement and retention

→ **FIND OUT MORE**

The SCIEX clinical diagnostic portfolio is For In Vitro Diagnostic Use, Rx Only. Product(s) not available in all countries. For information on availability, please contact your local sales representative or refer to www.sciex.com/diagnostics. All other products are For Research Use Only. Not for use in Diagnostic Procedures. Trademarks and/or registered trademarks mentioned herein, including associated logos, are the property of AB Sciex Pte. Ltd. or their respective owners in the United States and/or certain other countries [see www.sciex.com/trademarks]. AB Sciex™ is being used under license. Empower is a trademark of Waters Corporation used under license.
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