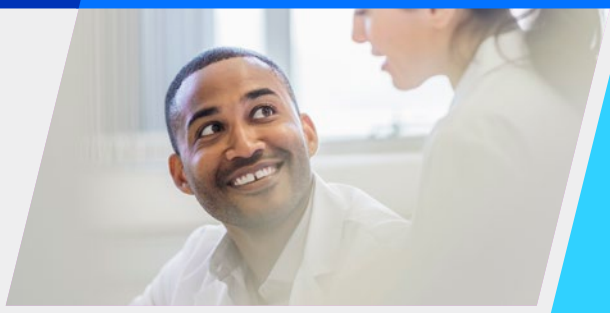
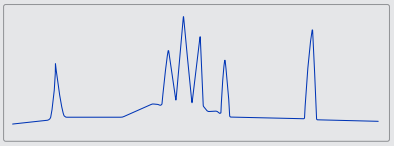
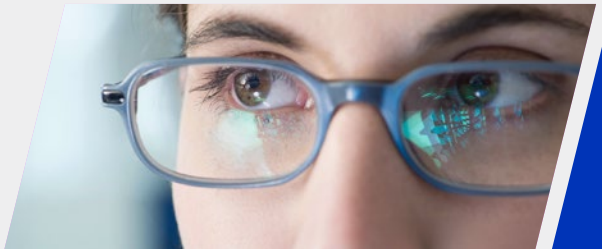
R&D systems™
by biotechne



Meet the *Maurice Family*

Accelerating Biotherapeutic Development Using Capillary Electrophoresis





Multiple Platforms

to Meet Your Specific Needs

Choose your options:

- ✓ Analyze biomolecular charge with imaged capillary isoelectric focusing (icIEF)
- ✓ Analyze protein size and impurities with capillary electrophoresis-sodium dodecyl sulfate (CE-SDS)
- ✓ Collect charge isoform fractions with icIEF-based fractionation for further characterization

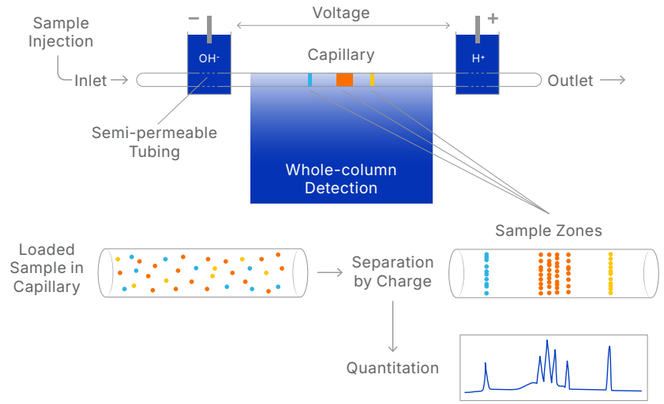
Learn More

Scan the QR code or visit
rndsystems.com/maurice

Unleash the Power of Capillary Electrophoresis in Your Lab

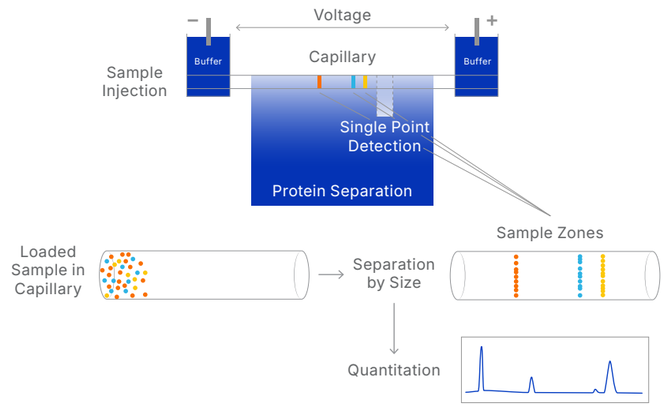
icIEF Technology

- ✓ Ensure consistent results with pre-assembled cartridges and automated sample injection
- ✓ Maintain high resolution with whole-column imaging
- ✓ Get high-quality data in 10-15 minutes



CE-SDS Technology

- ✓ Improve reproducibility with simplified sample prep and automated sample injection
- ✓ Go green and analyze samples without any acrylamide
- ✓ Get high-quality quantitative data in as little as 5.5 minutes



Choose the Right Maurice Instrument for Your Lab

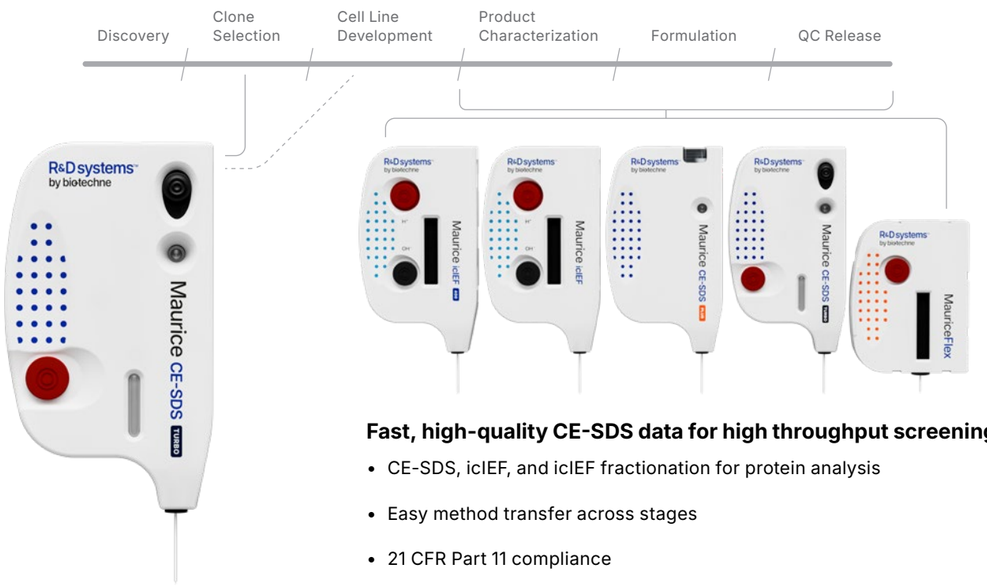
System Capabilities:

Whether you need a single solution or multiple capabilities, our Maurice platforms offer a range of products to meet your needs—icIEF, CE-SDS, or both, plus fractionation.

Instrument System Capabilities

Technical Specs	MauriceFlex	Maurice	Maurice C.	Maurice S.
icIEF Fractionation	✓			
icIEF (Both Cartridges)	✓	✓	✓	
CE-SDS (Both Cartridges)	✓	✓		✓
Absorbance Detection	✓	✓	✓	✓
Fluorescence Detection	✓	✓	✓	
On-board Mixing		✓	✓	

Use Maurice/MauriceFlex Systems in Multiple Phases of Development



Fast, high-quality CE-SDS data for high throughput screening

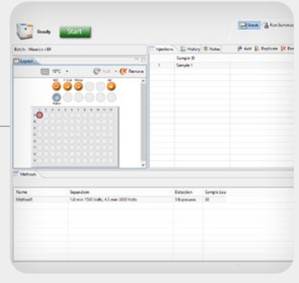
- CE-SDS, icIEF, and icIEF fractionation for protein analysis
- Easy method transfer across stages
- 21 CFR Part 11 compliance

Simplify Lab Life

1. Insert cartridge

2. Add sample

3. Press start



Overview of the Maurice/MauriceFlex workflow. The plug-and-play systems reduce the amount of time and labor required to run experiments, while simultaneously ensuring data consistency.

Obtain High Resolution, Reproducible Charge Separation with MauriceFlex, Maurice, & Maurice C. Systems

Advantages

- ✓ Develop your methods in a day
- ✓ Analyze a variety of molecules including mAbs, AAVs, fusion proteins and more
- ✓ Get data in 10-15 minutes

Results from the MauriceFlex, Maurice, & Maurice C. Systems:

- ✓ High resolution, reproducible charge heterogeneity separation
- ✓ Regulatory compliance with industry-approved software
- ✓ Choose between absorbance and native fluorescence detection modes

IEX vs icIEF workflows for routine analysis

Improve resolution, save time, and go green in charge analysis.

Duration

IEX
12.5 Hours

icIEF
4-5 Hours*

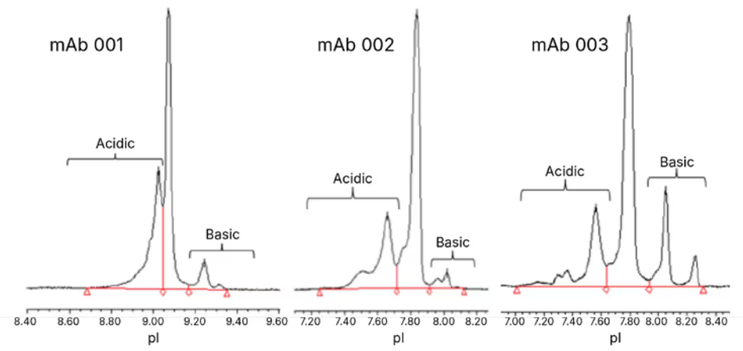
Waste

IEX
500-600 mL

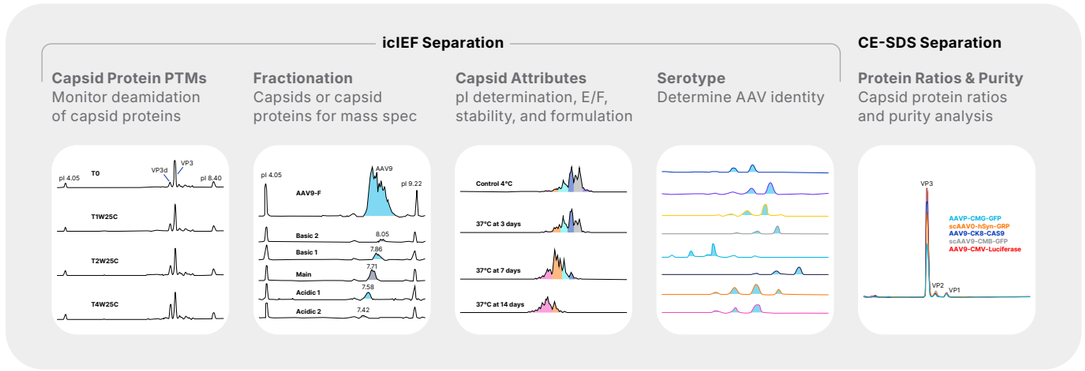
icIEF
8-10 mL**

*Run time can be further shortened with the new SupersonicIEF method by McElroy & Heger published in Electrophoresis. **Read the full paper here for faster icIEF.**
**Same total amount of waste generated for 1-12 samples

Charge profile of the three USP mAb Reference Standards determined by icIEF on the Maurice system



AAV attributes measured with methods using Maurice and MauriceFlex systems



Apparent pI comparison of 8 different AAV serotypes with Maurice icIEF using native fluorescence detection. Distinct charge profiles are obtained for each serotype, demonstrating how Maurice can be used to determine AAV identity.

Obtain High Throughput Protein Size Separation with MauriceFlex, Maurice, & Maurice S. Systems

Advantages

- ✓ Analyze a variety of molecules including mAbs, AAVs, IgMs, Lentiviruses and more
- ✓ Obtain high resolution, high throughput protein size separation
- ✓ Get data in as little as 5.5 minutes
- ✓ Maintain regulatory compliance with industry-approved software
- ✓ Decrease your footprint by doing away with acrylamide
- ✓ Use across stages: discovery to QC

SDS-PAGE vs. CE-SDS Improve resolution, save time, & go green in size analysis

Workflow Totals (12 samples):

Duration

SDS-Page
3-7 Hours

CE-SDS
1.5-2 Hours

Waste

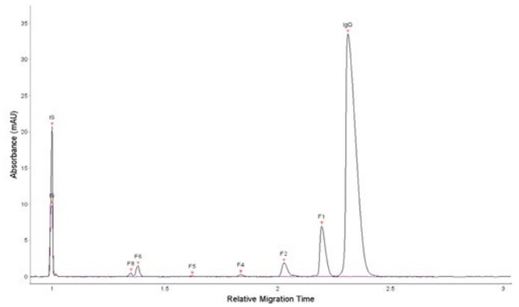
SDS-Page
Gels + 750 mL

CE-SDS
8-10 mL*

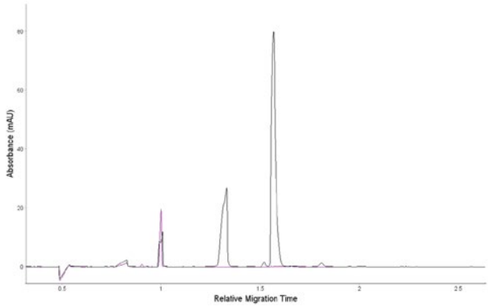
*Same total amount of waste generated for 1-12 samples

Conducting the USP <129> protocol on Maurice using the IgG System Suitability Reference Standard

A) USP Non-reduced Method on Maurice

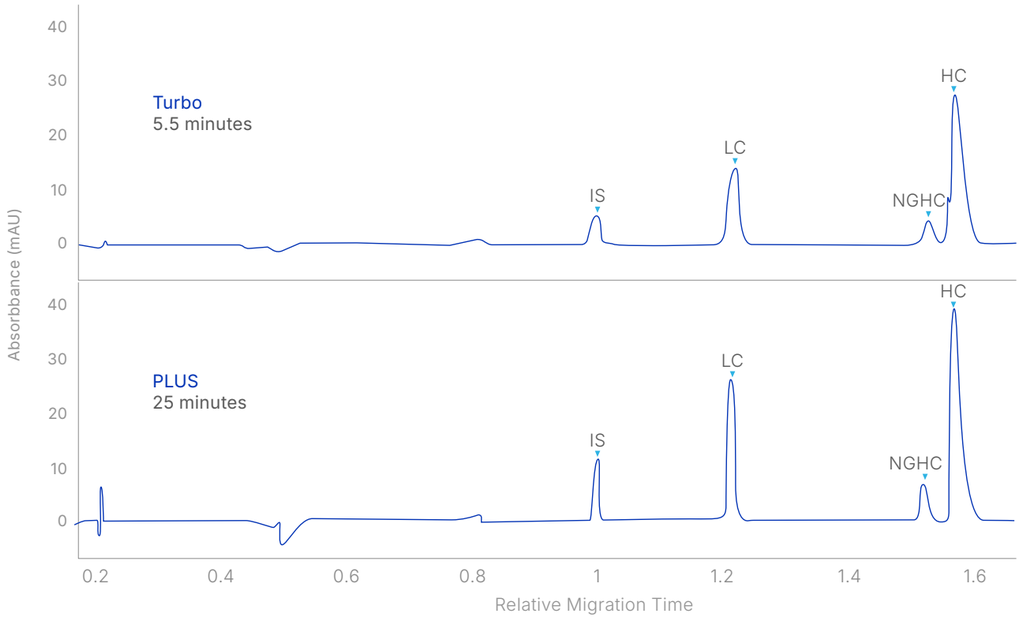


B) USP Reduced Method on Maurice



Results from the USP-recommended method on the Maurice system using (A) non-reduced CE-SDS method and (B) reduced CE-SDS method using the USP IgG System Suitability Reference Standard.

CE-SDS Analysis of NIST mAb



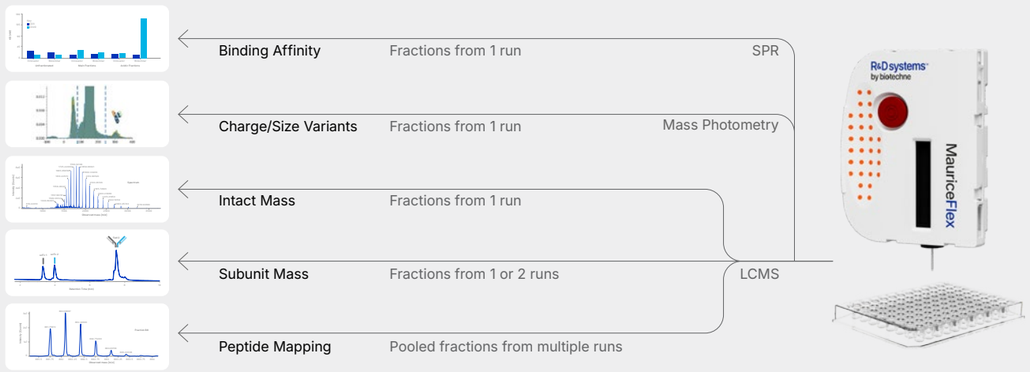
A comparison of size separation of NIST mAb obtained from the Maurice Turbo CE-SDS cartridge and the CE-SDS PLUS cartridge, run on the Maurice system. Both methods are comparable.

Maximize Your MauriceFlex One Instrument Multiple Solutions Capabilities

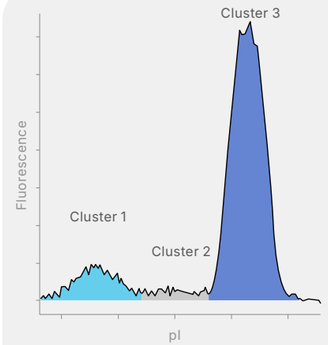
Advantages

- ✓ Run routine icIEF and CE-SDS assays
- ✓ Collect charge variant fractions (icIEF) for further characterization using mass spectrometry (MS), mass photometry, or surface plasmon resonance (SPR)
- ✓ Use any MS system of your choice for downstream characterization

Downstream characterization methods using MauriceFlex icIEF fractions

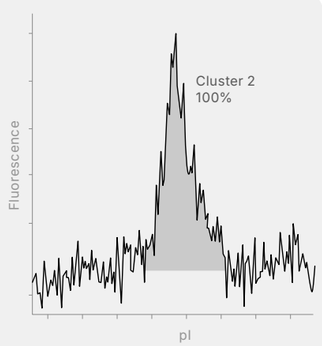


A. LC-MS



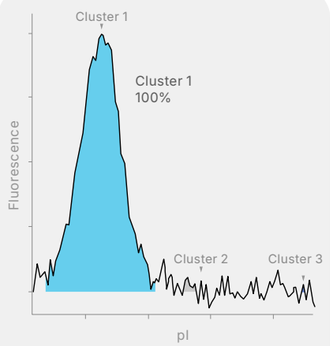
Acquity H-Class UHPLC + Xevo G2-XS QTOF
Gradient: 0.1% FA in ACN + 0.1 % FA in Water

B. Intact Mass



Sample: fractions from 1 fractionation run
BioResolve RP mAb Polyphenyl (50 × 2.1 mm, 1.7 µm)
Injection: 16 µL

C. Peptide Mapping



Sample: combined samples from 4 fractionation runs
Digestion: RapiZyme Trypsin, PREMIER BEH C18 (100 × 2.1 mm, 1.7 µm)
Injection: 38 µL

Representative electropherograms of an antibody collected after fractionation and verified with analytical icIEF on the MauriceFlex system. Fractions were analyzed using an array of characterization methods. Data referenced from T. Menneteau, *et al*, "Therapeutic Protein Charge Variant Characterization with Intact Mass and Peptide Mapping Following Microgram Preparative Capillary Isoelectric Focusing Electrophoresis Fractionation", 72nd Conference on Mass Spectrometry and Allied Topics, Anaheim, CA, USA, June 2024, Poster TP635.

Overview of Consumables & Kits

Visit our website for a complete list of consumables & kits

Scan the QR code or visit
rndsystems.com/maurice-consumables

Product	Part Number
MauriceFlex cIEF Fractionation Cartridge	PS-MC02-F
Maurice icIEF 400 Cartridge	PS-MC02-400C
Maurice icIEF Cartridge	PS-MC02-C
Maurice Turbo CE-SDS Cartridge	PS-MC02-TS
Maurice CE-SDS PLUS Cartridge	PS-MC02-SP
MauriceFlex cIEF Fractionation Method Development Kit	PS-MDK01-F
Maurice cIEF Method Development Kit	PS-MDK01-C
Maurice CE-SDS PLUS Application Kit	PS-MAK03-S
Maurice Turbo CE-SDS Application Kit	PS-MAK01-TS

Latest Software Releases for Maurice Platforms

Introducing Windows 11 and Compass 4.1 Upgrades

The Maurice portfolio offers multiple platforms and software options to analyze biomolecular charge or size, or to collect charge isoform fractions for further characterization using icIEF, CE-SDS, and icIEF fractionation methods. Maurice Instruments are easy to integrate into your current lab environment and 21 CFR Part 11 compliant workflows with multiple choices including Compass for iCE software, Waters™ Empower® Chromatography Data System (CDS) software,or Thermo Fisher™ Chromeleon™ CDS software.

Compass for iCE Software 4.1—Now Available

Compass for iCE Software provides an easy-to-use, easy-to-learn, 21 CFR Part 11 compliant interface to control your Maurice instrument. The software supports the latest cartridges (icIEF 400 and MauriceFlex icIEF Fractionation cartridges), including guided post-run cleanup and purging steps, which are crucial for maintaining cartridge health and ensuring reliable, high-quality data.

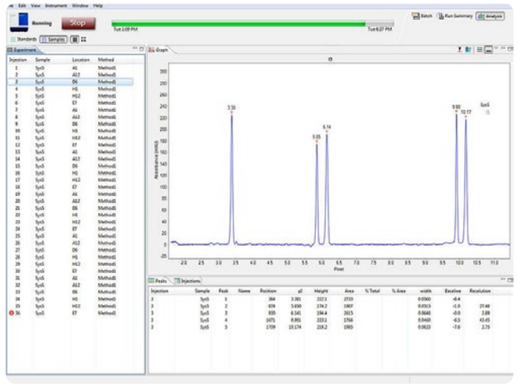
Compass for iCE 4.1 is now officially validated for Windows 11, ensuring compatibility and optimal performance on the latest operating systems and enabling improved cartridge management.

Update to Expired Cartridge Usage

This software release provides more flexible cartridge usage. Users can now start runs for cIEF, icIEF 400, CE-SDS PLUS, and Turbo CE-SDS cartridges after their expiration dates. Although it is highly recommended that expired cartridges be replaced to obtain the most reliable results, the software now allows users to proceed with expired cartridges, if needed, with clear audit trail logging for compliance. The Compass Run Report will state "Expired" along with the cartridge expiration date.

Update to Guaranteed Injection Warranty

Compass for iCE software will no longer display a warning notification regarding the 'guaranteed' injection limit, as this policy is no longer in effect. The CFR audit trail is not impacted. All cartridges are validated up to their respective maximum injection or batch limit. This new feature applies to updated Maurice cartridges, which will



ship starting October 15th, 2025 (with serial number prefix 1251015XXX). These updates are designed to give you greater control and flexibility, while maintaining transparency and traceability in your results.

For more information regarding these updates to the expired cartridge usage or guaranteed injection warranty and what users can expect to see across Compass for iCE, Empower ICS and Chromeleon CDS, please reach out to our Technical Support teams in North America at instrument.support@bio-techne.com or Europe at TechnicalService.EMEA@bio-techne.com.

Empower CDS Software

The Maurice Empower® Control Kit lets Maurice platforms be controlled directly through 3 CDS.

The kit includes driver software and an instrument control license. The latest version of the Empower ICS Driver v1.2 includes support for MauriceFlex (cIEF, CE-SDS PLUS, and Turbo CE-SDS assays only). This version includes the same cleaning features as Compass for iCE to maximize the life of Maurice cartridges with post-run cleanup and purging steps.

Chromeleon CDS Software

The Maurice System can be controlled directly with Chromeleon CDS. The Maurice Chromeleon Driver Software also includes the ability to perform pI recalibration, along with the same maintenance features as Compass for iCE and Empower ICS driver.

A. Software and Instrument Compatibility

	Maurice Flex	Maurice/ Maurice OBM	Maurice C. / Maurice C. OBM	Maurice S.
Compass for iCE	✓	✓	✓	✓
Empower	✓*	✓	✓	✓
Chromeleon***		✓**	✓	✓

*Works for the cIEF, icIEF 400, CD-SDS Plus, and Turbo CE-SDS cartridges only. Empower is compatible with all cartridges except the MauriceFlex Fractionation Cartridge

** OBM instrument is supported, but the OBM feature is not.

***Works for the cIEF, CE-SDS Plus, and Turbo CE-SDS cartridges only. Chromeleon is compatible with all cartridges except the MauriceFlex Fractionation Cartridge and the the icIEF 400 Cartridge.

B. Software and Cartridge Compatibility

Cartridge	cIEF (200)	icIEF 400	CE-SDS Plus	Turbo CE-SDS	Fractionation
Compass for iCE	✓	✓	✓	✓	✓
Empower	✓	✓	✓	✓	
Chromeleon	✓		✓	✓	

Download Latest Software Releases

Scan the QR code or visit
rndsystems.com/maurice-software

Instrument Service & Support Plans for Maurice and MauriceFlex Systems

Our service and support plans are built to give you confidence, continuity, and control—whether you need complete coverage or selective, budget-friendly support. We offer a full suite of service plans designed to protect your investment, minimize downtime, and maintain peak performance beyond the instrument warranty period. Each tier includes an annual preventive maintenance visit to safeguard performance, while our experienced technicians ensure issues are resolved quickly and effectively. The included annual preventive maintenance inspection ensures your instrument is running at peak performance and up to manufacturer specification for reliable and trustworthy results.

With flexible options designed for academic, government, and industry labs alike, our plans protect your investment and help you keep your work on track.

Service Plan Features

Feature	Platinum at Purchase	Platinum	Gold	Silver	Depot
Maintenance Location	On-site	On-site	On-site	On-site	Depot
Annual Preventive Maintenance	✓	✓	✓	✓	✓ at Depot
Repair Labor	✓	✓	✓	10% discount	✓
Repair Travel	✓	✓	✓	10% discount	N/A
Repair Parts	✓	✓	10% discount	10% discount	✓
Shipping & Packing	✓	✓	✓	✓	✓
Software Updates*	✓	✓	✓	✓	✓
Technical Support	✓	✓	✓	✓	✓
Scheduling Priority	Priority 1	Priority 1	Priority 2	Priority 3	N/A
Advanced Training Token	✓	—	—	—	—
Start Time	Immediate from installation	Post Warranty	Post Warranty	Post Warranty	Post Warranty
Bio-Techne Academy Training Access	✓	✓	✓	✓	✓

*Offered at the time of on-site visits by engineers. Remote updates available.
For all service plans except Depot Plans, instrument repairs are completed at the installation site whenever possible. If on-site repair is not feasible, the instrument will be sent to the Depot for repair. Shipping and packing costs are covered when parts are included as part of the service plan.
Verification Cartridge is provided during Ella PM.
Full terms are available upon request.

Platinum at Purchase

Platinum at Purchase offers exceptional value by delivering uninterrupted Platinum-level service from the moment your instrument is installed. The plan enhances your first-year warranty to full on-site Platinum coverage and continues with a 12-month Platinum service contract, ensuring two years of top-tier support. With unlimited on-site service, full coverage of repair parts, labor, and travel, and one annual preventive maintenance visit with all materials included, this plan provides complete peace of mind. Priority scheduling minimizes downtime, while included advance training tokens support advanced skill development for your team.

Platinum

Platinum coverage provides on-site repair labor, travel, and parts, plus an annual preventive maintenance visit. First level priority ensures rapid response and minimal downtime.

Gold

Gold coverage includes on-site repair labor and travel, plus an annual preventive maintenance visit. Repair parts are quoted and purchased separately.

Silver

Silver provides an annual on-site preventive maintenance visit. All repair labor, parts and travel are quoted and purchased separately.

Depot

Depot service provides mail-in repair support including repair labor and parts, plus an annual depot PM. Shipping both ways included.

Meet our Support Teams

Bio-Techne has a team of highly qualified and experienced Field Service Engineers (FSE), Field Application Scientists (FAS) and Technical Service teams that are ready to support your organization with your technical requirements. From installations, IQ/OQs, re-qualifications, repairs, troubleshooting, relocations or other activities, we have got you covered!

Assay and Cartridge Specifications

Description	cIEF	IcIEF 400
Minimum Sample Volume	50 µL	50 µL
Sample Delivery	Vacuum	Vacuum
Typical Separation Time*	6-10 min (molecule dependent)	6-10 min (molecule dependent)
Detection Capacity	UV Absorbance at 280 nm Fluorescence: Ex 280 nm, Em 320–430 nm	UV Absorbance at 280 nm Fluorescence: Ex 280 nm, Em 320–430 nm
Typical Voltage	Pre-focusing: 1,500 V; focusing: 3,000 V	Pre-focusing: 1,500 V; focusing: 3,000 V
Sample Injections per Cartridge	100 guaranteed, 200 maximum (max 20 batches)	100 guaranteed, 400 maximum (max 40 batches)
Maximum Sample Injections per Batch	100	100
pI/Size Range	2.85–10.45	2.85–10.45
pI/Sizing CV	1%	1%
CV for Peaks >10% Composition	≤5% (Intra-batch), ≤6% (Inter-batch)	≤5% (Intra-batch), ≤6% (Inter-batch)
Relative Migration Time CV	N/A	N/A
pI/Sizing Resolution	0.05 pI units (for wide range 3–10 ampholyte)	0.05 pI units (for wide range 3–10 ampholyte)
Minimum Dynamic Range	2 logs	2 logs
Linearity	>0.995	>0.995
Sensitivity (LOD)	0.7 µg/mL (Native fluorescence) 3.0 µg/mL (Absorbance) (Values based on a monoclonal antibody)	0.7 µg/mL (Native fluorescence) 3.0 µg/mL (Absorbance) (Values based on a monoclonal antibody)
Sample Tray Options	96-well plates or 48 vials	96-well plates or 48 vials
Power	100 V–240 V (AC), 50/60 Hz, 500 W	100 V–240 V (AC), 50/60 Hz, 500 W
Voltage Range	0–6,500 V	0–6,500 V
Temperature Control Range	4–25 °C	4–25 °C
Dimensions	44 cm H x 42 cm W x 61 cm D	44 cm H x 42 cm W x 61 cm D
Weight	46 kg (100 lb)	46 kg (100 lb)

Assay and Cartridge Specifications *(continued)*

Description	CE-SDS PLUS	Turbo CE-SDS
Minimum Sample Volume	50 µL	100 µL
Sample Delivery	Electrokinetic	Electrokinetic
Typical Separation Time	Reduced IgG: 25 min Non-reduced IgG: 35 min	Reduced IgG: 5.5 min Non-reduced IgG: 8 min
Detection Capacity	UV Absorbance at 220 nm	UV Absorbance at 220 nm
Typical Voltage	Separation: 5,750 V	Separation: 4,200 V
Sample Injections per Cartridge	100 guaranteed, 500 maximum (max 25 batches)	100 guaranteed (max 25 batches)
Maximum Sample Injections per Batch	48	96
pI/Size Range	10–270 kDa	10–270 kDa
pI/Sizing CV	≤2%	≤2%
CV for Peaks >10% Composition	N/A	N/A
Relative Migration Time CV	<1% for reduced IgG	<5%
pI/Sizing Resolution	≥1.5 for NGHC/HC IgG Standard	≥1.0 for NGHC/HC IgG Standard
Minimum Dynamic Range	2 logs	2 logs
Linearity	>0.995	>0.995
Sensitivity (LOD)	0.3 µg/mL (Value based on Internal Standard)	0.6 µg/mL (Value based on Internal Standard)
Sample Tray Options	96-well plates or 48 vials	96-well plates or 48 vials
Power	100 V–240 V (AC), 50/60 Hz, 500 W	100 V–240 V (AC), 50/60 Hz, 500 W
Voltage Range	0–6,500 V	0–6,500 V
Temperature Control Range	4–25 °C	4–25 °C
Dimensions	44 cm H x 42 cm W x 61 cm D	44 cm H x 42 cm W x 61 cm D
Weight	46 kg (100 lb)	46 kg (100 lb)

*Run time can be further shortened with the new SupersonicIEF method by McElroy & Heger published in Electrophoresis.
Read the full paper here for faster icIEF

Assay and Cartridge Specifications *(continued)*

Description	cIEF Fractionation
Minimum Sample Volume	100 µL
Sample Delivery	Vacuum
Typical Separation Time	40-50 min (molecule dependent)
Detection Capacity	Fluorescence: Ex 280 nm, Em 320-450 nm
Typical Voltage	Pre-focusing: 500 V and 1000 V; Focusing: 1500 V
Maximum Batches per Cartridge	Up to 15 batches, up to 84 fractions per batch
Maximum Sample Injections per Batch	1 (fractionation) 4 (cIEF)
pI/Size Range	3-10
pI/Sizing CV	1%
CV for Peaks >10% Composition	≤10% (Inter-batch)
Relative Migration Time CV	N/A
pI/Sizing Resolution	N/A
Minimum Dynamic Range	2 logs
Linearity	N/A
Sensitivity (LOD)	N/A
Sample Tray Options	96 well plates only
Power	100 V–240 V (AC), 50/60 Hz, 500 W
Voltage Range	0–6,500 V
Temperature Control Range	10–25 °C
Dimensions	44 cm H x 42 cm W x 61 cm D
Weight	46 kg (100 lb)

Featured Resources

Bio-Techne Academy

Join the Bio-Techne Academy to take your instrument usage to the next level: explore new techniques, optimized workflows, and sharpen your expertise. This free online platform offers training for every level of instrument users.

Explore Bio-Techne Academy

Scan the QR code
academy.bio-techne.com/learn

CE Chronicles eNewsletter

Read our quarterly CE Chronicles eNewsletter to get in-depth access to the latest resources related to biotherapeutic charge and size characterization CE. Each issue has a focused theme and related content, including AAV analysis, CE-SDS, and more!

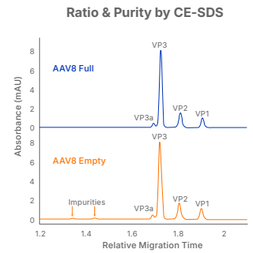
Read CE Chronicles Newsletter

Scan the QR code
bio-techne.com/ce-chronicles

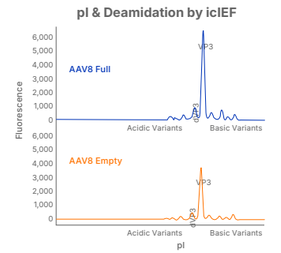
USP Standards & Controls

This portfolio provides four monoclonal antibody U.S. Pharmacopeia (USP) Reference Standards (mAb 001, mAb 002, mAb 003 and IgG System Suitability) to overcome the limited availability of consistent, highly characterized mAb standards and to provide a range of reference products with different physicochemical properties. The USP mAb Reference Standards (RSs) aid in mAb development and manufacturing. The USP IgG System Suitability Reference Standard enables analysts to efficiently evaluate system suitability criteria for aggregation and purity, which are critical quality attributes of mAbs, using methods outlined in USP General Chapter <129>.

For gene therapy applications, AAV Empty/Full Capsid Standards are available that can be used to determine multiple Critical Quality Attributes (CQAs) using CE-SDS and icIEF methods on Maurice and MauriceFlex systems.



VP Ratio	VP3	VP2	VP1
Full	7.9	1.7	1.0
Empty	7.3	1.7	1.0



% PA	Acidic	dVP3	VP3	Basic
Full	7.2	11.0	63.6	18.2
Empty	2.4	9.7	72.6	15.4

Ordering Information

To place an order for any of these reference standards, **request a quote**.

Part Number	Description	Package Size
1445539	USP mAb 001, monoclonal IgG1	200 µL solution (2 mg protein content)
1445547	USP mAb 002, monoclonal IgG1	200 µL solution (2 mg protein content)
1445595	USP mAb 003, monoclonal IgG1	200 µL solution (2 mg protein content)
1445550	USP IgG System Suitability Standard	2 mg (lyophilized)
1000301	AAV8 (Empty Capsids)	300 µL solution
1000302	AAV8 (Full Capsids)	300 µL solution

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