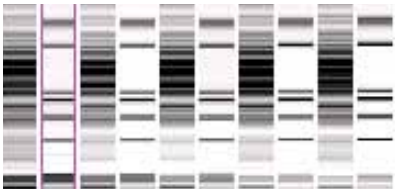
Experion™ Automated Electrophoresis System



Experience
Meets Innovation

BIO-RAD

Experience
Meets Innovation

The Experion automated electrophoresis system is a powerful and affordable separation and analysis system that applies microfluidic technology to reinvent the way you perform protein, RNA, and DNA electrophoresis. The Experion system combines Bio-Rad's expertise in electrophoresis with the innovation of Caliper Life Sciences' LabChip technology to deliver new levels of performance in automation. The Experion system advances automated electrophoresis to expand your ability to produce data quickly, without compromising the quality of results.

Rapid, Automated Results

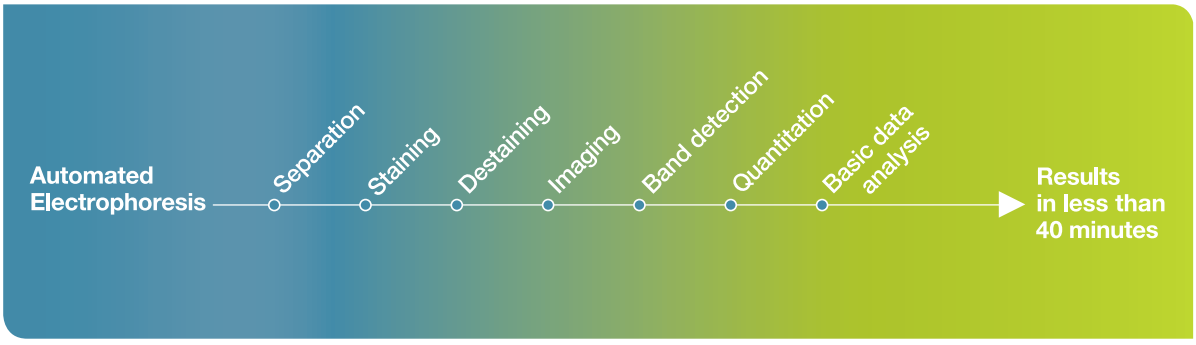
The Experion system automatically performs the multiple steps of gel-based electrophoresis. You can walk away and do more with your time while the Experion system produces reproducible separation and quantitation of your protein, RNA, and DNA samples.

Integrated System Design

The sleek components of the Experion system incorporate efficient and creative designs to deliver high-quality results. Optimized microfluidic chip design, electrophoresis-grade reagents, exclusive standards, easy-to-use automated priming and electrophoresis stations, and powerful software analysis tools all combine to form an integrated system that streamlines separation and analysis.

Major Benefits

- Dramatically reduced time-to-results, hands-on time, reagent usage, and sample consumption
- An affordable alternative to traditional electrophoresis
- The best protein quantitation results available in an automated system
- Automatic RNA integrity assessment with RQI (RNA quality indicator)



Superior Performance

- Fast, 30- to 40-minute batch runs of protein, RNA, and DNA samples
- Accurate single-step protein sizing from 10–260 kD
- 2-in-1 process for RNA: integrity checks and quantitation
- Exclusive protein, RNA, and DNA standards produce accurate and reproducible sizing and quantitation
- Flexible software tools make data analysis easier and more efficient

Convenient Data Analysis Tools

- Sizing and quantitation calculations performed automatically
- Intuitive navigation of separation and data analysis screens
- Quick comparisons of protein, RNA, or DNA components across a chip and between various chips
- Regulatory features — tools for U.S. FDA 21 CFR Part 11 compliance and installation qualification/operational qualification (IQ/OQ) functions

User-Friendly

- Automated and integrated system makes electrophoresis easier than ever before
- Automatic and error-free chip priming
- Minimal hands-on time required for unattended operation
- Minimal sample and reagent requirements
- Reduced exposure to hazardous chemicals
- Environmentally friendly compared to traditional gel electrophoresis

Automate Your
Protein, RNA, and DNA Analyses

Superior Analysis Kits and Chips Provide Improved Resolution and Quantitation

Experion Analysis Kits

Experion analysis kits combine state-of-the-art chip design with high-quality reagents to perform reproducible, quantitative, and accurate protein, RNA, and DNA analyses in minutes. Streamlined chip preparation methods and minimal sample requirements result in rapid experiments with minimal hands-on time.

Each analysis kit includes:

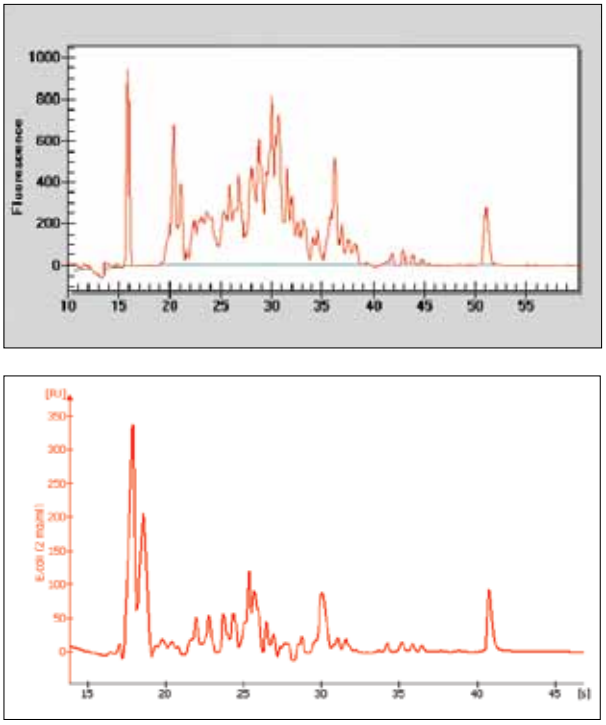
- Experion Pro260, RNA StdSens, RNA HighSens, or DNA chips
- High-quality gel matrix for separation and resolution similar to mini gels
- High-sensitivity fluorescent dye for accurate detection
- Experion protein, RNA, or DNA ladder for accurate sizing and quantitation
- Optimized sample buffer for accurate quantitation and reproducible results

Kits are available in flexible ordering configurations to match your research needs.

Experion Pro260 Analysis Kit

The Experion Pro260 analysis kit delivers fast, sensitive, and reproducible analyses of protein samples.

- Analysis of 10 samples in 30 minutes
- Resolution and quantitation of 10–260 kD proteins
- Improved resolution over other automated systems
- Sensitivity comparable to that of colloidal Coomassie Blue gel staining
- Protein sizing, quantitation, and analysis in a single step



Comparison of separation of proteins from equal amounts of *E. coli* lysate on automated electrophoresis systems. Upper panel, separation on an Experion Pro260 chip, displayed using Experion software; lower panel, separation on a competitor's chip, displayed using a competitor's automated electrophoresis system. Sample run time, ~60 sec. Note the greater number of peaks and increased resolution of the Pro260 result.

Experion RNA HighSens and RNA StdSens Analysis Kits

The Experion RNA analysis kits offer fast, accurate, and reproducible integrity checks (via RQI) designed to provide confidence in RNA quality without delaying your experiments.

- Analysis of 12 samples in 30 minutes
- Quantitation at nanogram (RNA StdSens kit) or picogram (RNA HighSens kit) amounts
- RNA ladder included in each kit
- Single-step RNA quality assessment (including electropherogram trace and RQI number)

Experion DNA 1K and 12K Analysis Kits

- Analysis of 11 samples in 30–40 minutes, depending on kit
- Quantitation in nanogram amounts
- Better sensitivity than traditional ethidium bromide–stained gels

Experion Automated Electrophoresis Station

The Experion automated electrophoresis station performs all the steps of gel-based electrophoresis in one compact, durable unit. Its multifunctionality combines electrophoresis, staining, destaining, band detection, and imaging into a single step.

Electrode manifold with 16 high-quality platinum pins for reproducible runs

Easy-to-access platform for inserting or removing chips

- Highly accurate laser for fluorescence detection
- USB port allows easy installation and maximum connectivity
- Built-in power supply reduces cost and saves benchspace
- Large LED “on” light blinks to indicate a run is in progress

Experion Priming Station

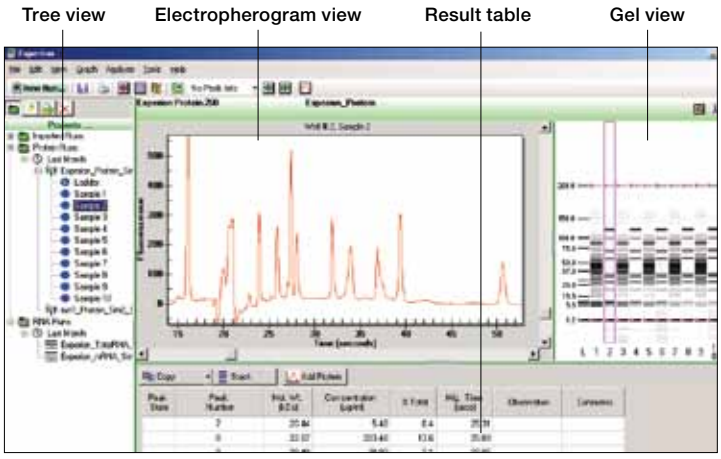
The Experion automated priming station consistently prepares protein, RNA, and DNA chips for successful electrophoresis with minimal hands-on time. Preset time and pressure settings ensure optimal introduction, or priming, of the gel matrix into the microchannels of the chip. This device delivers high-quality, reproducible results.

- Large LCD display clearly shows the preset time and pressure settings
- Integrated timer conveniently counts down the time-sensitive priming step
- Accessible chip platform allows easy chip placement and sample loading
- Alignment arrows on chip and priming station ensure proper chip placement for successful priming
- Secure locking mechanism prevents early release while priming
- Built-in, pressure-activated release mechanism ensures precise priming

Experion Vortex Station

The Experion vortex station ensures complete mixing of RNA and DNA samples and analysis reagents for effective sample runs.

- Prongs on the vortex adaptor securely hold the chip in place
- Preset speed and time settings provide single-step, precise mixing of samples and reagents
- Mixing within the chip reduces reagent volume and pipetting steps

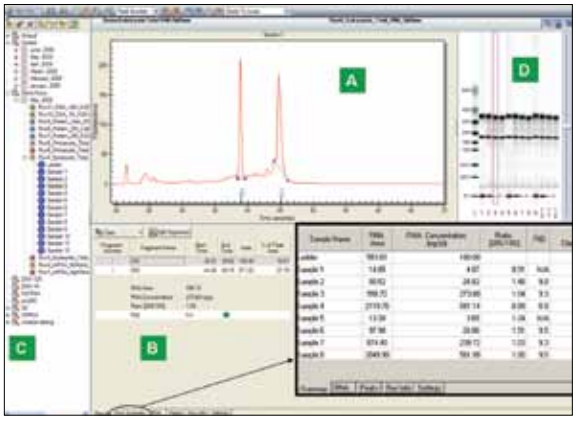


Experion software makes sophisticated technology surprisingly user friendly. Experimental results are analyzed through easy-to-use menus and result tables.

Experion software is your entryway into automated electrophoresis. The simple yet comprehensive working screen and built-in analysis functions allow you to obtain the information you need without spending a lot of your valuable time.

Versatile and Efficient

- Perform the run and analyze the data from a single screen
- Electropherogram (peak) or gel views offer easy access to information in both formats
- Data are organized in a tree-view format for logical storage, sorting, and retrieval of run information

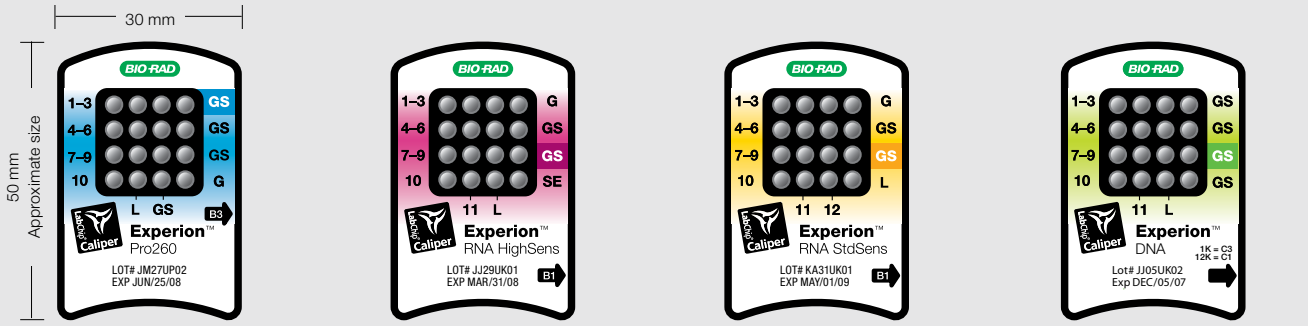


Experion software automatically calculates concentration; protein molecular weight; percent of total sample, and, in total RNA runs, the ribosomal RNA ratio; and automatically generates the RQI number, which enables a more objective method of assessing RNA integrity. A typical total RNA analysis is shown above. **A**, electropherogram; **B**, results; **C**, tree view; **D**, virtual gel.

Accessible Information

Experion software provides innovative tools that take the tedium out of data analysis.

- Automatic calculation of size, concentration, and percent of total sample — results for each peak appear in the result table
- Query-based comparisons of a single peak across all samples in a chip enable statistical analysis of the expression of a single protein or DNA of interest
- Data export function allows data sets to be exported to a spreadsheet for customized analysis



Experion Pro260 Chip
The Pro260 chip enables analysis of up to 10 protein samples (10–260 kD).

Experion RNA HighSens Chip
The RNA HighSens chip enables analysis of up to 11 RNA samples in the 100–5,000 pg/µl range.

Experion RNA StdSens Chip
The RNA StdSens chip enables analysis of up to 12 RNA samples in the 5–500 ng/µl range.

Experion DNA 1K and 12K Chip
DNA chip enables analysis of up to 11 DNA samples (2 assays covering DNA between 15 and 17,000 bp) in the 0.1—50 ng/µl range.

Experion LabChip Technology

The Experion analysis chip houses LabChip technology developed by Caliper Life Sciences, Inc. The chip is a powerful, miniaturized device — much like a tiny laboratory — that combines the functionality of several larger benchtop analytical instruments. Up to 10 protein or 12 RNA samples can be analyzed in only 30 minutes. Up to 11 DNA samples can be analyzed in 30–40 minutes, depending on the assay.

Research Applications

The Experion automated electrophoresis system is the perfect complement to Bio-Rad's protein separation and gene expression analysis tools.

Protein Analysis

A wide variety of protein-related applications are supported by the Experion system, including quality control, protein purity and stability analysis, protocol optimization, and evaluation of recombinant protein expression.

Proteins of interest are often isolated and purified by fractionating a complex sample using chromatography systems such as the BioLogic DuoFlow™ system. The Experion system is ideal for assessing and optimizing purification protocols.

RNA Analysis

Gene expression profiling experiments require high-quality RNA to ensure optimal results. The Experion system is perfect for evaluation of RNA quality because it requires very little of your valuable samples and your valuable time. The VersArray® microarray systems offer instruments for high-precision microarray experiments. As target transcripts are identified, the CFX96™, CFX384™, MyiQ™2, and MiniOpticon™ real-time PCR systems provide accurate transcript quantitation.

Real-Time PCR Detection Systems

BioLogic DuoFlow Pathfinder™ System

Ordering Information

Catalog #	Description
Experion Automated Electrophoresis Systems	
700-7000	**Experion System**, 100–120/220–240 V, for protein analysis, includes electrophoresis station, priming station, software, USB2 cable, instructions
700-7001	**Experion System**, 100–240 V, for nucleic acid analysis, includes electrophoresis station, priming station, vortex station, software, USB2 cable, instructions
701-7000	**Experion System**, 100–240 V, for protein analysis, includes electrophoresis station, priming station, software, USB2 cable, Experion Pro260 starter kit
701-7001	**Experion System**, 100–240 V, for RNA and DNA anaylses, includes electrophoresis station, priming station, vortex station, software, USB2 cable, Experion RNA StdSens starter kit
Electrophoresis Station and Replacement Parts	
700-7010	**Experion Electrophoresis Station**, 100–120/ 220–240 V, includes USB2 cable, instructions
700-7022	**Experion USB2 Cable with Ferrite**, replacement
Priming Station and Replacement Parts	
700-7030	**Experion Priming Station**, 100–120/220–240 V, includes 2 priming seals
700-7031	**Experion Priming Seals**, replacement, provides air seal on top of priming well, 2
Vortex Station and Replacement Parts (for nucleic acid analysis)	
700-7043	**Experion Vortex Station II**, 100–240 V
Experion Analysis Kits	
700-7101	**Experion Pro260 Analysis Kit for 10 Chips**, includes 10 Pro260 chips, 3 x 520 µl Pro260 gel, 45 µl Pro260 stain, 60 µl Pro260 ladder (10–260 kD), 400 µl Pro260 sample buffer, 3 spin filters
700-7103	**Experion RNA StdSens Analysis Kit for 10 Chips**, includes 10 RNA StdSens chips, 1,250 µl RNA gel, 20 µl RNA StdSens stain, 20 µl RNA ladder, 900 µl RNA StdSens loading buffer, 2 spin filters
700-7105	**Experion RNA HighSens Analysis Kit for 10 Chips**, includes 10 RNA HighSens chips, 1,250 µl RNA gel, 20 µl RNA HighSens stain, 20 µl RNA ladder, 900 µl RNA HighSens loading buffer, 100 µl RNA sensitivity enhancer, 2 spin filters
700-7107	**Experion DNA 1K Analysis Kit for 10 Chips**, includes 10 DNA chips, 1 cleaning chip, 3 x 250 µl DNA 1K gel, 40 µl DNA 1K stain, 20 µl DNA 1K ladder, 750 µl DNA 1K loading buffer, 3 spin filters
700-7108	**Experion DNA 12K Analysis Kit for 10 Chips**, includes 10 DNA chips, 1 cleaning chip, 650 µl DNA 12K gel, 40 µl DNA 12K stain, 20 µl DNA 12K ladder, 750 µl DNA 12K loading buffer, 3 spin filters
Experion Analysis Kit Accessories	
700-7151	**Experion Pro260 Chips**, 10
700-7152	**Experion Pro260 Reagents and Supplies**, for 10 chips, includes 3 x 520 µl Pro260 gel, 45 µl Pro260 stain, 60 µl Pro260 ladder (10–260 kD), 400 µl Pro260 sample buffer, 3 spin filters
700-7256	**Experion Pro260 Ladder**, 60 µl (10–260 kD)
700-7270	**Experion Pro260 Sample buffer**, 2 X 400 µl
700-7153	**Experion RNA StdSens Chips**, 10
700-7154	**Experion RNA StdSens Reagents and Supplies**, for 10 chips, includes 1,250 µl RNA gel, 20 µl RNA StdSens stain, 20 µl RNA ladder, 900 µl RNA StdSens loading buffer, 2 spin filters

Catalog #	Description
Experion Analysis Kit Accessories (Cont.)	
700-7155	**Experion RNA HighSens Chips**, 10
700-7156	**Experion RNA HighSens Reagents and Supplies**, for 10 chips, includes 1,250 µl RNA gel, 20 µl RNA HighSens stain, 20 µl RNA ladder, 900 µl RNA HighSens loading buffer, 100 µl RNA sensitivity enhancer, 2 spin filters
700-7255	**Experion RNA Ladder**, 20 µl
700-7251	**Experion Cleaning Chips**, 10
700-7252	**Experion Electrode Cleaner**, 250 ml
700-7253	**Experion DEPC-Treated Water**, 100 ml
700-7254	**Experion Spin Filters**, 10
700-7163	**Experion DNA Chips**, 10, for DNA 1K and 12K analyses, plus 1 cleaning chip
700-7164	**Experion DNA 1K Reagents and Supplies**, for 10 chips, includes 3 x 250 µl DNA 1K gel, 40 µl DNA 1K stain, 20 µl DNA 1K ladder, 750 µl DNA 1K loading buffer, 3 spin filters
700-7165	**Experion DNA 12K Reagents and Supplies**, for 10 chips, includes 650 µl DNA 12K gel, 40 µl DNA 12K stain, 20 µl DNA 12K ladder, 750 µl DNA 12K loading buffer, 3 spin filters
700-7261	**Experion DNA 1K Ladder**, 20 µl
700-7262	**Experion DNA 12K Ladder**, 20 µl
Experion Starter Kits	
700-7110	**Experion Pro260 Starter Kit**, includes 3 Experion chips, 1 cleaning chip, Experion reagents, spin filters, IgG protein standard, DTT, cleaning swabs (lint free), electrode cleaner, narrow bore polypropylene pipet tips, polypropylene 0.5 ml microcentrifuge tubes, DEPC-treated water (0.2 µm filtered)
700-7111	**Experion RNA StdSens Starter Kit**, includes 3 Experion chips, 2 cleaning chips, Experion reagents, spin filters, total RNA standard, cleaning swabs (lint free), electrode cleaner, narrow bore polypropylene pipet tips, RNase- and DNase-free polypropylene 0.5 ml microcentrifuge tubes, DEPC-treated water (0.2 µm filtered)
Experion Software*	
700-7050	**Experion Software**, system operation and data analysis tools, PC
700-7051	**Experion Validation Kit**, 3 test chips, qualification procedures, dongle, PC
700-7052	**Experion Security Edition Software**, system operation, standard and 21 CFR Part 11 data analysis tools, 3 test chips, qualification procedures, dongle, PC

* Optional computer systems available. Contact your local Bio-Rad representative for more information, including specific computer requirements. Or visit us at **www.bio-rad.com/experion/.**

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