Build Consistency into Your Lab’s Workflow

With the Agilent Automated Electrophoresis portfolio

Explore more
You can build consistency into your molecular biology lab’s workflow. Whether you perform low- or ultra-high-throughput testing, our automated electrophoresis instrument portfolio delivers reliable, objective assessments of sample integrity, concentration, and fragment size.
Build Consistency with a Complete Solution

No matter your laboratory's sample capacity needs, our complete portfolio of automated electrophoresis instruments, application-specific assays, intuitive software, and expert technical services provide your lab with flexible solutions for robust and objective sample quality assessment.
Instrument Options for a Variety of Nucleic Acid and Protein Applications

Whether you need to assess the integrity of nucleic acids or protein samples, our automated electrophoresis instruments can support your application.

### DNA applications

- TapeStation Systems
- Fragment Analyzer Systems
- Femto Pulse System
- ProteoAnalyzer System
- ZAG System

### RNA applications

<table>
<thead>
<tr>
<th>Type</th>
<th>TapeStation Systems</th>
<th>Fragment Analyzer Systems</th>
<th>Femto Pulse System</th>
<th>ProteoAnalyzer System</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFPE RNA</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>IVT RNA</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Total prokaryotic and eukaryotic RNA</td>
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<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Small RNA</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MicroRNA</td>
<td>✓</td>
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<td></td>
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<tr>
<td>mRNA</td>
<td>✓</td>
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<tr>
<td>Plant RNA</td>
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<td></td>
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</tr>
</tbody>
</table>

### Protein applications

- TapeStation Systems
- Fragment Analyzer Systems
- Femto Pulse System
- ProteoAnalyzer System
- ZAG System
Instrument Options for Any Throughput

You can build consistency into your lab's workflow by assessing the quantity and integrity of your nucleic acid samples. If your lab's sample capacity is ultra-low, medium, or ultra-high, Agilent has the sample quality control and fragment analysis solution that fits your need.

<table>
<thead>
<tr>
<th>Throughput</th>
<th>Instrument Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra-low throughput</td>
<td>4150 TapeStation System</td>
</tr>
<tr>
<td>Low throughput</td>
<td>5200 Fragment Analyzer System</td>
</tr>
<tr>
<td>Medium throughput</td>
<td>Femto Pulse System</td>
</tr>
<tr>
<td>High throughput</td>
<td>ProteoAnalyzer System</td>
</tr>
<tr>
<td>Ultra-high throughput</td>
<td>4200 TapeStation System</td>
</tr>
<tr>
<td></td>
<td>5300 Fragment Analyzer System</td>
</tr>
</tbody>
</table>

- 5400 Fragment Analyzer System
- ZAG DNA Analyzer System
Proven Sample Quality Metrics for Multiple Applications

Whether you are working with genomic DNA (gDNA), cell-free DNA (cfDNA), or FFPE RNA, you can find reliable quality metrics suited to your application. Explore each of the quality metrics below and learn about their use in sample quality control on automated electrophoresis instruments.

<table>
<thead>
<tr>
<th>RNA</th>
<th>RIN^</th>
<th>RQN</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFPE RNA</td>
<td>DV260</td>
<td></td>
</tr>
<tr>
<td>gDNA/FFPE DNA</td>
<td>DIN</td>
<td>GQN</td>
</tr>
<tr>
<td>cfDNA</td>
<td>%cfDNA</td>
<td></td>
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</tbody>
</table>

The Agilent Oligo Pro II, ZAG and ProteoAnalyzer systems do not offer quality metrics.
Nucleic Acid Analysis with Automated Electrophoresis Systems

Improve molecular workflows such as next-generation sequencing, gene engineering, and biopharmaceutical research with fragment analysis and sample quality control. Our automated electrophoresis systems offer flexibility for a wide range of DNA and RNA applications.

TapeStation Systems
Fragment Analyzer Systems
Femto Pulse System
ZAG System

Agilent TapeStation Systems

The Agilent 4150 and 4200 TapeStation systems combine automated walk-away sample processing with operational simplicity.

The instruments offer constant cost per sample and high application flexibility. Ready-to-use consumables ensure simple operation with minimal hands-on time.

Key benefits
- Fast analysis time
- Constant cost per sample
- Ready-to-use ScreenTape devices
- Application flexibility

Explore more
Oligonucleotide Purity Analysis with the Agilent Oligo Pro II System

Oligonucleotide synthesis and purification is a complex, multi-step process. It is critical for the manufacturer and end-user of oligonucleotides to know that the purity of their oligonucleotides is of sufficient quality for the intended downstream application.

The Agilent Oligo Pro II system is a specialized solution within the automated electrophoresis portfolio. It provides high-resolution separations and direct detection of both single-stranded DNA (ssDNA) and single-stranded RNA (ssRNA) oligonucleotides.

**Key Benefits**
- High-throughput UV absorption oligonucleotide purity assessment
- Low sample cost for routine quality control
- n-1 resolution through 60 nt
- 12, 24, or 96 capillary arrays provide for throughput scalability

Agilent Oligo Pro II System

The Agilent Oligo Pro II system is a specialized solution within the automated electrophoresis portfolio. It provides high-resolution separations and direct detection of both single-stranded DNA (ssDNA) and single-stranded RNA (ssRNA) oligonucleotides.

Explore more
Protein Analysis with the Agilent ProteoAnalyzer System

Proteins, essential for understanding cellular functions, analyzing disease mechanisms, and developing biotherapeutics, present a challenge for analysis due to their diversity. The Agilent ProteoAnalyzer enables scientists to make confident decisions across various disciplines.

Key Benefits
- Automated separation, capillary rejuvenation, and data processing
- Simplified, streamlined sample preparation
- Wide range of protein sample types

Agilent ProteoAnalyzer System

The Agilent ProteoAnalyzer system brings added efficiency, versatility, and reliability for protein QC workflows.

Able to separate 12 samples in as little as 30 minutes, this system is designed to eliminate the laborious process of SDS-PAGE gel preparation, staining, destaining, and analysis.

Explore more
Protect the Instruments that Power Your Sample QC and Fragment Analysis Workflows

Maximize uptime, ensure instrument compliance, and control your service costs with Agilent CrossLab services for your automated electrophoresis instruments.

<table>
<thead>
<tr>
<th>Repair Type</th>
<th>4150 and 4200 TapeStation Systems</th>
<th>Fragment Analyzer System</th>
<th>Femto Pulse System</th>
<th>ProteoAnalyzer System</th>
<th>ZAG DNA Analyzer System</th>
<th>Oligo Pro II System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended Warranty</td>
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<tr>
<td>CrossLab Service Plans</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Preventive Maintenance</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Compliance (IQ/OQ)</td>
<td>✓</td>
<td>✓</td>
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<td></td>
</tr>
</tbody>
</table>

IE = Instrument Exchange  RTA = Return to Agilent

Download service brochure
Kits and Reagents for the Automated Electrophoresis Systems

Application-specific kits and reagents have been designed for each of the automated electrophoresis systems. Click the links below to learn how each kit works with its instrument to deliver reliable sample integrity insights.

ScreenTape devices for TapeStation systems
- DNA ScreenTape devices and reagents
- RNA ScreenTape devices and reagents

Automated capillary electrophoresis kits for the Fragment Analyzer, Femto Pulse, ZAG, Oligo Pro II and ProteoAnalyzer systems
- Fragment Analyzer DNA kits
- Fragment Analyzer RNA kits
- Femto Pulse DNA kits
- Femto Pulse RNA kits
- ZAG dsDNA kits
- Oligo Pro II Reagents
- Protein Broad Range P240 kit
More Online Resources

Visit our sample quality control solution pages to find technical overviews, application notes, webinars, and videos for NGS workflows, vaccine development and biobanks

Are you interested in the Automated Electrophoresis Portfolio?

Let us know your lab's needs and we will contact you to find the best solution to meet them.