

Nucleic Acid Quality Control Solutions for Any Throughput

Agilent Automated Electrophoresis Portfolio



Exceed Your Expectations

Go above and beyond with the Agilent Automated Electrophoresis portfolio, a collection of instruments designed for the quantitative and qualitative analysis of nucleic acids. With automated options for ultralow to ultrahigh throughputs, fast run times, and a broad variety of assays and kits, the automated electrophoresis systems enable accurate, efficient, and reliable quality control (QC) for any application.

Agilent TapeStation systems – Provide easy-to-use solutions for the rapid and precise evaluation of DNA and RNA samples in as little as one to two minutes per sample. These systems are compatible with ultralow- to high-throughput workflows and include:

- 4150 TapeStation system: analyze up to 16 samples at a time for low-throughput laboratories
- 4200 TapeStation system: run up to 96 samples at a time for high-throughput workflows

Agilent Fragment Analyzer systems – Utilize parallel capillary electrophoresis for nucleic acid analysis in a variety of applications and throughputs and include:

- 5200 Fragment Analyzer system: perform low- to medium-throughput workflows with a 12-capillary array
- 5300 Fragment Analyzer system: select either a 48- or 96-capillary array for high- to ultrahigh-throughput workflows
- 5400 Fragment Analyzer system: get complete robotic integration with a 96-capillary array, enabling ultrahigh-throughput workflows

Agilent 2100 Bioanalyzer system – Separate DNA, RNA, and protein samples with lab-on-a-chip electrophoresis. This well-established system is adaptable to virtually any QC workflow

Agilent Femto Pulse system – Analyze high molecular weight genomic DNA (gDNA) in 1.5 hours and enable ultrasensitive detection of DNA and RNA with the only automated pulsed-field instrument on the market

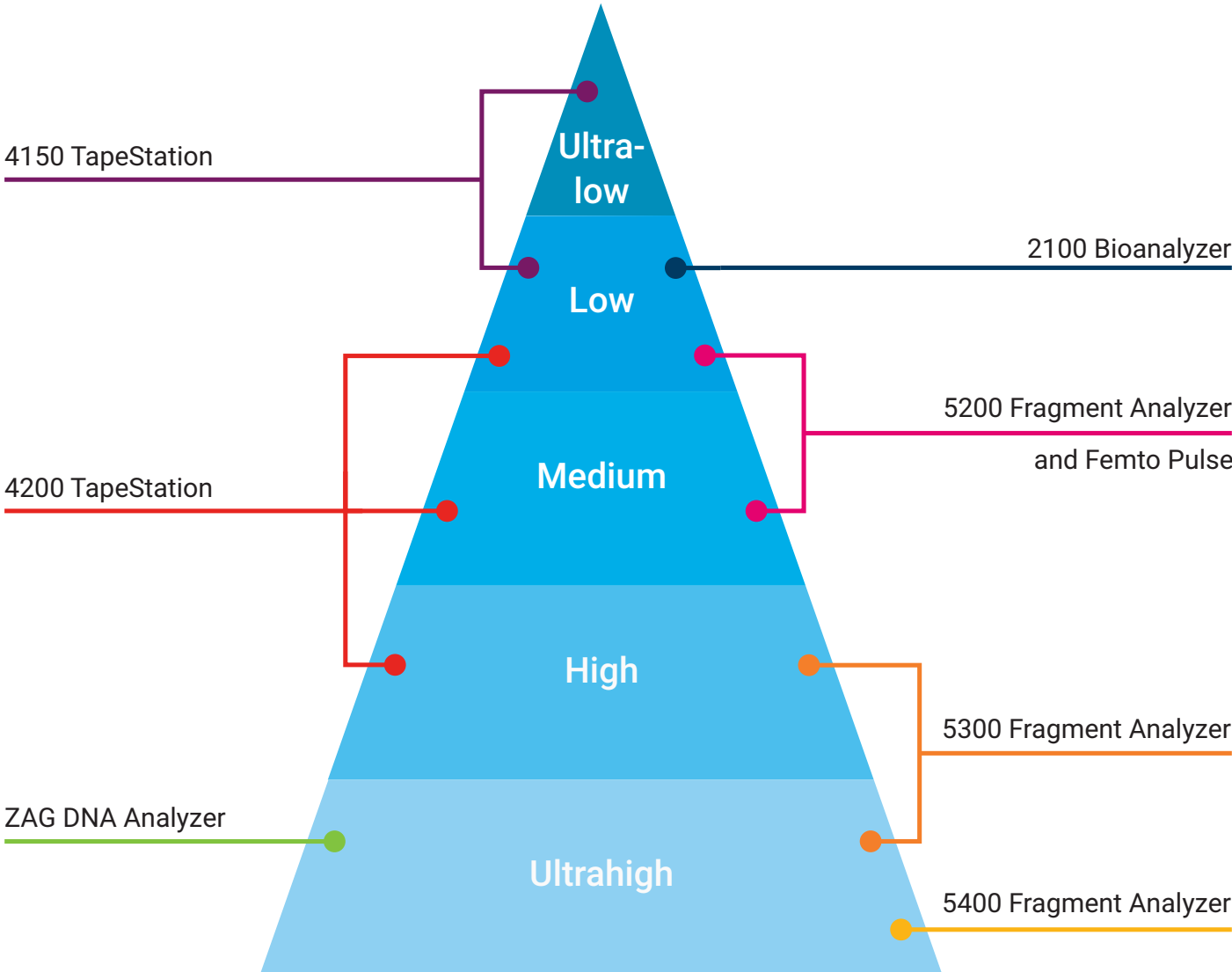
Agilent ZAG DNA Analyzer system – Achieve quick and efficient analysis of DNA fragments with this ultrahigh-throughput platform

Agilent Oligo Pro II system – Accelerate QC of ssDNA and ssRNA oligonucleotides with rapid, reliable, and dye-free analysis of ssDNA and ssRNA oligonucleotides

With a large range of throughputs and applications, the Agilent Automated Electrophoresis portfolio provides accurate and trusted solutions to give you objective, reliable QC metrics for any sample at any throughput.

An Instrument for Any Throughput Need

Our Automated Electrophoresis portfolio is a compilation of instruments that are designed for advanced quality control of nucleic acid samples. Whether you are evaluating a few samples at a time, or need to analyze thousands of samples every day, we have an instrument for your needs. Use the graphic below to find the system best tailored to your workflows and start saving time, money, and valuable resources.



TapeStation Systems

The TapeStation systems accelerate nucleic acid analyses and minimize time to results with easy-to-use ScreenTape technology. The automated workflow enables analysis of 1 to 96 samples in as little as one to two minutes each, letting your lab focus on the work that matters.

Key system benefits include:

- A simple workflow, allowing you to load a ScreenTape device and your samples, then let the instrument do the rest
- Flexible ScreenTape technology, enabling you to save partially used ScreenTape devices for later use, resulting in a constant cost-per-sample
- Comprehensive compliance services (IQ/OQ)

Analyze a wide range of sample types for different applications including:

- Next-generation sequencing (NGS) libraries
- Cell-free DNA (cfDNA)
- Genomic DNA (gDNA)
- Total RNA
- PCR fragment analysis

With two different systems and complete assay compatibility between instruments, the TapeStation systems are easily adaptable to the workflow of any lab.



The 4150 TapeStation system is ideal for ultralow-throughput labs and permits the analysis of up to 16 samples.

Throughput	Speed*	Key Differentiator
Ultralow to low	One sample in 1-2 minutes; 16 samples in < 20 minutes	Ease of use

**Assay dependent*



The 4200 TapeStation system provides higher throughput for running up to 96 samples with constant costs per sample.

Throughput	Speed*	Key Differentiator
Low to high	One sample in 1-2 minutes; 96 samples in < 90 minutes	Ease of use

**Assay dependent*

Fragment Analyzer Systems

The Fragment Analyzer systems break through analytical bottlenecks and streamline nucleic acid analysis workflows, providing researchers with the results they need, when they need them. Automated parallel capillary electrophoresis allows for analysis of as few as 12 to as many as 96 samples per run without user intervention.

Key system benefits include:

- The versatility of interchangeable arrays, allowing users to choose between speed and resolution to fit the changing needs of any lab
- The ability to load up to three 96-well plates and process in any order
- The flexibility to house two different gel matrices to analyze different sample types unattended
- Comprehensive compliance services (IQ/OQ)

Analyze a wide range of sample types for different applications including:

- NGS libraries
- cfDNA
- gDNA
- Total RNA
- Small RNA
- MicroRNA
- PCR fragment analysis
- Multiplex PCR
- Restriction digest
- Microsatellites
- CRISPR
- Large fragment DNA
- TILLiNG
- Plasmid DNA

With three different models, the Fragment Analyzer systems are compatible with the workflow of any lab.



The 5200 Fragment Analyzer system uses a 12-capillary array and is ideal for low to medium-throughput labs.

Throughput	Speed*	Key Differentiator
Low to medium	30 minutes per run (12 samples)	Flexibility Versatility

**Kit specific*



The 5300 Fragment Analyzer system offers higher throughput and can be run with either a 48- or 96-capillary array.

Throughput	Speed*	Key Differentiator
High to ultrahigh	40 minutes per run (48 or 96 samples)	Flexibility Versatility

**Kit specific*



The 5400 Fragment Analyzer system is an ultrahigh-throughput system that uses a 96-capillary array. It was designed to fully integrate into most robotic systems using a tested Application Program Interface (API), enabling the analysis of 2400 samples per day.

Throughput	Speed*	Key Differentiator
Ultrahigh	40 minutes per run (96 samples)	Robotics arm integration

**Kit specific*

Bioanalyzer System

Featured in more than 60,000 citations, the 2100 Bioanalyzer is a well-established system that fits into virtually any QC workflow. High-sensitivity QC of up to 12 DNA, RNA, or protein samples per chip improves lab efficiency with minimal input requirements, allowing the conservation of precious samples for the work that matters.

Key system benefits include:

- A broad variety of assays for nucleic acid and protein analysis, suitable for a wide range of applications
- The advantage of a widely accepted QC tool recommended by major NGS vendors for library QC and determination of nucleic acid integrity
- Services and software features enabling 21 CFR Part 11 compliance

Analyze a wide range of sample types for different applications including:

- NGS libraries
- Total RNA
- Small RNA
- MicroRNA
- Messenger RNA
- PCR fragment analysis
- Multiplex PCR
- Restriction digest
- Microsatellites
- Antibodies
- Proteins



Throughput	Speed*	Key Differentiator
Low	12 samples in about 30 minutes	Protein analysis

*Assay dependent

Femto Pulse System

The Femto Pulse system shatters nucleic acid analysis barriers, giving researchers unparalleled sensitivity to analyze large nucleic acid fragments in about 1.5 hours. An automated pulsed-field power supply allows the separation of DNA up to 165 kb. The optimized optical platform enables 10 times higher sensitivity for nucleic acid smear analysis (up to 100 times higher for fragment analysis) and offers detection capabilities down to 50 fg/μL.

Key system benefits include:

- A rapid workflow, allowing quick and accurate quantitation, qualification, and sizing of DNA fragments up to 165 kb in about 1.5 hours
- Enhanced sensitivity for the detection of DNA fragments down to 50 fg/μL and quantitation of a single cell's worth of gDNA or total RNA
- Minimal input requirements, enabling conservation of sample for downstream applications

Analyze a wide range of sample types for different applications including:

- NGS libraries
- Long-read sequencing libraries
- cfDNA
- gDNA
- Total RNA
- Small RNA
- Messenger RNA (mRNA)
- High molecular weight DNA
- Bacterial Artificial Chromosome (BAC) digests



Throughput	Speed*	Key Differentiator
Low to medium	12 samples in about one hour	Femtogram level sensitivity and separation of HMW DNA

*Kit specific

ZAG DNA Analyzer System

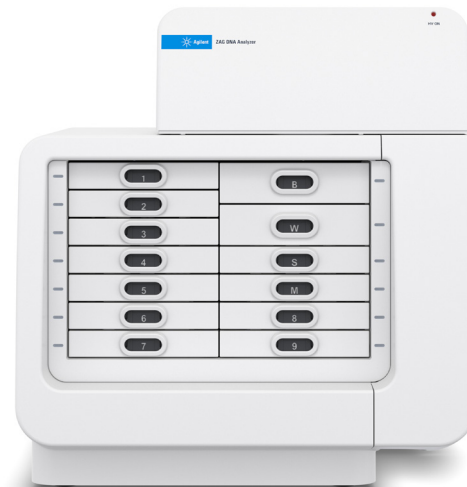
The ZAG DNA Analyzer system removes analytic bottlenecks and expedites DNA fragment analysis workflows, giving researchers the ability to painlessly screen thousands of DNA fragments per day. Designed for analysis of PCR fragments, microsatellites, and restriction enzyme digest products, this system is essential for high-throughput facilities focused on qualitative DNA fragment analysis.

Key system benefits include:

- A smooth, rapid workflow enables loading of 864 samples at once and the separation of over 4,600 samples in 24 hours
- Intuitive software features, including batch processing, allowing analysis of over 100 sample plates simultaneously with advanced sample flagging
- High-resolution separation, giving researchers the ability to distinguish and size DNA fragments within 3 bp of each other

Analyze a wide range of sample types for different applications including:

- PCR fragments
- Restriction digests
- Microsatellites



Throughput	Speed*	Key Differentiator
Ultrahigh	96 samples in 20 minutes; 4,600 samples per day	Low analysis cost

**Kit specific*

Oligo Pro II System

The Oligo Pro II system delivers confidence in your oligonucleotides, ensuring optimal downstream performance of ssDNA and ssRNA oligos. 12-, 24-, and 96-capillary array options provide flexible throughput with results ready in only about 1 hour, while direct UV detection removes the need for dye labeling.

Key system benefits include:

- Automated operation, enabling analysis of 288 samples without user intervention
- Adaptable throughput, providing separation of 12, 24, or 96 samples per run
- Dye-free direct UV detection of samples with single-base resolution through 60-mers

Analyze a wide range of sample types for different applications including:

- Single-stranded DNA oligos (ssDNA)
- Single-strand RNA oligos (ssRNA)



Throughput	Speed*	Key Differentiator
Low to high	12, 24 or 96 samples in one hour	UV detection system

Learn more:

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