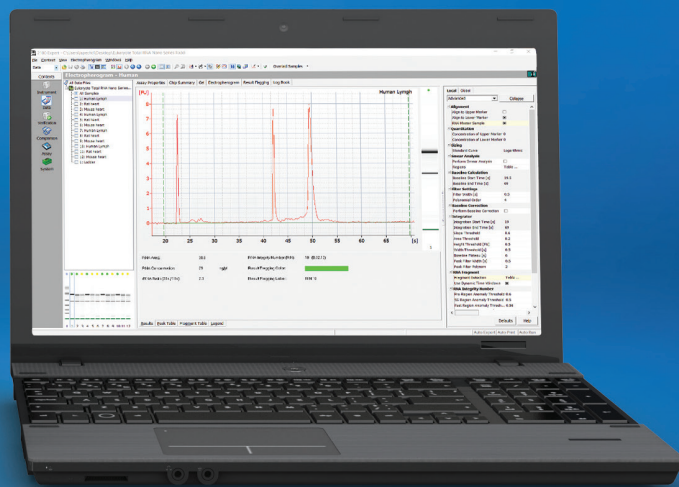
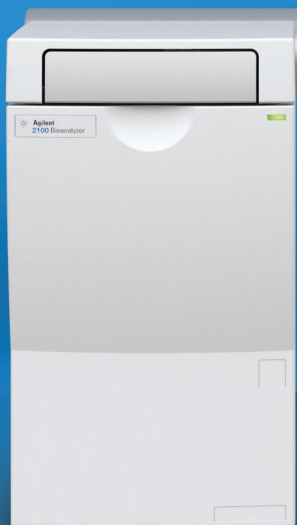


Secure Experimental Success

Agilent 2100 Bioanalyzer system





Trust the Quality of Your Samples

Sample quality is critical to experimental success. With citations in more than 50,000 scientific papers, the Agilent 2100 Bioanalyzer system is a well-established tool for quality control of RNA and DNA samples. Its fast electrophoretic analysis of biomolecules—DNA, RNA, and proteins—delivers objective, digital data about concentration, size, and integrity.

Even with limited material, the 2100 Bioanalyzer system offers unprecedented speed, flexibility, sensitivity, and reproducibility. Trust the integrity values and concentrations of your precious samples for the highest confidence in your downstream experiments.



Versatile quality control

To ensure experimental success, use the Agilent 2100 Bioanalyzer system, comprised of the instrument, prepackaged kits with chips and reagents, and an intuitive software with application-specific assays.


Transform Your Analysis of Biological Samples

The Agilent 2100 Bioanalyzer system delivers these key benefits:


- High sensitivity: Down to pg/ μ L concentration
- Minimal sample consumption: Only 1–4 μ L of sample required
- Flexibility: On-chip electrophoresis of DNA, RNA, and proteins
- High-quality digital data: RIN algorithm for RNA sample integrity; DNA and protein sample quality control
- Contamination-free: Exchangeable electrode cartridge for easy switching between methods
- Compliance services and software: 2100 Security Pack and IQ/OQ services enable 21 CFR Part 11 compliance

Reliable results in three easy steps

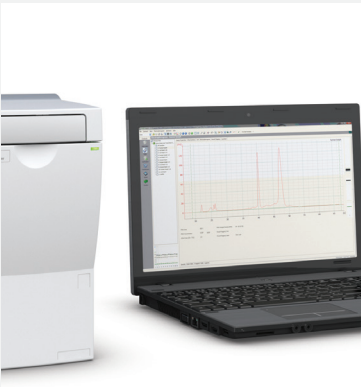
1. Add sample




2. Start chip run




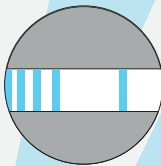
3. Watch real-time data display

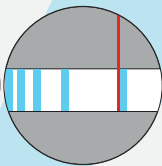


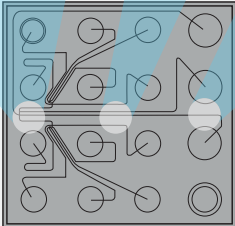
How it works

1. 

2. 

3. 

4. 



1. The sample moves through the microchannels from the sample well.
2. The sample is injected into the separation channel.
3. Sample components are electrophoretically separated.
4. Components are detected by their fluorescence and translated into gel-like images (bands) and electropherograms (peaks).

Extreme Versatility, Excellent Data Quality

The 2100 Bioanalyzer system includes:

- Chip priming station
- Chip vortexer
- Agilent 2100 Expert software for instrument control and data analysis (optional expansion for full compliance support in regulated environments)
- Service and support for system and applications



Maximum flexibility

Exchangeable cartridge for on-chip electrophoresis. An easy switch between methods.

Excellent sensitivity

Minimal sample consumption (only 1–4 μL required) due to miniaturization and highly sensitive laser induced fluorescence detection.

Most robust

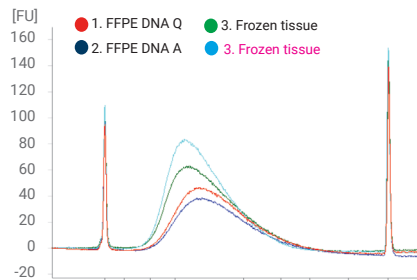
Highly stable instrument that is not dependent on fragile components.

Endless Possibilities for Diverse Applications

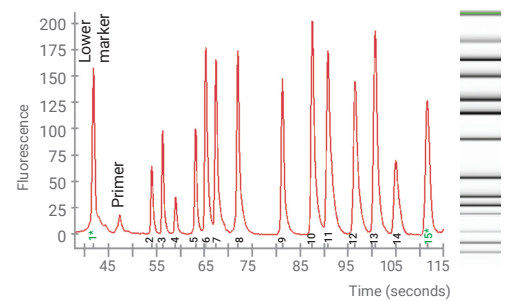
Assessing the quantity and quality of your experimental starting material is essential for research success. The Agilent 2100 Bioanalyzer system is a versatile tool for sample quality control (QC) in many workflows, including next-generation sequencing, gene expression, proteomics, and CRISPR applications. It lets you evaluate the integrity, concentration, and purity of RNA, DNA, and protein samples derived from origins such as FFPE samples, laser-microdissected tissues, and biopsies.

DNA applications

- Sample QC in next-generation sequencing: including size distribution analyses and QC of PCR-amplified libraries
- PCR validation and impurity check
- Restriction digestion analysis
- Food analysis
- Cleavage efficiency of synthesized gRNA in genome editing



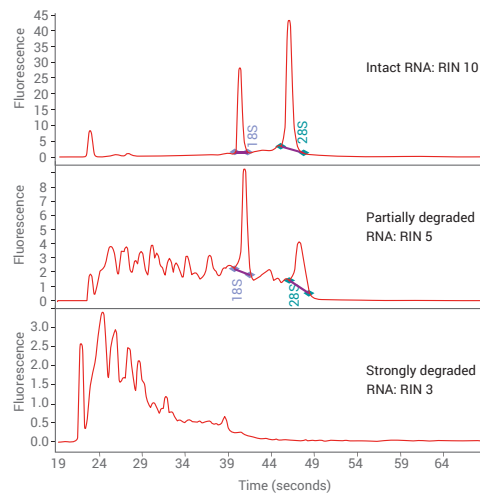
1. Size distribution analysis of fragmented DNA



2. Multiplex PCR of 13 amplicons

RNA applications

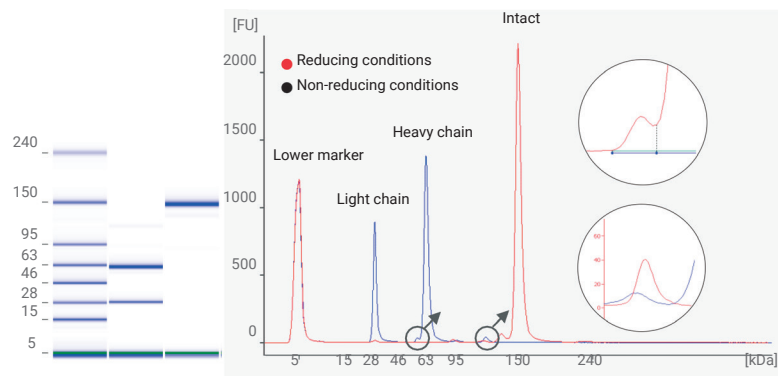
- QC before gene expression studies using microarrays and qPCR
- QC of FFPE RNA samples with DV200 metric
- QC of small RNA fractions for miRNA research or small RNA sequencing
- QC of gRNA in genome editing



RNA integrity assessment of total RNA

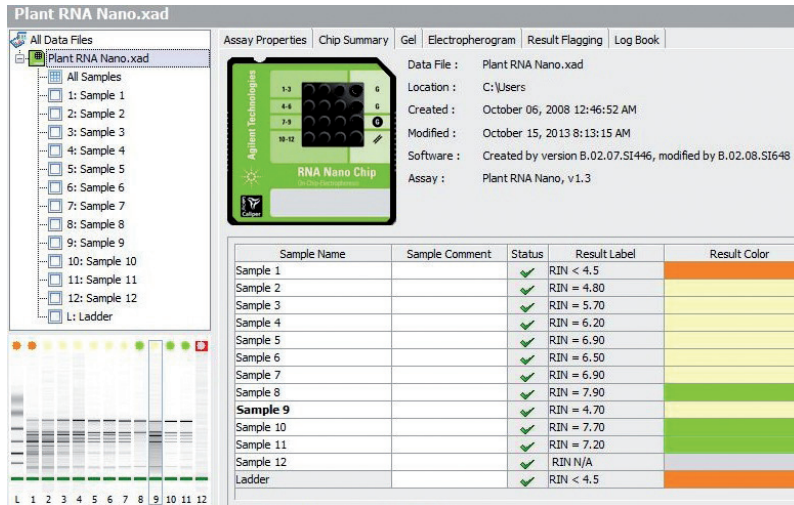
Protein applications

- Optimization and monitoring of protein purification
- Protein expression
- Protein production
- Food analysis
- QC of antibodies



Quality control of antibodies under reducing and non-reducing conditions

Streamlined Operation Including Software, Services, and Support



Get the most from your digital data

The 2100 Expert software offers powerful tools for analyzing RNA, DNA, and proteins. Its unique features include:

- RNA Integrity Number (RIN): The established parameter for unbiased total RNA quality control
- Color-coded result flagging tool: An easy-to-use rule-defined system for automated data evaluation
- Security Pack expansion: Supports all 21 CFR Part 11 requirements

Smooth operations

All 2100 Bioanalyzer system components carry a one-year factory warranty. You can extend your coverage by one to four years.

CrossLab Silver service plan

This premium service provides instrument exchange for repair, free software updates, and annual preventive maintenance.

Compliance services

Agilent CrossLab Compliance offers a single, comprehensive qualification approach to streamline compliance procedures. It improves laboratory-wide productivity, and reduces regulatory risk and cost.

Application support

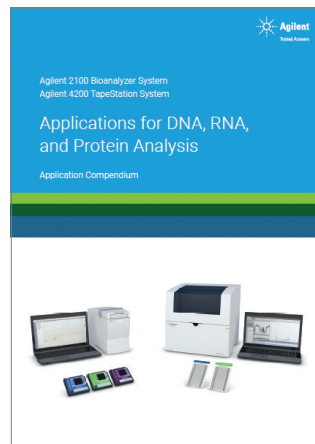
Two on-site application-related support services are available:

- Start-up services to familiarize the new user with the hardware, software and an application of choice.
- On-site consulting services, including troubleshooting for application-related problems and user training for a kit of your choice. Running samples is included in this training.

Applications for DNA, RNA, and Protein Analysis

You find more details on key applications using the Agilent 2100 Bioanalyzer and 4200 TapeStation systems in a new application compendium. From next generation sequencing, genomic DNA, RNA, genome editing to protein analyses, this compilation of applications will help you accelerate discovery and support your research.

Download a copy by searching for publication number 5991-8974EN on agilent.com.



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© Agilent Technologies, Inc. 2018
Published in the USA, December 15, 2018
5994-0088EN