

# Embrace the Future of Electrophoresis

QIAxcel<sup>®</sup> Advanced brings the future of nucleic acid electrophoresis to your lab – today



Analysis of 12 samples in as little as 3 minutes



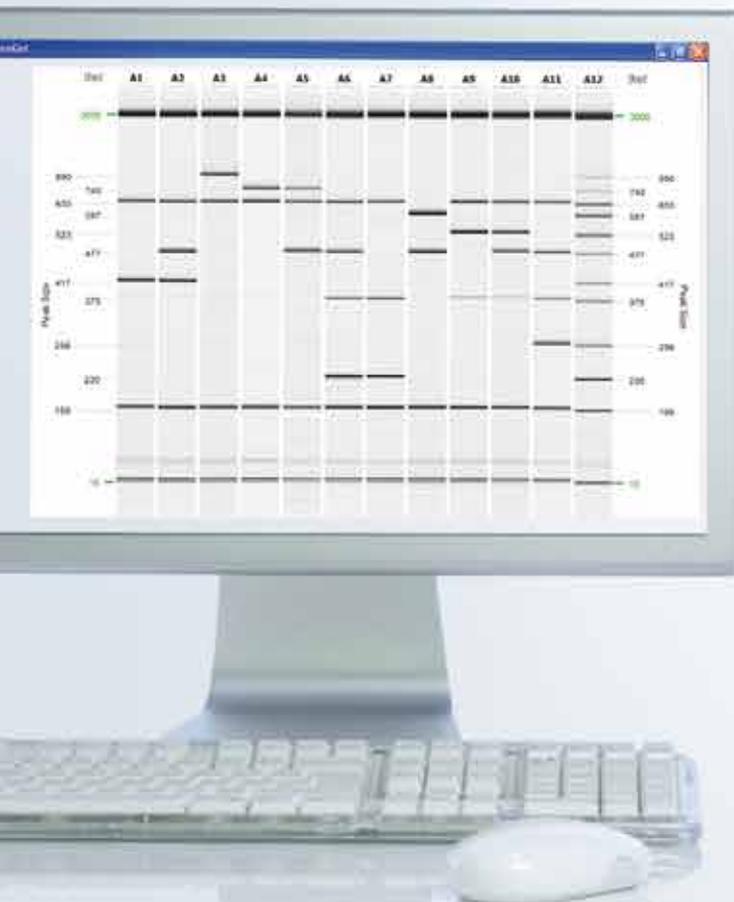
Unattended analysis of up to 96 samples



Resolution down to 3–5 bp for fragments <500 bp



Reliable detection with sensitivity down to 0.1 ng/μl



Sample to Insight



# The QIAxcel Advanced System – a

The QIAxcel Advanced capillary electrophoresis system automates DNA and RNA analysis, providing time and cost efficiency with a new level of convenience and analysis performance.

**3** minutes

Analysis of 12 samples in as little as 3 minutes

**3–5** bp

Resolution down to 3–5 bp for fragments <500 bp

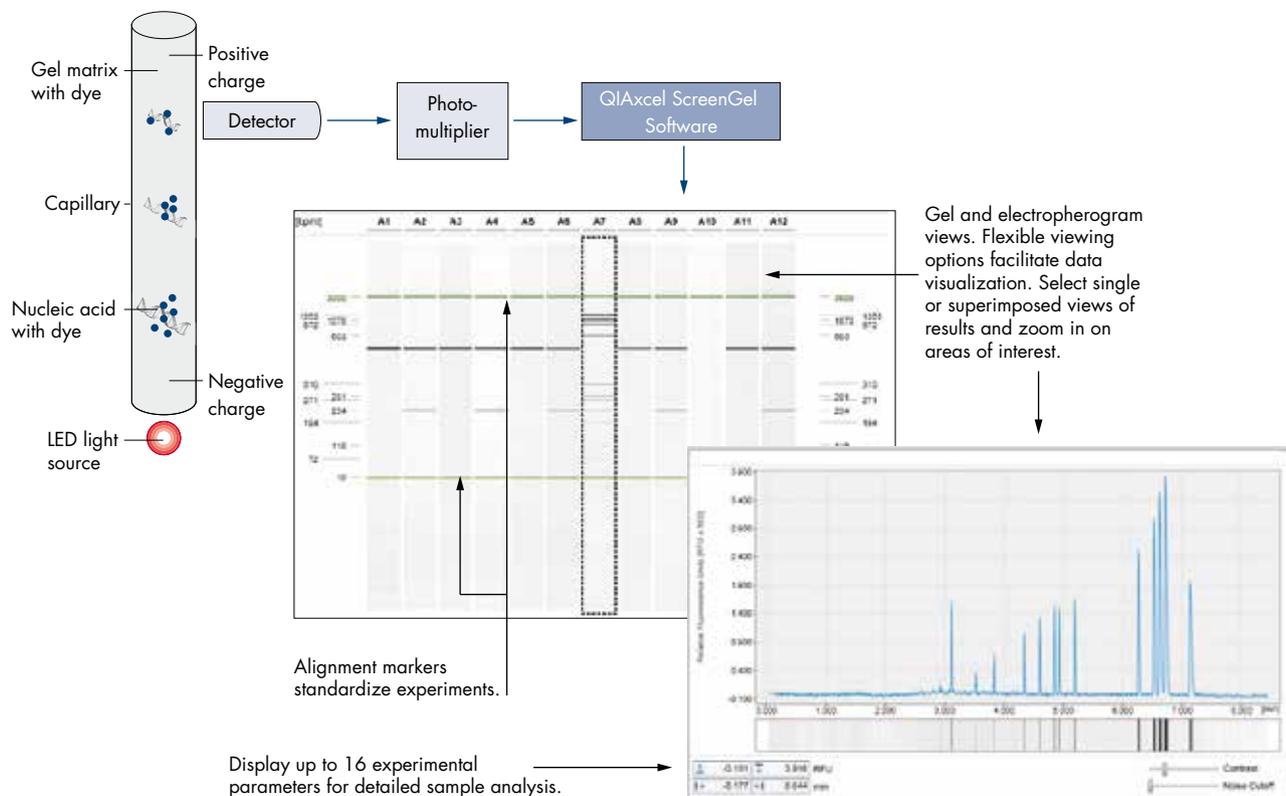
**96** samples

Unattended analysis of up to 96 samples

**0.1** ng/μl

Reliable detection with sensitivity down to 0.1 ng/μl

Nucleic acid molecules are separated by application of an electrical current to a gel-filled capillary and are detected as they migrate towards the positively charged terminus. The signal data pass through a photomultiplier and are converted to electropherogram and gel images by the QIAxcel ScreenGel® Software.



# ready-to-go electrophoresis solution



## Maximum convenience, minimum hands-on interaction

Little to no sample preparation is required. Automated sample loading and analysis limit manual, error-prone steps.



## Standardized experiments, reproducible results

Predefined protocols and sample normalization ensure consistent results – from run to run and lab to lab.



## Improved cost efficiency

Reusable cartridges enable lower cost per sample than slab gels and lab-on-a-chip technologies.



## Advanced sample analysis

Digital data output and state-of-the-art algorithms provide both qualitative and quantitative data. Automatic analysis of results streamlines quality control, detection and genotyping assays.



## Instrument and data security

Software supports 21 CFR part 11 compliance for user and experiment management, securing instrument access and ensuring traceability and integrity of your results.



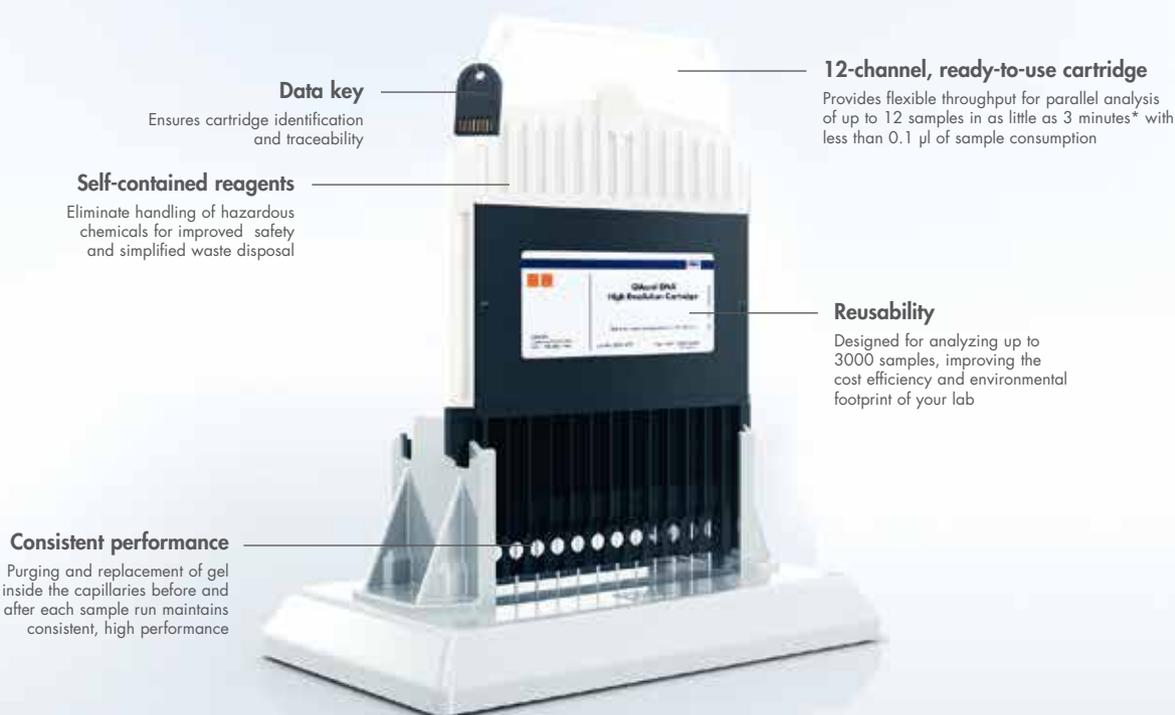
## Data export flexibility

Flexible data export options and customizable reports show your results exactly how you want to see them.

—● Explore more QIAxcel Advanced at [www.qiagen.com/QIAxcel](http://www.qiagen.com/QIAxcel)

# Analysis cartridges designed for versatility and flexibility

Ready-to-run gel cartridges minimize hands-on interaction, reducing manual handling errors and eliminating the need for tedious gel or chip preparation.



Four different cartridges cover various experiment requirements and offer both flexibility and versatility in both DNA and RNA analysis applications.

	Analyte	Best resolution achievable	Run time for 12 samples*	Number of analyses per kit
QX DNA High Resolution Kit	DNA	3–5 bp	7–20 min	1200
QX DNA Screening Kit	DNA	20–50 bp	5 min	2400
QX DNA Fast Analysis Kit	DNA	50–100 bp	3–5 min	3000
QX RNA QC Kit v2.0	RNA	–	10 min	1200

\* Run time depends on the instrument method used.

—● Discover more QIAxcel Advanced applications at [www.qiagen.com/QX-applications](http://www.qiagen.com/QX-applications)

# High performance, maximum convenience

QIAxcel Advanced provides an all-in-one solution for reliable analysis of nucleic acids. Full automation and hands-free sample loading minimize error-prone manual steps, ensuring reproducibility, standardized results and significant time and cost savings.



#### Easy-access flap

Easily switch from one cartridge to another.

#### Precision electronics and robust hardware

Standardized run parameters deliver consistent results run after run, year after year, with minimal maintenance.

#### Sample tray

Accommodates PCR strips and 96-well plates for unattended sample processing and supports automated plate loading and unloading.

#### Buffer tray

Necessary buffers and alignment markers remain stable for months and only need to be replaced every 500–1000 analyses.

It only takes a few minutes and simple steps to operate the QIAxcel Advanced System and start a run before your first results appear on the computer screen in real time.

#### 1 Place samples in instrument



<1 min

#### 2 Select process profile



<1 min

#### 3 Run check and press start



<1 min

#### 4 First results in real time

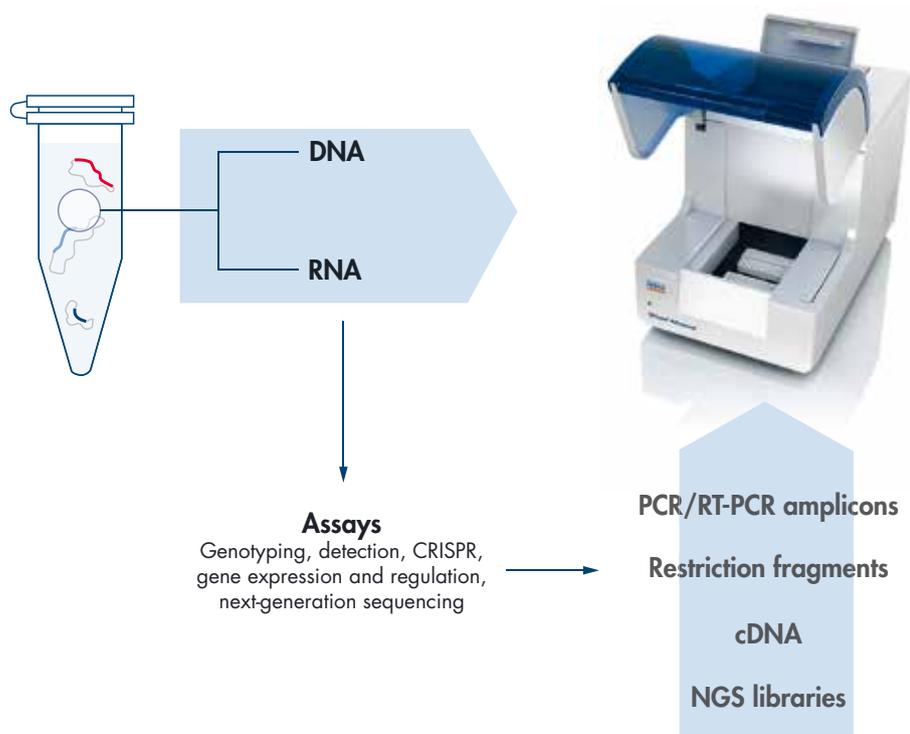


<2 min

—● Request a demo at [www.qiagen.com/automation-demo](http://www.qiagen.com/automation-demo)

# Streamlined electrophoresis applications

Whether you are performing low- or high-throughput screening or complex, high-resolution analysis, QIAxcel Advanced has your application covered! Combining high-performance analysis with short time to result and cost efficiency, QIAxcel Advanced provides reliable genetic detection for applications including DNA fingerprinting, genotyping and nucleic acid quality control analyses.



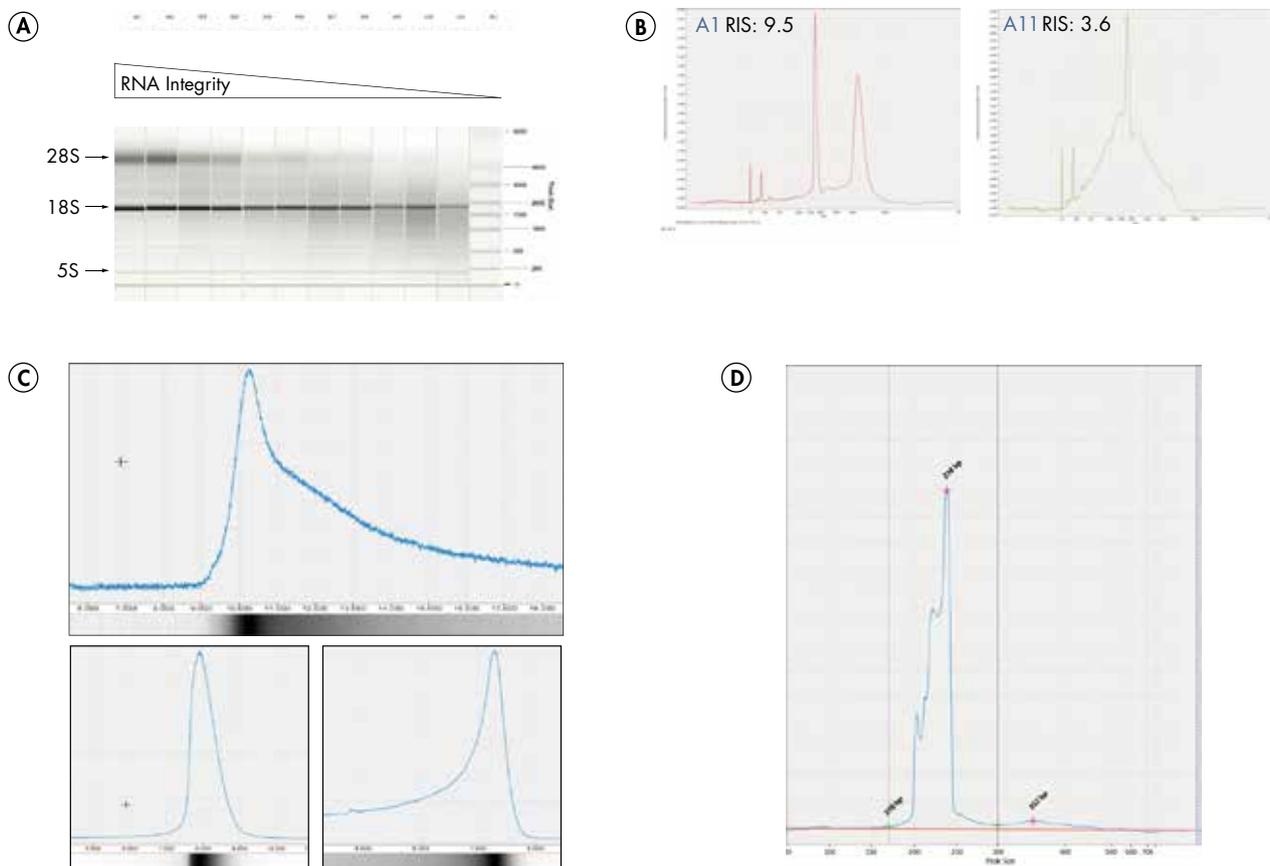
## Automatic analysis with peak pattern matching

QIAxcel ScreenGel Software features peak pattern matching to automate your data analysis. Simply enter the possible migration patterns and their respective biological meanings into the software. After the run, the software reports which samples match the patterns, accelerating and simplifying data interpretation, especially for large sample pools and multiplex PCR assays.

—● Discover more QIAxcel Advanced applications at [www.qiagen.com/QX-applications](http://www.qiagen.com/QX-applications)

# Quality control of RNA, gDNA and NGS libraries

QIAxcel ScreenGel Software can compute various parameters to help assess the quality of gDNA, RNA and NGS samples and match experimental results against defined QC criteria. Comprehensive reports automatically highlight samples that failed to meet the requirements, accelerating and streamlining your QC procedures. The objective RNA Integrity Score (RIS) indicates the integrity of eukaryotic RNA samples, eliminating the need for human interpretation and enabling rigorous RNA QC and sample standardization.

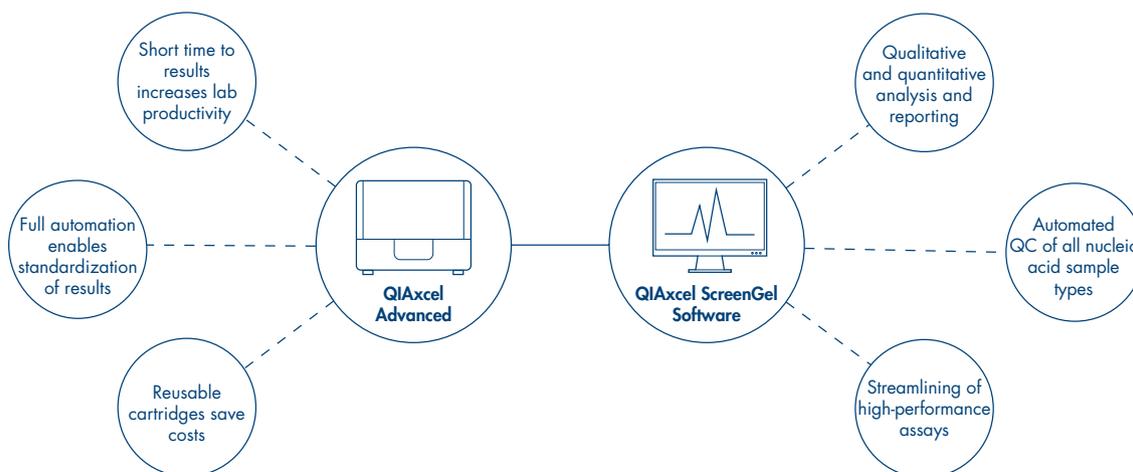


**Objective quality assessment of nucleic acids using QIAxcel Advanced.** **A** Gel view of rat liver total RNA subjected to a gradient of increasing decomposing conditions (A1 to A11); A12: RNA size marker. **B** Electropherograms of lanes A1 and A11 and respective RIS values. **C** Electropherogram of gDNA samples degraded by sonication. Degraded samples contain small fragments that appear as a tail in the peak (bottom), while high integrity samples contain representative high molecular weight fragments (top). **D** Electropherogram of a high-quality GeneRead™ NGS library, which passed the final QC step on the QIAxcel Advanced. Find out more at [www.QIAGEN.com/QX15-NGS-QC](http://www.QIAGEN.com/QX15-NGS-QC).

—● Find out about our automated QC solutions at [www.qiagen.com/QCsolutions](http://www.qiagen.com/QCsolutions)

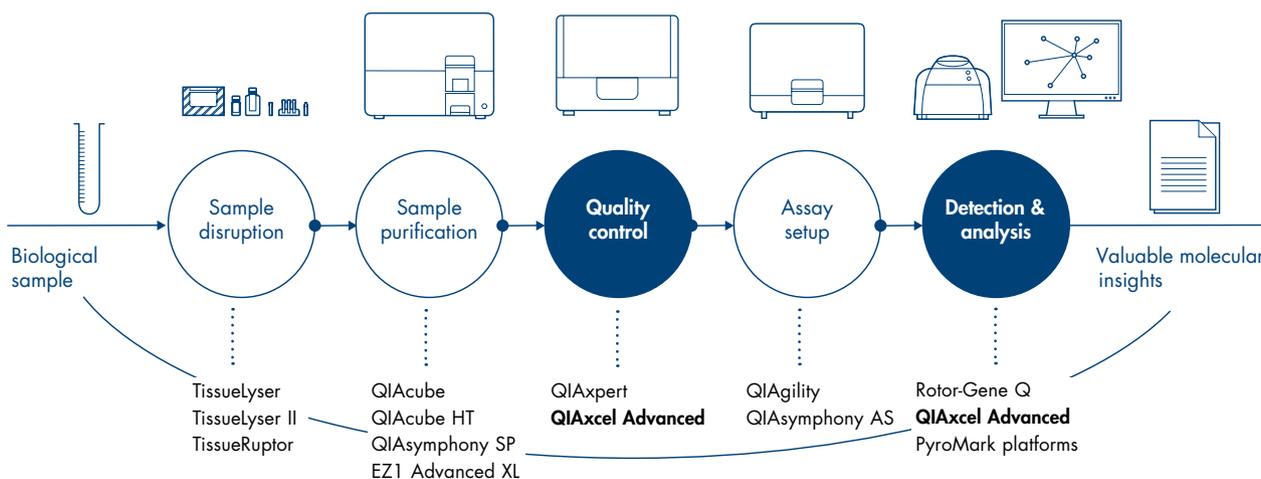
# Discover the benefits of QIAxcel Advanced

Overcome the bottlenecks of slab-gel electrophoresis and lab-on-a-chip systems and enjoy greater process safety and convenience with the QIAxcel Advanced System.



## QIAGEN's automated Sample to Insight solutions

Our automation solutions and optimized chemistries seamlessly integrate into your daily work and help you quickly convert biological samples into valuable molecular insights. We can help standardize every workflow step so you can get the reproducible, high-quality data you need to compare your results to those from labs around the world.



For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at [www.qiagen.com](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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