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Applied Biosystems™

Quantifiler™ Trio DNA Quantification Kit

The Quantifiler Trio DNA Quantification Kit is a robust kit that enables forensic laboratories to simultaneously obtain a quantitative [Read more](#)


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-

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The Quantifiler Trio DNA Quantification Kit is a robust kit that enables forensic laboratories to simultaneously obtain a quantitative and qualitative assessment of total human and human male DNA in a single, highly sensitive real-time PCR reaction. This guides selection of the optimal short tandem repeat (STR) analysis chemistry (autosomal, Y-STR, or miniSTR) and streamlines the workflow while increasing downstream analysis success rates. The kit includes enhanced quantity and quality indicators that help deliver accurate, sensitive, and specific results that work together with the HID Real Time PCR Analysis Software v1.2 to enable informative and integrated workflow decisions. The Quantifiler Trio kit and the HID v1.2 software are designed for use with the Applied Biosystems 7500 Real-Time PCR System.

Highly Accurate

- Determines the ratio of human male to female DNA, even with minute male and excess female DNA (1:4000 or greater)

Highly Sensitive

- <1 pg/μL limit of detection. Quantifies DNA concentrations from 0.005 ng/uL to >50 ng/uL, enabling the use of a broad range of concentrations, with flexible protocols for higher concentration samples.

Highly Specific

- Detects human and higher primate DNA

Highly Informative

- Quantifies DNA from a wide variety of sources, including buccal swabs, blood, semen, tissue, and other human DNA sources, making this kit suitable for casework sample screening, databasing, and paternity labs
- Guides selection of the optimal AmpFLSTR PCR Amplification Kit (autosomal, Y-STR, or miniSTR)
- Quality Index helps improve prediction of STR amplification performance and estimation of DNA quantity in degraded samples, especially in the presence of inhibitors.
- Enhanced inhibition detects the presence of PCR inhibitors (suggesting additional purification of extract and/or whether a mini STR kit like the MiniFiler, NGM SElect, or GlobalFiler kit may be necessary).

Highly Reliable

- Uses gold standard TaqMan real-time PCR technology already widely adopted in forensic laboratories. Real-time PCR has the widest dynamic range of any DNA detection technology, allowing for more accurate quantification of low level samples.

Highly Efficient

- Dual quantification system minimizes sample consumption and streamlines workflow, with results in ~1 hour.
- Optimized and validated as part of a complete DNA testing system with the Applied Biosystems 7500 Real-Time PCR System, AmpFLSTR PCR Amplification kits, and HID Real Time PCR Analysis Software v 1.2 to enable high quality STR profiling results.

A Highly Informative Workflow Tool

The Quantifiler Trio DNA Quantification Kit has been optimized and validated as part of a complete DNA testing system with the AmpFLSTR PCR Amplification kits. The chemistry is compatible with commonly used extraction technologies for easy integration into current lab workflows. This enables the Quantifiler Trio kit to function as a critical component of an improved and integrated workflow for more effective processing of forensic casework samples. Both the kit and the software are fully automatable with most liquid handling robotic platforms.

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human-specific target loci: Small Autosomal, Large Autosomal, and a Y-chromosome target. Each consists of multiple copies dispersed on various autosomal chromosomes (Small Autosomal and Large Autosomal) or multiple copies on the Y-chromosome.

Optimized Chemistry: The assay chemistry has been optimized for more efficient multiplexing, faster PCR cycle times (~1 hour), and better inhibitor tolerance. The overall performance improvements allow the Quantifiler Trio kit to better match the enhanced performance of newer STR kits that are designed to accommodate more challenging samples, like the Identifiler Plus, NGM Select, or GlobalFiler PCR Amplification kits.

DNA Standard: The Quantifiler Trio DNA Standard is a pooled, human genomic, smaller molecular weight DNA for improved stability, homogeneity, and correlation with forensic samples. There is a five point standard curve protocol that helps improve efficiency with up to 6% more samples on a plate.

Packaging Features: To help laboratories control for and minimize the potential of reagent contamination, as well as to better accommodate automated platforms, the Quantifiler Trio DNA Quantification Kit has some key packaging features:

- Four 100-reaction individual-use screw cap tubes (1 tube will process a 96 well plate)
- The DNA standard is packaged in a separate box.
- Both the reagent and DNA standard box are shipped together in an STR-style sleeve with peel & stick reagent lot barcode labels. This allows customers to separate out the reagents easily for special storage upon arrival at the laboratory.

Specifications	
Product Line	Quantifiler
Quantity	400 reactions
Target	Large autosomal (LA) human target, Y chromosome, small autosomal (SA) human target
Unit Size	Each

Contents & Storage

Store at -5°C to -30°C upon receipt, 2°C to 8°C after initial use.

Documents & Downloads

Certificates

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Safety Data Sheets



Product Information

Manuals



-  [Product Sheet: Quantifiler Trio DNA Quantification Kit](#)
-  [User Guide: Quantifiler HP and Trio DNA Quantification Kits](#)
-  [Quick Reference: Quantifiler HP and Trio DNA Quantification Kits](#)

Scientific Resources

Application Notes



-  [Application Note: Get more answers from challenging bone samples using the latest tools in forensic DNA analysis](#)

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 [Poster: Enhancing the Sexual Assault Workflow: Testing of Next Generation Assessment and Y-STR Systems](#)

Reference Materials

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 [Quantifiler Trio DNA Quantification Kit Validation Certificate](#)

Frequently asked questions (FAQs)

How does the quantification solution provided by the Quantifiler Trio and HP DNA Quantification Kits and HID Real-Time PCR Software easily integrate with robotics for an automated workflow?	▼
Can I use the basic SDS v1.2.3 software to analyze data generated with the Quantifiler Trio and HP DNA Quantification kits?	▼
What instrument can I use with the Quantifiler Trio and HP DNA Quantification kits and HID Real-Time PCR Software quantification solution?	▼
Does the Quantifiler Trio DNA Quantification Kit assay perform well with male:female mixture samples?	▼
How is female DNA detected with the Quantifiler Trio and HP DNA Quantification kits? Is there a specific marker for females?	▼

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