TECHNE

Quantica®

Real-time nucleic acid detection system

multiplex capability...
chemistry versatility...

Bibby Scientific U.S.

Quantica®

the real-time nucleic acid detection system from Techne has been designed with the advantage of having an open architecture and chemistry format that allows the end user full flexibility of the methods and research they wish to pursue

Features

Solid state white light source and PMT (photomultiplier tube) detector gives an impressive excitation range of 470nm to 650nm and a detection range of 500nm to 710nm

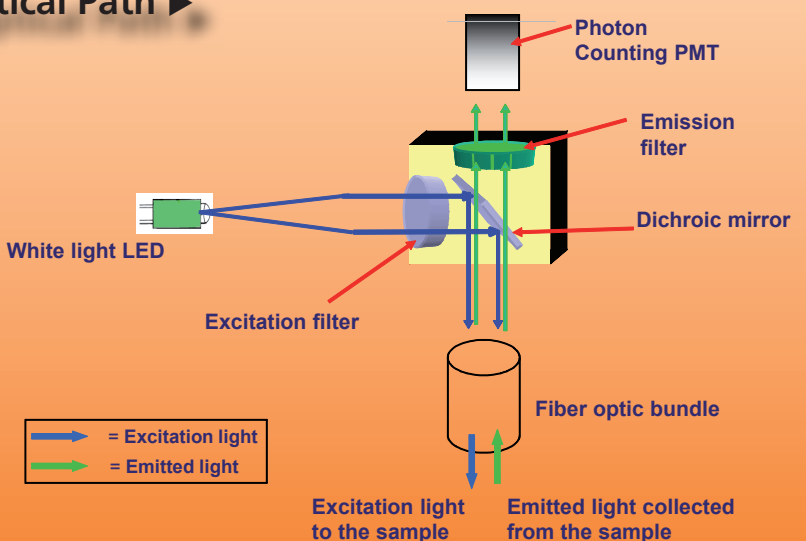
Multiplex - multiple wavelengths are detectable per sample using up to four paired excitation and emission filters housed in individual cartridge systems

Wide dynamic range - up to at least 9 orders of magnitude from starting copy number and high sensitivity detecting down to 1nM fluorescein and single copy templates, depending upon the assay

Heated Lid

The flexible optical heated lid system is designed to minimize loss of sample and prevent sample condensation. Temperature controlled, it allows further method optimization where pre-incubation stages may be required (e.g. in reverse transcription techniques) or where changes in the heated lid characteristics are needed during the different stages of a program run

Optical Path ▶



Quansoft software and reporting

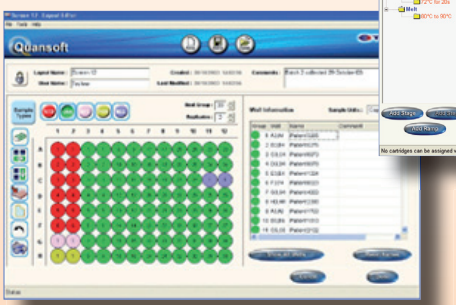
Accompanying Quantica® is our unique, intuitive software **Quansoft**. By employing a series of user-friendly windows, Quansoft enables any real-time experiment to be created with ease.

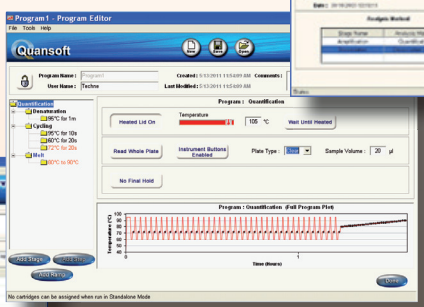
▼ Plate layout editor

Within a matter of seconds, a 96-well microplate can be assigned with unknowns, controls, standards, user-defined samples or test samples. All are color-coded for ease of identification.

◄ Experiment editor

Using combinations of plate layout and program analysis parameters, this unique Quansoft feature allows the user even easier management of experiment protocols.

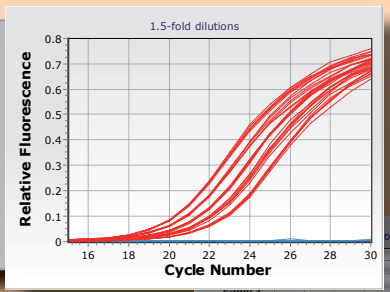


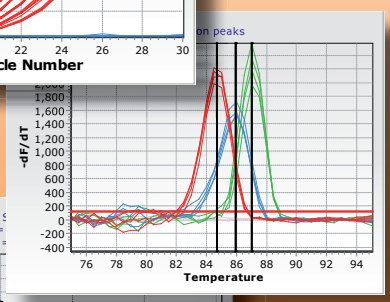


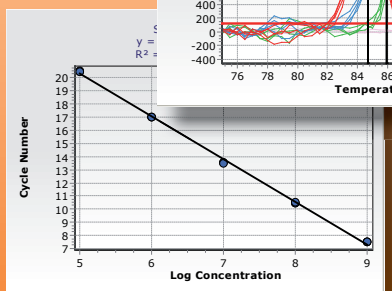
▲ Program editor

Individual cycles and steps as well as a ramp read can be added quickly to build up and display the thermal program and read points.

Comprehensive, completely user customizable report formats can be selected from quantification, dissociation curve, plus/minus scoring and allelic discrimination analyses. All report types including graphs can be exported to Microsoft® Word, PowerPoint or other programs currently used for publication purposes.







Dissociation analysis ▸

Provides the user confident reporting in genotyping experiments and in product verification analysis.

Quantification ▸

Using intercalating dyes or probes, linearity of at least 9 orders of magnitude can be obtained, allowing the user to quantify DNA down to a single copy template or to achieve absolute quantification of 1nM fluorescein in a volume of 20µl.

Technical Specifications

Thermal Cycler

Block format	96 x 0.2ml well
Block specification	8 x Peltier block employing quad-circuit technology to enhance performance
Block uniformity at 50°C	Better than ±0.3°C
Max. ramp rate	Up to 2.2°C/s
Temperature range	4°C to 98°C
Sample volume	15 to 50µl
Heated lid	Adjustable between 100°C and 115°C in 1°C increments, or off
Max. sample evaporation	Less than 15% volume loss from any well using plate sealing recommended by Techne
PC connectability	USB, OS Win XP SP3 or higher and Win 7 (one unit per PC)
Plate format	Low profile 96-well plate (skirted or non-skirted)

Optical Detection System

Excitation source	Solid state white light source
Detector	Photon counting photomultiplier tube
Multiplex dye detection	Up to 4 dyes per reaction tube
User selected filters	Max. of 4 paired excitation/emission filter cartridge systems suitable with currently used dyes*
Fluorescence excitation range	470nm - 650nm (standard filters are centered at 485, 530, 580 and 640nm)
Fluorescence detection range	500nm - 710nm (standard filters are centered at 520, 560, 615 and 685nm)
Dynamic range	At least 9 orders of magnitude of target DNA concentration
Sensitivity (detection threshold)	1nM fluorescein in a 20µl sample
Resolution	1.5 fold difference in target DNA concentration
Weight	55 lbs
Dimensions, WxHxD, in.	16 x 20 x 21”
Input power	715W
Power supply	100V to 230V, 50/60Hz

**custom filter cartridge systems available upon request*

Ordering Information

Part No.	Description
FQPCR96	Quantica real-time nucleic acid detection system
Filters	
FC01	FAM multiplex, 460nm excitation wavelength, 500nm emission wavelength
FC02	Green, FAM/SYBR®, 485nm excitation wavelength, 520nm emission wavelength
FC03	Yellow, HEX, 530nm excitation wavelength, 560nm emission wavelength
FC04	Red, ROX, 580nm excitation wavelength, 615nm emission wavelength
FC05	Blue, Cy5, 640nm excitation wavelength, 685nm emission wavelength

FC01 not included with unit

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2 year warranty

Made in the U.S.A.