**Mx4000 Multiplex Quantitative PCR System**

The 'Mx4000 Multiplex Quantitative PCR System' detects multiple fluorescent PCR chemistries (including TaqMan gene expression assays and custom-designed assays using TaqMan or SYBR green detection) and combines the capabilities of a microplate fluorescence multi-wavelength detection reader with a PCR thermal cycler into a single real-time detection system. Applications include allelic discrimination, plate reads, melting curves, and quantification of single or multiplexed targets.

The Mx4000 system provides broad excitation (350 to 750 nm) and detection (350 to 830 nm) ranges, allowing the choice of fluorophores with little or no spectral overlap, producing clean, delineated signals for superior multiplexing. Each of the four scanning fiber-optic heads independently excites and detects dyes, reading up to four different dyes in a single tube. Users can currently choose from FAM/SYBR Green I, HEX/JOE/VIC, Texas Red/ROX and Cy5 filter sets, but TET, TAMRA, Cy7, Cy3, ALEXA Fluor 350 and custom filter sets are also available. The system is in a 96-well format, allowing the use of single PCR reaction tubes, 8-tube strips or 96-well plates.

The Mx4000 software is intuitive and easy to use. Many features are included, including real-time amplification plots as the run progresses. This allows you to determine at a glance how an experiment is running at any time during thermal cycling, rather than waiting until the end of the run. You can choose to abort a run if a problem develops in a reaction, or stop the experiment and save the data as soon as the desired information is generated. The ability to make allelic discrimination calls by endpoint fluorescence values, as well as by threshold cycle is also featured. Data can be viewed in many forms including amplification plots, scatter plots, sample value screens for the entire plate for all dyes, fluorescence intensity screen, final call results, melting curves, annealing range, and text reports.

A standalone PC is available in our laboratory for users to perform data analysis.

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