

Market for Real-time PCRs soaring in India

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In India, Roche, Eppendorf, Applied Biosystems, Stratagene, Corbett and BioRad are a few companies offering real time PCRs to the researchers. Bio-Rad is a leader in the Real-time and PCR market. It has applications in biopharma companies and in CROs. Real time PCRs are available in the price range of \$20,000-60,000 per unit. According to industry estimates, about 65-70 systems are sold per year in India and the market is growing at the rate of 20-25 percent.

Advantages
Anthony Jai Kumar, assistant manager, marketing, Eppendorf India, said, "The present market for real time PCRs is about Rs 10 crore, growing at rate of 40-50 percent. And about 85-90 units of real time PCRs are sold per year in the country with 30 percent absorption in biopharma companies/institutes. These are available in the price range of Rs 10-30 lakh per unit."

The growth of Indian biopharma sector will continue to support the growth of real time PCRs market as these units offer many advantages to the biopharma researchers.

Traditional PCR is measured at End-Point plateau while Real-Time PCR collects data in the exponential growth phase

PCR technology
The PCR (Polymerase Chain Reaction) technique is a vital tool in many areas of science. It has revolutionized molecular biology. PCR is a key technique in life science research in which a segment of DNA or RNA is copied or "amplified" so that it can be more readily analyzed. PCR has completely revolutionized the detection of RNA and DNA. Traditional PCR has advanced from detection at the end-point of the reaction to detection while the reaction is occurring.

According to reports, real-time chemistries allow for the detection of PCR amplification during the early phases of the reaction. Measuring the kinetics of the reaction in the early phases of PCR provides a distinct advantage over traditional PCR detection. Traditional methods use Agarose gels for detection of PCR amplification at the final phase or end-point of the PCR reaction. The cleaved probe provides fast, precise and accurate results. Real-Time PCR is designed to collect data as the reaction is proceeding, which is more accurate for DNA and RNA quantitation and does not require laborious post PCR methods. record amplification of an Amplicon

Hence Real-time PCR is a powerful and rapid technique for nucleic acid amplification. The accumulation of specific products in a reaction is monitored continuously during cycling. This is usually achieved by monitoring changes in fluorescence within the PCR tube. And real-time PCR enables the detection of amplified DNA during the process of amplification rather than at the end, providing greater accuracy in applications such as gene expression quantification and genotyping.

According to Rajasri Chandra, marketing manager, molecular and cell biology, Labindia Instruments (Applied Biosystems Division), "Real-Time PCR system can be of use in carrying out drug development studies. Genes that code for drug metabolism enzymes are important targets for study in both drug development and clinical research, as they influence individual response. Another use is in sterility testing. Pathogen detection is possible using TaqMan technology. Detection of changes in the environment, as well as all ingredients that are used in developing the product. Many pharmaceutical companies use biological products as their ingredient. It is very important to determine that the final product does not contain residual DNA. Acceptable amount of residual host cell DNA in biological product is 100 pg per dose."

Source:

www.appliedbiosystems.com

Narayan Kulkarni

Applications

Real-Time PCR can be applied to traditional PCR applications as well as new applications that would have been less effective with traditional PCR. With the ability to collect data in the exponential growth phase, the power of PCR has been expanded into applications such as: viral quantitation; quantitation of gene expression; array verification; drug therapy efficacy; DNA damage measurement; quality control and assay validation; pathogen detection; and genotyping

Source:

www.appliedbiosystems.com