

Spring back—or forward?

While it's sometimes hard to remember whether the clock goes forwards or backwards, you'll save time in PCR quantitation, telomere length analysis and large-scale mRNA processing with the latest arrivals on the biomedical research scene.

Intergen introduces the Amplifluor™ universal amplification and detection system for real-time PCR quantitation in closed reaction tubes. This system relies on a hairpin structure that, when incorporated into a PCR product, unfolds to reveal a fluorophore, generating a fluorescent signal. The Uniprimer™ can be used with any PCR primer by incorporating a short sequence on the 5' end during standard oligonucleotide synthesis. As products can be detected by their fluorescence at any time, there is no need to purify samples or to run a gel to determine qualitatively whether a reaction has worked. The system works with DNA or RNA targets *in situ* as well as in a standard reaction, and the manufacturer claims that protocols for almost all reactions can be adapted with few alterations.

High-throughput sequencing, mutation screening *et al.* are all the rage these days, but 'high-throughput cleaning'? That's what is promised by the DyeEx™ 96. From QIAGEN, this kit allows quick removal—4 preps can be done in 18 minutes, according to the manufacturer—of unincorporated dye terminators of various types from sequencing reactions in a standard 96-well format. The DyeEx™ 96 uses prehydrated gel filtration medium and two centrifugation steps to simplify the procedure. The system is compatible with many makes and models of automated sequencers.

The mRNA Express Kit™, from RNA-ture, Inc., offers a solution for parallel processing of RNAs from multiple sources. The kit contains a 96-well filter plate, for

cell capture and lysis, a proprietary membrane and barrier to prevent cross-contamination between wells, and a 96-well microplate containing oligo(dT) for isolation of poly(A) mRNA. All reactions can be performed at room temperature, and RNase-free lysis, wash and elution buffers are included. The samples can then be used for cDNA synthesis or the entire microplate placed in a compatible thermocycler for RT-PCR. Separation and isolation steps can be performed manually, or the system can be used with fully automated systems from a number of manufacturers.

Having high-quality ethanol on hand is important in these DNase- and RNase-free times, and all the better if one can sample it upon occasion. Molecular biology grade ethanol from Sigma-Aldrich provides

the best of both worlds. It has no detectable DNase, RNase or Nickase activities, and it's also benzene-free and non-denatured, so it won't make you go blind. The manufacturer prepays the federal excise tax required for sale of non-denatured ethanol, allowing one to purchase it without necessitating additional record keeping. But there's a catch: it is sold only within the US (and presumably only to those over 21 years of age).

Measuring telomere length in mammalian cells is an integral part of many studies, and the TeloTAGGG telomere length assay from Roche Diagnostics is designed to simplify and speed such

analyses. Designed to work with any telomere that consists of TTAGGG repeats, the kit facilitates selective isolation of subtelomeric and telomeric DNA populations from bulk genomic DNA. Isolated DNAs are run on a standard gel and Southern-blotted, then visualized using a specific non-radioactive probe and a chemiluminescent substrate. Size is determined by comparison with the included molecular weight standard. The kit includes sufficient reagents for up to 50 reactions (including 10 controls).

Allergy to latex is increasing in incidence, with more widespread use of latex gloves. The Wells Lamont Industry Group now addresses this problem by providing knitted nylon glove liners, made of 100% continuous nylon filament. The liners can be laundered and reused up to 50 times, and the manufacturer claims that they have the lowest particulate count of any textile glove, minimizing air contamination and making them ideal for clean-room use. Available in sizes from small to extra large, the liners can stretch for better fit and sensitivity.

Denaturing HPLC (that's high performance, not high pressure) technology is gaining steadily wider use in mutation screening. The WAVE® nucleic acid fragment analysis system from Transgenomic can analyse single- and double-stranded DNA for both mutation screening and size determination using proprietary DNASep® cartridges. The system contains a computer-controlled, heated oven for precise control of analysis temperature (the manufacturer claims a range of 35–80 °C with accuracy within 0.1 °C), which is critical in these applications; the autosampler has an independent temperature control unit, can inject a wide variety of sample sizes and is formatted to fit standard 96-well formats. WAVEMaker software facilitates data analysis.

—Notes compiled by Michael Ronemus



QIAGEN's DyeEx™ 96 cleans sequencing reactions by gel filtration.



Denature mutations quickly by DHPLC with the WAVE® nucleic acid fragment analysis system from Transgenomic.



Precipitate without fear with Sigma-Aldrich's molecular biology grade ethanol.

For more information, contact:

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