Getting the Most out of the PV92 PCR Informatics Kit

The PV92 PCR Informatics kit is one of the most exciting kits that the Biotechnology Explorer™ program has to offer. In order to attain the best results possible and to effectively teach the concepts of PCR in the classroom, we recommend that you pay close attention to the key points described below.

Storage and Stability of the Kit

- Although the kit is stable for shipment at ambient temperature, it contains temperature-sensitive components that must be properly stored upon arrival.
- The components of the kit are guaranteed for 1 year from the date of purchase when stored under the appropriate conditions.
- **Open the kit immediately upon receipt** and store the bagged components at –20°C or 4°C as indicated.

Spinning Down Contents of Reagent Tubes

- Before opening any of the reagent tubes, pulse-spin the contents in a micro centrifuge (~3 seconds) to bring contents to the bottom of the tubes. Contents often become trapped underneath the caps during shipping. The tube containing PV92 primers may appear empty prior to centrifugation since there is only 25 µl of solution per tube.

Preparing Cell Extracts: Two Convenient Options

Option 1: Cheek Cell DNA Template Preparation
Option 2: Hair Follicle DNA Template Preparation

- The PV92 manual is now provided with two alternate protocols to give instructors the added benefit of two robust methods for template preparation. For those instructors with local restrictions, we recommend the Hair Follicle DNA Template Preparation protocol. Please note: the Hair Follicle DNA Template Preparation protocol requires the purchase of protease (166-2003EDU).
- Make sure that the InstaGene™ matrix is well mixed prior to dispensing it to students. Thorough mixing of the suspension is necessary for successful preparation of genomic DNA templates.

Option 1: Cheek Cell Extracts

- When collecting cheek cells following the saline mouthwash, ensure that a matchhead-sized pellet of cells is apparent. Too few cells will yield insufficient genomic DNA, but an excessive amount of cells will saturate the capacity of the matrix.
- After transferring the cheek cells into the InstaGene matrix, mix the tube well by vortexing or flicking the tube repeatedly with your finger. It is important to thoroughly break up clumps of cells.

Option 2: Hair Follicle Extracts

- When selecting hair to be used for genomic DNA preparation, choose hair that has either an obvious sheath (a shiny covering around the base of the hair), or a good sized root (bulb-shaped base of hair).
- The Hair Follicle DNA Template Preparation protocol requires the purchase of protease (166-2003EDU).

Mixing Cell Extracts and Master Mix

- When adding cell extract to master mix, it is critically important **NOT** to transfer InstaGene matrix beads into the PCR reaction tube. Even a minute amount of InstaGene matrix beads will inhibit PCR.