# A NOVEL LAMINATED MICRO CARD FOR A SIMPLE AND EFFICIENT METHOD TO DIRECTLY TRANSFER BUCCAL EPITHELIAL CELLS ONTO FTA® PAPER

**Xavier G. Aranda[1], Betsy Moran[2], Arthur J. Eisenberg[1]**
[1]University of North Texas Health Science Center, 3500 Camp Bowie Blvd., Forth Worth, TX 76107; [2]Whatman Inc., 9 Bridewell Place, Clifton, NJ 07014.

A simple non-invasive buccal swab has become the preferred method for the collection of biological samples for genetic testing. The most recent annual report from the American Association of Blood Banks has indicated that over 900,000 samples were collected in 2003 for parentage testing, with over 90% of the samples collected with buccal swabs. Previous studies have attempted to directly transfer buccal epithelial cells onto FTA® paper by either pressing or rolling the swabs onto the paper. This process varies considerably based upon the user, and is often inefficient resulting in an uneven distribution of cells on the FTA® paper. In order to simplify the process and make it more consistent and efficient, Whatman Inc. has developed a Laminated Indicating FTA® Micro Card. The card has been designed so that the FTA® paper portion of the card is sandwiched between the two laminated surfaces. A simple protocol has been developed to maximize the transfer of buccal epithelial cells onto the FTA® laminated cards utilizing a round "lollipop" foam tipped swab. This swab provides a large collection and transfer area that fits within the target circle on the FTA® paper. The swab is simply placed on top of the FTA® paper, the laminated flap is closed, and pressure is applied using the index and middle finger. Full DNA profiles are routinely obtained from 1.2 mm punches taken from within the target circle. The Laminated Indicating FTA® Micro Card provides an efficient and cost effective method to directly transfer buccal epithelial cells at the point of collection onto FTA® Paper. In addition, the laminated flap minimizes the potential exposure to any biological pathogens.