

DIRECT AMPLIFICATION OF DATABASE SAMPLES WITH 5X AMPSOLUTION™

Stephen K. Gicale, Nicole R. Frazier, Elizabeth D. Johnson, United States Army Criminal Investigation Laboratory, DNA Databasing Branch

Direct amplification is the preferred method for typing DNA database samples because of the significant time savings. While the Identifiler Plus™ (Life Technologies) kit offers some time savings over the Identifiler kit™ due to a shorter amplification time, it is not a direct amplification kit. A method was developed for the direct amplification of FTA® punches using the Identifiler Plus™ kit.

Direct amplification of FTA® punches with Identifiler Plus™ was performed by two methods. First, FTA® punches were added to 10 µL of Tris-EDTA (TE, 10mM Tris-HCl-0.1mM EDTA, pH 8.0) followed by the addition of 15 µL of Identifiler Plus™ Amplification Mix. Second, FTA punches were added to 5 µL of TE and 5 µL of AmpSolution™ (Promega Inc.) followed by the addition of 15 µL of Identifiler Plus™ Amplification Mix. In both cases, the samples were amplified at 26 cycles using the manufacturer's recommended cycling parameters.

Profiles developed from FTA® punches with and without the addition of AmpSolution™ were evaluated for first pass rate, concordance, peak height ratios, intracolor balance, stutter and artifacts. Superior results were obtained with the addition of AmpSolution™.

The opinions or assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense. Names of commercial manufacturers or products included are incidental only and inclusion does not imply endorsement by the authors, Department of the Army or the Department of Defense.