

STOCHASTIC AND ANALYTICAL THRESHOLD FOR IDENTIFIER ON THE 3100 AND 3130

April Perry, Marisa Fahrner MSFS, Shelley Johnson, MFS, Dr. Charles M. Kelly, PhD
Fairfax Identity Laboratories a Division of AIBiotech, 601 Biotech Drive Richmond, VA 23235

The new SWGDAM Interpretation Guidelines for Autosomal STR Typing by Forensic DNA Testing Laboratories issued on 1/14/10. Included in these guidelines were suggestions for the establishment of both analytical and stochastic thresholds. In our efforts to abide by this new guideline we have improved our reliability and stringency of condition under which we run our samples. As recommended we amplified a set of dilutions. With these dilutions we tested both our injection times (1, 3, 5, 10 and 15 seconds) as well as our amplification load (.5, 1.0, 1.5 and 2.0 ul). These conditions were run on both a 3100 and a 3130. We were able to gain valuable knowledge from our systems and were able to drop and add conditions under which samples were run to obtain the most complete and reliable results. Due to this testing were able to drop both our LOD (Analytical Threshold) and our reporting threshold (Stochastic Threshold). Laboratories should see this change in guidelines as an opportunity to re-evaluate and improve their processes.