

DEVELOPMENT OF THE INVESTIGATOR STRGO! KITS FOR DIRECT AMPLIFICATION OF REFERENCE SAMPLES

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Reference samples are typically of high quality and quantity and the outcome of a STR analysis is more predictable compared to an unknown casework sample. The analysis process of reference samples therefore can be streamlined by doing STR PCR directly from a FTA punch or a crude lysate of a buccal swab, eliminating sample extraction and quantification. Based on the fast and highly robust Investigator STR Plus kits we have developed assays for direct amplification, the Investigator STR GO! Kits. New assay formats have been developed, covering the CODIS set of markers, as well as the new European Standard Set (ESS) with our without SE33. Blood or buccal cells on FTA and other paper and swabs can be used as sample. Direct PCR amplification only takes about 45 – 54 min depending on the type of sample. For buccal swabs a convenient 5 min room temperature lysis protocol to obtain a crude lysate to be used as PCR template is provided. The assays give rise to balanced profiles and allow high first pass rates for all common reference samples. To overcome unbalanced amplifications due to rare mutations in the primer binding sites of vWA, D16S539 and SE33, new SNP primers have been introduced.