

DNA RADAR: REVELATION OF SURNAMES FROM DNA SAMPLES WITH NEXT GENERATION SEQUENCING

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DNA RADAR™ is an innovative next generation sequencing (NGS) assay that provides a complete human identification solution in a single assay. Included are STR markers for CODIS & ENFSI and SNP phenotype markers for blood type, hair, eye color and ancestry. Most importantly, the technology employs proprietary, patent-pending predictive tools to reveal the likely surname(s) associated with the DNA sample. Data will be presented on samples processed as part of a single tube, addition only workflow utilizing standard laboratory equipment and an Illumina MiSeq sequencer. Analysis by Kailos Blue, a complete analytic and reporting software package, provide results on how the incorporation of unique molecular identifiers (UMIs) enables the determination of the representation of original DNA templates, increasing the sensitivity and specificity of the results and the ability to reduce stutter in STR calling. Results will be presented from the development and validation of the assay on unknown samples of varying quality, mixtures and input amounts for the determination of surnames.