



COMMONWEALTH of VIRGINIA

DEPARTMENT OF FORENSIC SCIENCE

OFFICE OF THE DIRECTOR
A Nationally Accredited Laboratory

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NOTICE OF DFS POLICY CHANGE

To: All Agencies Served by DFS
From: Linda C. Jackson, Director 
Date: December 27, 2021
RE: **STRmix™ Statistical Capabilities for DNA Mixtures**

The Virginia Department of Forensic Science is pleased to announce that it has expanded its probabilistic genotyping capabilities by instituting the use of STRmix™ at all four regional laboratories. STRmix™ is a probabilistic genotyping software (PGS), developed by New Zealand's Institute of Environmental Science and Research (ESR) and Australia's Forensic Science South Australia (FSSA), that is used by forensic scientists in the interpretation of complex DNA mixtures.

STRmix™ has been extensively validated and is utilized in casework interpretation in many laboratories around the world and across the United States. The Department performed its own internal validation of STRmix™ in accordance with the FBI Quality Assurance Standards (QAS) for Validations, which was reviewed by the Department's advisory board, the Scientific Advisory Committee (SAC) and its Forensic Biology Subcommittee at meetings held in October 2021. Copies of the internal validation summary may be obtained from the Department by any interested parties. The Department's STRmix™ System Procedures Manual (document number 210-D2021) is available on the [DFS website](#).

DNA examiners in each laboratory are trained in the use of STRmix™. They will use STRmix™ when they have identified two- to three-person mixtures in "non-persons cases" (e.g., larcenies and felons in possession of firearms) that meet defined criteria. Its use will be noted on the Certificate of Analysis in the "Statistical Analysis Methods" section. The results, including any conclusions drawn and statistics calculated will be in the "Results and Interpretations" section of the report.

As it has since 2014, the Department will continue to utilize the TrueAllele® Casework System for "persons cases" (e.g., homicides, sexual assaults, malicious wounding) and any "non-persons cases" that do not meet the defined criteria for STRmix™.

For general questions regarding the utilization of STRmix™ by DFS, please contact Forensic Biology Program Manager Brad Jenkins at (804) 588-4025. For case specific questions, please contact the Forensic Biology Supervisor at the DFS regional laboratory that provides services to your agency:

Central (Richmond)	Theresa Francis	(804) 588-4072
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