

## Standard for Training in Forensic Short Tandem Repeat Typing Methods Using Amplification, DNA Separation and Allele Detection



### WHAT IS AN AAFS STANDARD FACTSHEET?

The AAFS produces clear, concise, and easy-to-understand factsheets to summarize the contents of technical and professional forensic science standards on the OSAC Registry. They are not intended to provide an interpretation for any portion of a published standard.

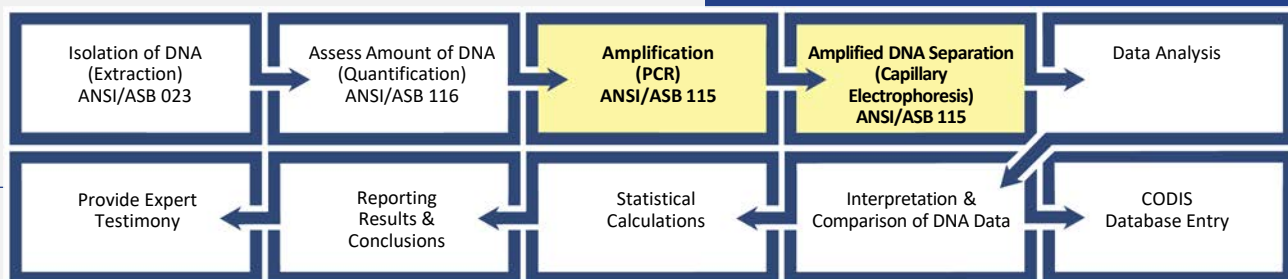
### WHAT IS THE PURPOSE OF THIS STANDARD?

Testing of evidence containing DNA (e.g., blood, semen, saliva, tissue) is routinely performed to exclude or potentially link an individual to a crime scene. DNA testing involves a sequential series of required steps specific to each type of DNA testing performed. The general steps are outlined in the diagram below.

Comprehensive and documented training of DNA personnel prior to conducting any testing on evidence in a case is required to ensure quality and consistency in the testing and communication of the DNA test results and the conclusions derived from the DNA results.

### WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

This standard provides requirements for the training program used for the proper training of personnel in the methods of polymerase chain reaction (PCR) amplification, DNA separation and allele detection in the STR typing process. These three processes are critical to the generation of STR DNA test results.



### HOW IS THIS STANDARD USED, AND WHAT ARE THE KEY ELEMENTS?

The standard details requirements for the training of personnel in the amplification, DNA separation and allele detection of DNA recovered from various types of biological samples routinely tested by forensic science service providers (FSSPs) performing DNA STR testing. It includes 1) specific knowledge-based training regarding the fundamental scientific principles and methods, including any limitations; 2) practical training; and 3) knowledge-based and practical competency assessment of that training.

This standard is intended to be used in conjunction with [ANSI/ASB 022, 1st Ed. 2019](#), which provides the overall scope and framework for the testing training program and includes the requirement that all training is documented and retained by the FSSP. This standard is one in a series of standards that span all aspects of training for DNA testing and communication (see the individual boxes in the diagram).

This is a standard practice. Additional training beyond that required in the standard may be necessary depending on the testing assays used and the types of evidence tested by the FSSP.