



TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Forensic Chemistry Standard Operating Procedure Manual Primary, Secondary and Working Standards

8.0 PRIMARY REFERENCE, SECONDARY, AND WORKING STANDARDS

8.1 *Primary Reference Standards*

- 8.1.1 Primary reference standards are used for definitive identification of legally significant substances.
- 8.1.2 These standards will be analyzed with a category A test upon receipt into the laboratory. The results will be verified with scientific literature or a previously confirmed primary standard. If scientific literature is unavailable, then a certificate of analysis provided with the standard may be used for verification. Interlaboratory comparison data of primary reference standards may be used for instrumental techniques that cannot be provided by the manufacturer or cannot be found in scientific literature.
- 8.1.3 Any standard producing data that does not correspond to the accepted spectra will not be used. The vendor will be contacted to resolve the situation.
- 8.1.4 Standards past their expiration date or without an expiration date may be re-verified before use in casework with a category A test. This re-verification will be valid for one year, and the results will be maintained in the appropriate log. If re-verification fails, the standard will be destroyed, and a new standard will be procured.
- 8.1.5 The standards will be securely stored according to supplier recommendations and inventoried annually.
- 8.1.6 Disposal of primary standards will follow standard hazardous waste disposal protocols that are currently in place within the TBI FCU.

8.2 *Secondary Standards*

Secondary standards are samples obtained from various sources for training purposes. These standards must be compared to a primary reference standard by utilizing a category A test before use and will be inventoried annually.

8.3 *Working Standards*

Working standards will have an expiration date of one year from their preparation. If a working standard is received from a chemical supplier, their expiration date will apply. All working standards must be compared to a primary reference standard by utilizing a category A test prior to use in casework. Any expired working standards may be re-verified for fitness of use with a category A test. Re-verified standards will have a one-year expiration date from the re-verification date, and the results will be maintained in the appropriate log. Standards that fail re-verification will be destroyed.

8.4 *Documentation of Standards*

Logs of primary reference, secondary, and working standards will be maintained by each laboratory. Log sheets for these standards are located in the Lab Documentation folder in Ensuir. Please refer to the Documentation chapter for documentation guidelines.