
Administrative Policy and Procedure for Reference Materials and Standards

1.0 Purpose – To classify and control the reference materials used in physical evidence examinations at the Raleigh Laboratory and the Western Regional Laboratory.

2.0 Scope – This policy applies to the below listed reference collections and reference standards maintained in the Physical Evidence Section. For the purposes of this policy and procedure, the Trace Unit will encompass both the Raleigh Laboratory Trace Unit and the Western Regional Laboratory's limited trace evidence service of fire debris examination. The Firearms Unit will encompass both the Raleigh Laboratory Firearms Unit and the Western Regional Laboratory's Firearms Unit.

3.0 Policy

3.1 Reference Collections

3.1.1 The Trace Unit maintains the following reference collections:

3.1.1.1 Fire Debris

- In-house reference collection of ignitable liquids – Raleigh Laboratory
- In-house reference collection of ignitable liquids – Western Regional Laboratory

3.1.1.2 Explosives

- In-house reference collection

3.1.1.3 Fibers

- CTS Reference Collection of Synthetic Fibers
- In-house reference collection
- Textile Consultants Fabric and Fiber Kits
- McCrone Research Institute Fiber Kit

3.1.1.4 Hair

- Cargille Reference Set of Commercial Fur Hairs
- In-house reference collection

3.1.1.5 Paint

- PPG and DuPont Color Code Books
- PDQ
- CTS Paint File

3.1.1.6 Chemical Standards

- Purchased chemicals

- Scientific Polymer Products, Polymer Sample Kit

3.1.1.7 Instrumental Libraries

- FTIR spectral libraries, including atrpolym, crime, fluka, ncsbipolymers, ncsbimiscellaneous, ncsbifiber1, Iowa, fibers
- NIST mass spectral libraries
- In-house ignitable liquid chromatographic library

3.1.2 The Firearms Unit maintains the following in-house reference collections:

- Firearm
- Ammunition

3.1.3 The reference collections maintained in the Physical Evidence Section shall not be considered evidence.

3.1.4 Prior to use in casework, the technical leader for the related discipline shall approve the materials and any data generated from the collection for use.

3.2 Reference Standards

3.2.1 The Trace Unit maintains the following reference standards:

- Polystyrene
- Weight standards
- Microspectrophotometry Standards (Holmium Oxide, Didymium Oxide, Neutral Density Filters 0.1 OD, 0.5 OD, 1.0 OD)
- Copper (Cu) standard for SEM
- Stainless Steel 316 standard for SEM
- PLANO GSR Standard for SEM
- Manganese (Mn)/Rhodium (Rh) 5492 standard for SEM
- Kevex Spectrace OFHC Copper Standard
- Locke Scientific Glass Standards

3.2.2 The Firearms Unit maintains the following reference standards:

- 0.500" and 1.000" gage blocks
- DMD 24" calibration rod
- Weight standards
- Stage micrometer
- Hott-Rods
- 12" ruler
- 36" ruler
- 2461 standard casing
- 2460 standard bullet
- Comparison microscope performance check reference bullets

- Balance performance check reference bullets

3.2.3 These reference standards are utilized for calibration and quality control checks and have certificates of traceability or equivalent documentation.

3.2.4 The associated technical procedures that utilize the reference standards state the proper use and storage.

3.2.5 Access

3.2.5.1 All employees of the Trace Unit have access to the Trace Unit reference standards and materials.

3.2.5.2 All employees of the Firearms Unit have access to the Firearms Unit reference standards and materials.

3.3 Test Fires

3.3.1 Test fires are considered reference items in the Laboratory.

3.3.2 Test fires used for comparison purposes shall be returned to the submitting agency.

Revision History		
Effective Date	Version Number	Reason
04/06/2016	1	Original ISO Document. Created by combining Administrative Policy and Procedure for Reference Materials and Standards (Trace Unit) and sections of the Firearms Unit Administrative Policy and Procedure Manual.