STANDARDS BULLETIN

October 2021

This Standards Bulletin from the Organization of Scientific Area Committees (OSAC) for Forensic Science provides a monthly update on:

- Standards moving through the OSAC Registry approval processes for published and OSAC Proposed Standards.
- Standards moving through the development process at standards developing organizations (SDOs).

Bulletin Summary:

- New standards added to the OSAC Registry: 1
- Standards under consideration for the Registry and open for comment: 11
- New SDO published standards: 9
- Standards open for comment at SDOs: 18

OSAC REGISTRY UPDATES

The OSAC Registry is a repository of high-quality, technically sound published and proposed standards for forensic science. These written documents define minimum requirements, best practices, standard protocols, and other guidance to help ensure that the results of forensic analyses are reliable and reproducible.

New Standard Added to the OSAC Registry

SDO Published Standard (added October 5, 2021):

- *ASTM E3260-21 *Standard Guide for Forensic Examination and Comparison of Pressure Sensitive Tapes*.

*Criminal justice agencies can access the ASTM standard listed above by visiting OSAC's Access to Standards webpage.

NOTE: ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories* has been moved to the OSAC Registry archive.

To date, the OSAC Registry contains 72 standards (64 SDO published and 8 OSAC Proposed Standards), representing over 15 forensic science disciplines.

Visit the OSAC Registry webpage to see the complete list and access these standards.

Is your organization implementing standards on the OSAC Registry?
Complete OSAC's Standards Implementation Declaration Form and send it to mark.stolorow@nist.gov to let us know.

Standards Open for Comment for OSAC Registry Approval

SDO Published Standards

The OSAC Registry approval process for published standards is used to review existing SDO published standards for technical quality and placement on the Registry. Please submit your comments by **11:59 p.m. ET on November 1, 2021** on whether the following SDO published standard should be included on the Registry.

- ASTM E2808-21a *Standard Guide for Microspectrophotometry in Forensic Paint Analysis*. **Submit your comments here.**

OSAC Proposed Standards

The OSAC Registry approval process for OSAC Proposed Standards is used to review OSAC drafted standards for technical quality and placement on the Registry. The following OSAC draft proposed standards are being considered for submission to an SDO. The final draft provided to the SDO will be available on the OSAC Registry as an "OSAC Proposed Standard." OSAC welcomes comments on whether the current draft is suitable for release to the SDO as well as suggestions for improvements in content and wording. **To be considered, comments must be placed in the OSAC Comment Form and sent to comments@nist.gov by 11:59 p.m. ET on November 1, 2021.**

Bloodstain Pattern Analysis:

- OSAC 2022-N-0010, *Standards for Development of an Accredited Bloodstain Pattern Analyst Certification Program*.

- OSAC 2021-S-0011, *Standards for the Technical Review of Bloodstain Pattern Analysis Reporting*.
    - OSAC 2021-S-0011 STRP Report | Subcommittee response to STRP Report

Fire Debris:

- OSAC 2022-S-0004, *Standard Classification for Ignitable Liquids Encountered in Fire Debris Analysis*.
- OSAC 2022-S-0005, *Standard Test Method for Interpretation of Gas Chromatography-Electron Ionization Mass Spectrometry Data for the Identification of Ignitable Liquid Classes in Fire Debris Analysis*.

Friction Ridge:

- OSAC 2022-S-0012, *Standard for Proficiency Testing in Friction Ridge Examination*.

Gunshot Residue Analysis:

- OSAC 2022-S-0002, *Standard Practice for the Analysis of Organic Gunshot Residue (oGSR) by Gas Chromatography-Mass Spectrometry (GC-MS)*.
- OSAC 2022-S-0003, *Standard Practice for the Analysis of Organic Gunshot Residue (oGSR) by Liquid Chromatography-Mass Spectrometry (LC-MS)*.

Toxicology:

- OSAC 2021-S-0004, *Standard Practices for Evaluating Measurement Uncertainty of Quantitative Measurements in Forensic Toxicology*.
    - OSAC 2021-S-0004 STRP Report

Video/Imaging Technology & Analysis:

- OSAC 2021-S-0037, *Standard Guide for Forensic Photogrammetry*.

Wildlife Forensics:

- OSAC 2022-S-0011, *Standards for Construction of Multilocus Databases*.

NOTE: OSAC Resource Task Group (RTG) members are encouraged to comment on these standards by downloading the RTG Comment Table and submitting it to forensics@nist.gov in accordance with the Registry approval process.

Visit the OSAC website to see all the standards under consideration for the OSAC Registry, along with their status in the Registry approval process.

SDO UPDATES

New SDO Published Standards

The following standards have recently been published by SDOs.

Academy Standards Board (ASB)

- ANSI/ASB Standard 054, *Standard for a Quality Control Program in Forensic Toxicology Laboratories*, First Edition, 2021. This document establishes minimum requirements for quality control practices in forensic toxicology laboratories. The document explains the importance of a quality control program, how to select and care for materials used to prepare quality control samples, proper preparation and use of calibrator and control samples, and requirements for their use in different types of assays. The document also provides direction for the review and monitoring of quality control data in forensic toxicology laboratories. This standard applies to laboratories performing forensic toxicological analysis in the following sub-disciplines: postmortem forensic toxicology, human performance toxicology (e.g., drug-facilitated crimes and driving-under-the-influence of alcohol or drugs), non-regulated employment drug testing, court-ordered toxicology (e.g., probation and parole, drug courts, child services), and general forensic toxicology (non-lethal poisonings or intoxications). It is not intended for the area of breath alcohol toxicology.
- ANSI/ASB Standard 085, *Standard for Detection Canine Selection, Kenneling, and Healthcare*, First Edition, 2021. This standard covers requirements for the selection, kenneling and health care pertaining to detection canines. It does not include training methodology standards.
- ANSI/ASB Standard 105, *Minimum Education Requirements for Firearm and Toolmark Examiner Trainees*, First Edition, 2021. This document provides the minimum education requirements for forensic laboratory applicants and employees entering a training program in firearm and toolmark examination. This document does not apply to previously trained and qualified firearm and toolmark examiners who may be temporarily referred to as trainees when they change employment.
- ANSI/ASB Standard 121, *Standard for the Analytical Scope and Sensitivity of Forensic Toxicological Testing of Urine in Drug-Facilitated Crime Investigations*, First Edition, 2021. This document delineates the minimum requirements for target analytes and analytical sensitivity for the forensic toxicological testing of urine specimens collected from alleged victims of drug-facilitated crimes (DFC). This document does not cover the analysis of blood and other evidence that may be collected in DFC cases.
- ANSI/ASB Standard 140, *Standard for Training in Forensic Human Mitochondrial DNA Analysis, Interpretation, Comparison, Statistical Evaluation, and Reporting*, First Edition, 2021. This document provides the requirements for a forensic DNA laboratory's training program in forensic human mitochondrial DNA (mtDNA) analysis, interpretation, comparison, statistical evaluation, and reporting.
- ANSI/ASB Standard 146, *Standard for Resolving Commingled Remains in Forensic Anthropology*, First Edition, 2021. This document provides laboratory and field procedures and requirements for resolving commingled remains. The techniques presented include size, age, and sex similarities, articulation between skeletal elements, taphonomic similarities, and reconstruction of fragmentary remains. The document also describes the determination of MNI (Minimum

Number of Individuals), as well as the LI (Lincoln Index) and MLNI (Most Likely Number of Individuals) based on the number of paired and unpaired bones.

- ANSI/ASB Standard 150, *Standard for Determination of Medicolegal Significance from Skeletal Remains in Forensic Anthropology*, First Edition, 2021. This standard sets procedures required for the determination of medicolegal significance from suspected skeletal remains. It addresses methodological, testing, and observational procedures for identifying skeletal remains as either human or nonhuman in origin and sets required procedures to assess the relevancy of human remains to the medicolegal death investigation system.
- ANSI/ASB Standard 152, *Standard for the Minimum Content Requirements of Forensic Toxicology Procedures*, First Edition, 2021. This document provides requirements for the minimum content of analytical procedures in forensic toxicology. This standard applies to laboratories performing forensic toxicological analysis in the following sub-disciplines: postmortem forensic toxicology, human performance toxicology (e.g., drug-facilitated crimes and driving-under-the-influence of alcohol or drugs), non-regulated employment drug testing, court-ordered toxicology (e.g., probation and parole, drug courts, child services, breath alcohol), and general forensic toxicology (non-lethal poisonings or intoxications).

ASTM

- *ASTM E2808-21a Standard Guide for Microspectrophotometry in Forensic Paint Analysis*. This guide is intended to assist forensic analysts who conduct UV, visible, NIR, or fluorescence emission spectral analyses on small fragments of paint or use Guide E1610, as this guide is to be used in conjunction with a broader analytical scheme.

Standards Open for Comment at SDOs

Comments are currently being solicited on the following forensic science standards. Visit the OSAC website to view these standards open for comment at SDOs and instructions on how to submit your feedback.

Crime Scene Investigation:

- ASB Best Practice Recommendation 160, *Best Practice Recommendation for Initial Response at Scenes by Law Enforcement Officers*, First Edition, 2021. **Comment deadline October 18, 2021.**
    - NOTE: This standard is the SDO version of OSAC 2021-N-0016 which is on the OSAC Registry.

DNA:

- Recirculation – ASB Best Practice Recommendation 114, *Best Practice Recommendations for Internal Validation of Software Used in Forensic DNA Laboratories,* First Edition, 2021. **Comment deadline October 25, 2021.**

Fire & Explosion Investigation:

- NFPA 921, *Guide for Fire and Explosion Investigations*. **Comment deadline November 10, 2021.**
- NFPA 1321, *Standard for Fire Investigation Units*. **Comment deadline January 5, 2022.**

Gunshot Residue Analysis – Comment deadline November 1, 2021:

- ASTM WK58457 *Standard Practice for Training in the Forensic Examination of Primer Gunshot Residue (pGSR) Using Scanning Electron Microscopy/Energy Dispersive X-Ray Spectrometry (SEM/EDS)*.

Ignitable Liquids & Explosives – Comment deadline November 1, 2021:

- ASTM WK67862 *Standard Practice for Establishing an Examination Scheme for Intact Explosives*.
- ASTM WK78319 *Standard Practice for Separation of Ignitable Liquid Residues from Fire Debris Samples by Solvent Extraction* (revision of E1386).
- ASTM WK73923 *Standard Practice for Establishing an Examination Scheme for Explosive Residues*.

Seized Drugs – Comment deadline October 18, 2021:

- ASTM WK75231 *Assessment of Fourier Transform Infrared (FTIR) Spectroscopy Data During the Qualitative Analysis of Seized Drugs*.

Trace Materials – Comment deadline November 1, 2021:

- ASTM WK58028 *Standard Guide for Forensic Examination of Non-Reactive Dyes in Textile Fibers by Thin-Layer Chromatography* (revision of E2227).
- ASTM WK70035 *Standard Practice for Use of Color in Visual Examination and Forensic Comparison of Soil Samples*.
- ASTM WK72932 *Standard Guide for the Collection, Analysis and Comparison of Forensic Glass Samples*.
- ASTM WK73180 *Standard Guide for Microscopical Examination of Textile Fibers* (revision of E2228).
- ASTM WK75645 *Standard Guide for Forensic Examination of Fabrics and Cordage* (revision of E2225).
- ASTM WK73181 *Standard Guide for Forensic Analysis of Fibers by Infrared Spectroscopy* (revision of E2224).
- ASTM WK74138 *Standard Guide for Using Micro X-ray Fluorescence (μ-XRF) in Forensic Polymer Examinations*.

Interdisciplinary:

- ASTM WK66161 *Standard Practice for Reporting Incidents that May Involve Criminal or Civil Litigation* (revision of E1020-13e1). **Comment deadline November 1, 2021.**
- ASTM WK70379 *Standard Practice for Examining And Preparing Items That Are Or May Become Involved In Criminal or Civil Litigation* (revision of E860-07(2013)e2). **Comment deadline November 1, 2021.**

For a list of forensic science standards that are currently open for comment at OSAC and SDOs, visit OSAC's Standards Open for Comment webpage. This page consolidates and tracks comment deadlines for you and will be updated on a weekly basis.

Work Proposals for New or Revised Standards

The following documents are being initiated and are expected to result in new or revised standards.

ASB

- On September 3, 2021, a Project Initiation Notification System (PINS) was published on page two in the *ANSI Standards Action*. This will begin a 30-day period for public comment on the initiation of ASB's work on the following:
    - BSR/ASB 175, *Standard for Interpreting and Reporting DNA Test Results Associated with Failed Controls and Contamination Events.* This standard provides requirements for the interpretation, comparison, and reporting of DNA data associated with control failures or contamination where re-testing is not performed. These requirements may be applied to any type of forensic DNA testing technology and methodology used in forensic laboratories.
        - NOTE: This standard is the SDO version of OSAC 2020-S-0004 which is on the OSAC Registry.

ASTM

- WK78319 *Standard Practice for Separation of Ignitable Liquid Residues from Fire Debris Samples by Solvent Extraction* is a work item revision to existing standard E1386-15 developed by Committee E30.01.
    - NOTE: This is currently open for comment at ASTM (see above).

OTHER NEWS

Input Needed from Glass Experts

The Glass Task Group of OSAC's Trace Materials Subcommittee has created a survey that is intended to help them prioritize and improve the drafting and editing of ASTM standards related to forensic glass analysis. They are requesting your input so that they can better understand the current and anticipated future status of glass analysis at forensic laboratories.

The task group requests that only one survey be completed per laboratory, so please collaborate as needed to provide the most accurate answers for your laboratory. Please feel free to share the survey link with other laboratories that conduct trace evidence examinations, particularly those that conduct glass analysis.

Survey link:
https://docs.google.com/forms/d/e/1FAIpQLSeQ6MV9XYvJuCqW9WBGCNdXziQBrWktb8S2ilJ5BtwnW24Q4A/viewform

The deadline to complete the survey is **October 19, 2021.** Please contact Troy Ernst (ernstt@michigan.gov) with any questions.

Other Forensic Science News, Events & Training

ASTM

ASTM Committee E30 on Forensic Science will be hosting a virtual workshop on the role and value of voluntary consensus standards in the criminalistics, interdisciplinary, and digital multimedia disciplines on October 19 from 9:00 a.m. – 5:00 p.m. EST. Learn more and register.

CSAFE

The Center for Statistics and Applications in Forensic Evidence (CSAFE) has announced the lineup for its fall 2021 webinar series, beginning September 22 and continuing through December 9. The following webinars are free and open to the public, but researchers and members of the forensics and statistics communities are encouraged to attend. Learn more and register.

- Bloodstain Pattern Analysis Black Box Study | October 14 | 11:00 a.m. – noon CDT
- Using Mixture Models to Examine Group Differences: An Illustration Involving the Perceived Strength of Forensic Science Evidence | December 9 | 9:00 – 10:00 a.m. CST

FTCoE

NIJ's Forensic Technology Center of Excellence (FTCoE) provides evidence-based resources about forensic technologies and emerging challenges. Check out these past and upcoming FTCoE events:

- Just Science podcast: Just Standardizing Sexual Assault Kits (original release date September 24, 2021).
- Webinar: DART-MS Data Interpretation Tool and Other Resources for Seized Drug Analysis | October 21 | 1:00 – 2:00 p.m. ET

NIJ

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