BULLETIN STANDARDS

February 2020

Bulletin Summary

The Organization of Scientific Area Committees (OSAC) for Forensic Science Standards Bulletin provides an update on forensic science standards that are moving through the Registry Approval Process at OSAC and those moving through the development process at standards developing organizations (SDOs).

This bulletin is organized to capture the following standard development phases in the OSAC Registry Approval and SDO processes:

- After being published by an SDO, selected standards and guidelines may proceed to the OSAC Registry Approval Process where they are evaluated further for technical merit and impact on the forensic science community.
- In the SDO process, OSAC committees or task groups submit an idea (i.e., work item), a partially drafted document, or a fully drafted document to an SDO for further development, commenting, and publishing.

Number of New Standards Placed on the OSAC Registry: None
Number of OSAC Registry Documents Open for Comment: None
Number of SDO Documents Open for Comment: Twelve (12)

OSAC Registry Updates

The OSAC Registry serves as a trusted repository of high-quality, science-based standards and guidelines for forensic science practice. A document included on the Registry has progressed through the formal SDO process and has been published as a standard. OSAC elevates standards to the OSAC Registry as an endorsement of the document's high quality and to encourage its adoption by relevant stakeholders in the forensic science community.

Standards Moving through the OSAC Registry Approval Process

The following standards have moved from one step in the OSAC Registry Approval process to another during the last month.

In the Comment Adjudication Phase:

- *ANSI/ASB Standard 020, Standard for Validation Studies of DNA Mixtures, and Development and Verification of a Laboratory's Mixture Interpretation Protocol, First Edition, 2018*.
- *ANSI/ASB Standard 040, Standard for Forensic DNA Interpretation and Comparison Protocols, First Edition, 2019*.

Sent Back to SDO for Revisions:

- *ANSI/ASB Technical Report 097, Terminology Used for Forensic Footwear and Tire Evidence, First Edition, 2019*.

For a list of all standards currently under consideration, please visit the OSAC website.

If your organization is on the "tip of the spear" and has already embraced the OSAC Registry implementation efforts, let us know! Please email mark.stolorow@nist.gov to share your experience.

SDO Updates

New or Revised Standards

On January 6, 2020 the American Academy of Forensic Science Standards Board (ASB) published *ANSI/ASB Standard 106, Wildlife Forensic-Protein Serology Method for Taxonomic Identification, First Edition, 2020*. This document, initially developed by OSAC's Wildlife Forensics Subcommittee and finalized by the ASB Wildlife Forensics Consensus Body, addresses the protocols required for general protein serology methods for taxonomic identification routinely used in the laboratory. This document also covers the use of quality controls (i.e., positive, negative and comparison samples) and the analysis of results if controls fail. Additionally, the document explains how differences in expressed proteins can be used to identify animals at family and/or species level using a suite of serology methods.

Comment Period Open on Draft Documents

Consider sharing your expertise by commenting on the following documents to ensure they are technically sound and aligned with the needs of the forensic science community.

ASB:

- *ASB 098, Standard for Mass Spectral Data Acceptance in Forensic Toxicology*. This standard provides criteria for the acceptance of mass spectral analyses of small molecules (compounds with an atomic weight of less than 800 Daltons) in laboratories conducting any of the following forensic toxicology subdisciplines: 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). This document also provides minimum requirements for acquiring data on single- or multiple-stage mass spectrometers using nominal or high-resolution mass spectrometers. Additionally, it provides instruction on the evaluation of mass spectral data when conducting acquisitions in full-scan mode, selected ion monitoring, multiple-stage analyses, or when using high-resolution mass analyzers. **Comment deadline February 24, 2020.**

- *ASB 113, Standard for Identification Criteria in Forensic Toxicology*. This document sets minimum criteria, based on a point system, for the identification of an analyte during forensic toxicology testing. This document also provides a mechanism for laboratories to evaluate each analytical technique to determine if their testing regimen is sufficient to meet or exceed the minimum points required for identification. This document does not address identification of low molecular-weight analytes (e.g., ethanol, carbon monoxide, cyanide) or metals. **Comment deadline February 24, 2020.**
- *ASB 133, Standard for Age Estimation in Forensic Anthropology*. Age is one of several biological parameters that can be estimated from skeletal material or radiographic images. This standard provides procedures for the estimation of age from skeletal material or radiographic images. It also includes the estimation of age-at-death from skeletal remains and can also be applied to skeletal development from living individuals. Specific methods and techniques are not included in the standard. **Comment deadline February 24, 2020.**
- *Recirculation – *ASB 053, Standard for Report Content in Forensic Toxicology*. This document delineates the requirements for reporting results from forensic toxicology analyses. Specifically, it is intended for the subdisciplines of human performance toxicology (e.g., driving- under-the-influence of alcohol or drugs and drug-facilitated crimes), postmortem forensic toxicology, non-regulated employment drug testing, court-ordered toxicology (e.g., probation and parole, drug courts, child services), and general forensic toxicology (e.g., non-lethal poisonings or intoxications). The document does not apply to the reporting of breath alcohol testing results. **Comment deadline March 9, 2020.**
- *Recirculation – *ASB 054, Standard for a Quality Control Program in Forensic Toxicology Laboratories*. 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. **Comment deadline March 9, 2020.**
- *ASB 050, Best Practice Recommendation for Photographic Documentation of Footwear and Tire Impression Evidence*. This document provides the best practice recommendations for personnel responsible for documenting and photographing footwear and tire impressions for future examinations. Deviations from this document may/may not preclude examination of captured images. **Comment deadline March 16, 2020**.
- *ASB 024, Crime Scene/Death Investigation – Dogs and Sensors, Pre-Scented Canines – Location Check*. This document provides the requirements for pre-scented canine - location check search using a canine team to search for and identify a specific person's (target) scent at a given location. **Comment deadline March 16, 2020.**
- *ASB 026, Crime Scene/Death Investigation – Dogs and Sensors, Pre-Scented Canines – Aged Trail Search*. This document provides the requirements for training, certification and documentation pertaining to pre-scented canine-aged track/trail search. Pre-scented canine aged trail searches use a canine team (canine and handler) to search for and follow aged trails of a specific person's (target) scent over different surface types. An aged

track/trail is a human scent pathway that has been present for some period, typically expressed with a time frame associated with the track/trail (e.g., a 24 hour or older track/trail). **Comment deadline March 16, 2020.**

- *ASB 027, Crime Scene/Death Investigation – Dogs and Sensors, Patrol Dogs: Tracking/Trailing/Area Search/Building Search/Evidence Search of One or More Persons Based on Last Known Position*. This document will provide standards for the training, certification, and documentation pertaining to canine teams (canine and handler) trained to search for specific person(s), location(s), and/or article(s) by starting from the last known position. This pertains to trails less than 24 hours old. **Comment deadline March 16, 2019.**

*Please note that comments on a re-circulation will only be accepted on revised sections of a document, comments made to text not revised from the original comment period will not be accepted.

For the ASB documents listed above, download the comment template and return it to asb@aafs.org by the comment deadline.

ASTM:

- *WK71108 Practice for Quality Assurance of Forensic Science Service Providers Performing Forensic Chemistry Analyses*. This practice discusses procedures for quality assurance of forensic science service providers performing forensic chemistry analyses and provides a framework of quality in the processing of evidence, including maintaining a quality management system; personnel duties, qualifications, training, education and professional development; facility considerations; evidence handling; analytical procedures; instrument and equipment performance; chemicals and reagents; casework documentation and reporting; proficiency and competency testing; method validation and verification; audits; deficiency of analysis; and documentation requirements. **Comment deadline February 9, 2020.**
- *WK71337 Guide for Forensic Examination and Comparison of Pressure Sensitive Tapes*. This guide describes the construction and classification of various tapes and the methods to develop discriminatory information using an efficient order of testing. However, it is not intended as a detailed methods description or rigid scheme for the analysis and comparison of tapes, but as a guide to the strengths and limitations of each analytical method. **Comment deadline February 9, 2020.**
- *WK70035 Guide for Determination and Comparison of Color by Visual Observation in Forensic Soil Examination*. The purpose of this document is to recommend best practices for describing the color of forensic soil/geologic material determined by visual assessment and comparison to a reference color chart. This document encompasses the human visual characterization of soil color in the Munsell color system and provides criteria in forensic soil comparisons to exclude that soils came from the same source. Characterization of color of forensic soils by instrumental methods is not within the scope of this guide. **Comment deadline February 9, 2020.**

To access the ASTM documents listed above, contact Brian Milewski (bmilewski@astm.org) to become a member of Committee E30 on Forensic Science.

New Work Proposals for New or Revised Standards

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

ASB:

- On January 24, 2020 a Project Initiation Notification System (PINS) was published on page 26 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 document:
    - *BSR/ASB Std 102-202x, Standard for Peer Review of Source Conclusions in Toolmark Examinations*. This new document will provide the requirements for conducting peer reviews of source conclusions arising from forensic toolmark comparisons. This document is limited to the process of performing a quality check of the source conclusions reached by the primary firearm and toolmark examiner in a case and does not address or consider other types of technical casework review.

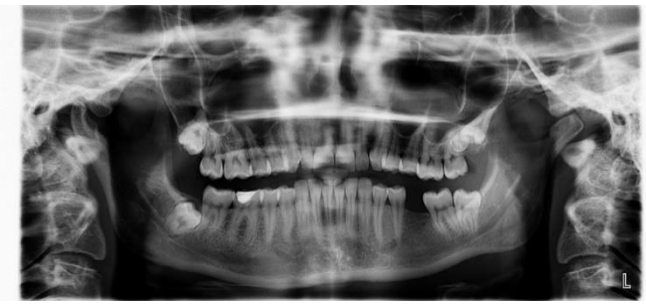
Contact Teresa Ambrosius (tambrosius@aafs.org) for more information on the proposed ASB documents or to submit your comments.

Other News

Attending the 2020 AAFS Annual Scientific Meeting in Anaheim, California?

If so, be sure to visit us at **Booth #103** to learn more about the latest forensic science standards development activities and pick up an "OSAC Member" or "OSAC Affiliate" ribbon to decorate your AAFS Conference badge.

Also, register **Workshop 14 – Mass Disasters and Disaster Victim Identification (DVI) on Monday, February 17** from 8:30 a.m. to 5:30 p.m. to learn more about the OSAC Registry Standard, *ANSI/ASB Best Practice Recommendation 010, Forensic Anthropology in Disaster Victim Identification: Best Practice Recommendations for the Medicolegal Authority, First Edition, 2018,* and its impact the forensic science community. Visit the AAFS Annual Scientific Meeting website for more information and to register!



Thanks to comments from members of OSAC's Odontology Subcommittee, The American Dental Association (ADA) is in the process of updating *ADA Technical Report 1088-2017 Human Identification by Comparative Dental Analysis.* The revision to this OSAC Registry Approved standard is just one example of OSAC's contributions and positive impact and how OSAC and SDOs are working together to strengthen forensic science through the development and use of standards.