



# STANDARDS BULLETIN

October 2024

This [Standards Bulletin](#) from the Organization of Scientific Area Committees (OSAC) for Forensic Science provides a monthly update on forensic science standards moving through the OSAC Registry and standards development process, along with other OSAC news and standards-related information.

## STANDARDS UPDATES

### OSAC Registry Updates

The following **six** standards (5 SDO published, and 1 OSAC proposed) have been added to the Registry effective October 1, 2024.



### Academy Standards Board (ASB)

- [ANSI/ASB Best Practice Recommendation 122, Best Practice Recommendation for Performing Alcohol Calculations in Forensic Toxicology. 1st Ed. 2024.](#)
- [ANSI/ASB Standard 154, Standard for Training on Testimony for Forensic Biology. 1st. Ed. 2024.](#)
- [ANSI/ASB Best Practice Recommendation 171, Best Practice Recommendation for the Management and Use of Quality Assurance DNA Elimination Databases in Forensic DNA Analysis.](#)
  - NOTE: This is the SDO published version of OSAC 2020-N-0007, *Best Practice Recommendations for the Management and Use of Quality Assurance DNA Elimination Databases in Forensic DNA Analysis* and will replace the OSAC Proposed Standard on the OSAC Registry.

## ASTM

- [ANSI/ASTM E3391-24, Standard Terminology Relating to Gunshot Residue Analysis.](#)
- [ANSI/ASTM E2917-24a, Standard Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs.](#)
  - NOTE: This will replace E2917-19a on the OSAC Registry.

## OSAC Proposed

- [OSAC 2023-S-0026, Technical Report for Task-Relevant Information in Friction Ridge Examination](#)

**The OSAC Registry now contains 209 standards (147 published and 62 OSAC Proposed) representing over 20 forensic science disciplines.**

## Standards Open for Comment

### SDO Published Standards Under Consideration for the OSAC Registry

The [OSAC Registry approval process for published standards](#) is used to review existing SDO published standards for technical quality and placement on the Registry.

- There are no SDO published standards under consideration for the OSAC Registry at this time.

### OSAC Proposed Standards Under Consideration for the OSAC Registry

The OSAC Registry approval process for OSAC Proposed Standards reviews OSAC drafted standards for technical quality and placement on the Registry. The following draft OSAC Proposed Standard is 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 and 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](mailto:comments@nist.gov) by 11:59 p.m. ET on **November 4, 2024**.

- [OSAC 2025-N-0003, Standard Terminology for Shooting Reconstruction](#)

## Standards Open for Comment at Standards Development Organizations (SDOs)

There are **12** forensic science standards currently open for public comment at the following SDOs:

ASB:

- One (1) in the forensic toxicology discipline and (1) in the medicolegal death investigation discipline with a comment **deadline of October 14**.
- One (1) in the medicolegal death investigation discipline with a comment **deadline of October 21**.
- One (1) in the dogs & sensors discipline with a comment **deadline of October 28**.
- One (1) in the forensic document examination discipline with a comment **deadline of November 4**.
- One (1) firearm & toolmarks discipline with a comment **deadline of November 11**.

ASTM International:

- One (1) each in the fire debris, gunshot residue, and trace materials disciplines with a comment **deadline of October 21**.

Facial Identification Scientific Working Group (FISWG):

- Five (5) documents with a comment **deadline of November 1**.

Visit OSAC's [Standards Open for Comment](#) webpage to access these documents and for instructions on how to submit your comments.

## SDO Updates

### New Published Standards

From ASTM:

- ANSI/ASTM E3307-24, *Standard Practice for the Collection and Preservation of Organic Gunshot Residue (OGSR)*.
  - NOTE: This is the SDO published version of OSAC 2021-N-0009, Standard Practice for the Collection and Preservation of Organic Gunshot Residue, currently on the OSAC Registry.

#### From SWGDE:

- 16-I-001-1.2 SWGDE *Best Practices for Image Content Analysis* (2024-08-08).
- 24-P-002-1.0 SWGDE *Best Practices for Photographic Documentation of Scars, Marks, and Tattoos* (2024-08-08).
  - NOTE: This is the SDO published version of OSAC 2023-S-0006, *Standard Guide for Photographing Injuries, Scars, Marks & Tattoos*, currently on the OSAC Registry.
- 16-F-002-2.1 SWGDE *Considerations for Required Minimization of Digital Evidence Seizure* (2024-08-05).
- 24-P-001-1.0 SWGDE *Guidelines for the Use of Macro Photography in Forensic Science* (2024-08-05).
- 17-V-001-1.3 SWGDE *Technical Overview of Digital Video Files* (2024-08-05).
- 18-M-001-2.2 SWGDE *Video and Audio Redaction Guidelines* (2024-08-05).

The following document has been archived:

- 16-I-001-1.1 SWGDE *Best Practices for Image Content Analysis* (2023-06-29).

#### Work Proposals for New or Revised Standards

On September 6, 2024, a Project Initiation Notification System (PINS) was published on page 2 of the [ANSI Standards Action](#). This will begin ASB's work on the following standard:

- BSR/ASB Standard 032-202x, *Standard for a Training Program in Bloodstain Pattern Analysis* (**NOTE:** This is a revision of ANSI/ASB Standard 032, *Standards for a Bloodstain Pattern Analyst's Training Program*. 2020. 1st Ed., which is currently on the OSAC Registry). This document provides minimum pre-training educational requirements for an individual currently in or entering a bloodstain pattern analyst training program and the minimum training requirements that a trainee must successfully complete prior to practicing as a bloodstain pattern analyst. This document also includes the required components of a mentorship program, including mentoring and evaluation of casework, mock casework, as well as courtroom preparation and testimony.

On September 13, 2024, a Project Initiation Notification System (PINS) was published on page 2 of the [ANSI Standards Action](#). This will begin ASTM's and ASB's work on the following standards:

- BSR/ASTM WK92088-202x, *New Practice for Validation and Verification of Analytical Methods for Forensic Science Service Providers Performing Forensic Chemical Analyses*. This document was built from E2549 Standard Practice for Validation of Seized-Drug Analytical Methods which was withdrawn due to time constraints. This document has been extensively revised by OSAC subcommittee members in Explosives, Fire Debris, and Seized Drugs, including a title change, to be an interdisciplinary document applicable to FSSPs and FSPs performing forensic chemical analyses. Discipline specific annexes/appendices will provide additional details on the specific testing that should be conducted for each performance characteristic.
- BSR/ASTM WK92115-202x, *New Terminology for Standard Terminology Relating to Trace Evidence Analysis*. This is a compilation of terms and corresponding definitions used in

the examination and analysis of trace evidence to include the areas of fiber, hair, paint, and tape analysis. Legal or scientific terms that generally are understood or defined adequately in other readily available sources may not be included.

- BSR/ASB Std 036-202x, *Standard for Test Method Selection, Development, Validation, and Verification in Forensic Toxicology* (**NOTE:** This is a revision of ANSI/ASB Standard 036, *Standard Practices for Method Validation in Forensic Toxicology*. 2019. 1st Ed., currently on the OSAC Registry). This document delineates minimum requirements for selecting, developing, validating, and verifying test methods used in forensic toxicology that target specific analytes or analyte classes. It is specifically intended for the subdisciplines of postmortem forensic toxicology, human performance toxicology, non-regulated workplace drug testing, and court-ordered toxicology. This document does not address calibration or testing in breath alcohol programs.

On September 20, 2024, a Project Initiation Notification System (PINS) was published on pages 2-3 in the [ANSI Standards Action](#). This will begin ASB's work on the following standards:

- BSR/ASB Standard 037-202x, *Standard for Reporting and Testimony of Forensic Toxicology Results and Opinions* (**NOTE:** This is a revision of ANSI/ASB Standard 037, *Guidelines for Opinions and Testimony in Forensic Toxicology*. 2019, 1st Ed., currently on the [OSAC Registry](#)). This document establishes the requirements for reporting and testimony of forensic toxicology results and opinions. Specifically, it is intended for the subdisciplines of human performance toxicology (e.g., driving-under-the-influence of alcohol (to include breath alcohol), or drugs and drug-facilitated crimes), postmortem forensic toxicology, nonregulated 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 subject testing results and breath alcohol calibration results.
- BSR/ASB Standard 044-202x, *Standard for Examination of Documents for Indentations* (**NOTE:** This is a revision of ANSI/ASB Standard 044, *Standard for Examination of Documents for Indentations*. 2019. 1st Ed., currently on the [OSAC Registry](#)). This standard provides requirements for the techniques, technologies, and procedures used by forensic document examiners for the examination, visualization, evaluation, sourcing, and reporting of indentations on documents.
- BSR/ASB Standard 045-202x, *Standard for Stature Estimation in Forensic Anthropology* (revision of ANSI/ASB Std 045-2019). This is the revision to the existing ANSI/ASB Standard 045. It will provide updated language and methods if the Consensus Body feels they are needed. The anticipated outcome of adopting and using this document is that the estimation of stature will follow acceptable practices.
- Revision BSR/ASB Standard 090-202x, *Standard for Sex Estimation in Forensic Anthropology* (revision of ANSI/ASB Std 090-2019). This is the revision to the existing ANSI/ASB Standard 090. It will provide updated language and methods if the Consensus Body feels they are needed. The anticipated outcome of adopting and using this document is that the estimation of sex will follow acceptable practices.

- BSR/ASB Standard 216-202x, *Standard for Construction of Multilocus Databases* (new standard). The composition of a database intended for use in population genetic analyses is critical for accurate comparison among the individual subjects as well as statistically sound group assignment (e.g., individual, relatedness, population, geographic source, taxonomic grouping). Forensic wildlife analysts use their knowledge in assessing the scientific merit of results obtained from analysis of allele frequency and population genetic data, and in the subsequent reporting of results.
  - NOTE: This is OSAC 2022-S-0011, *Standard for Construction of Multilocus Databases*, currently on the [OSAC Registry](#).

## IMPLEMENTATION IMPACTS & RESOURCES

### OSAC Registry Standards Implementation Across the “Traditional” Forensic Landscape

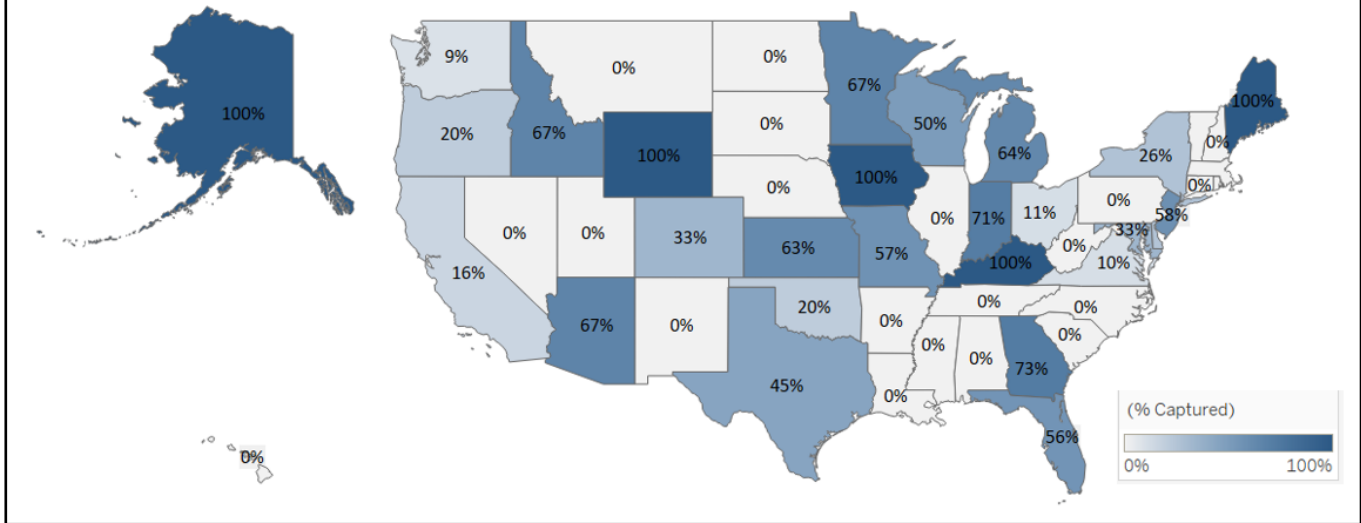
In December 2023, the Bureau of Justice Statistics (BJS) published the results of their 2020 Census of Publicly Funded Forensic Crime Laboratories. Their report, which can be found [here](#), encapsulates responses from 326 standalone laboratories/multi-lab systems which included 423 individual laboratories in total.

OSAC has been relying on this report as one of its metrics to help measure the extent to which forensic standards from the OSAC Registry are implemented throughout what has been termed the “traditional” forensic environment.

By the completion of OSAC’s latest Open Enrollment initiative on September 2, 2024, a total of 202 forensic science service providers (FSSPs) had submitted implementation surveys. Of these, 123 FSSPs were found to cross-correlate with the 423 laboratories that had responded to the 2020 BJS Census. This amounts to approximately 29% of these “traditional” FSSPs known to be implementing standards from the OSAC Registry.

OSAC has made great strides over the last few years to capture implementation data; however, these data indicate that there is still a great deal of progress to be made. In comparison to the extent of standards implementation, BJS reports that 90% of the 423 responding laboratories are accredited. Ideally, there should be a strong correlation between the levels of standards implementation and accreditation. To close this gap, OSAC will be focusing efforts on outreach to the laboratories listed on the BJS report that have yet to complete implementation surveys.

OSAC Registry Implementers as a Percentage of “Traditional” FSSPs Included in the 2020 BJS Census as of Sept 2, 2024



An additional takeaway of significance from this cross-comparison of data is the fact that OSAC collected implementation survey data from 81 FSSPs who did not submit data to the BJS. In one of these instances, the FSSP was on BJS’s full list of publicly funded labs, while the 80 others were not (the BJS report recognizes a total of 449 publicly funded laboratories in total). These additional implementation survey respondents included international FSSPs and what OSAC has termed “non-traditional” FSSPs (e.g., digital forensic service providers, crime scene units, and identification units operating in smaller law enforcement agencies). This is a good indication that standards from the OSAC Registry are finding use in the “non-traditional” forensic environment and outreach efforts in these areas are gaining traction.

Once again, thank you to all who have submitted new surveys and continue to update their surveys as time progresses. These data are critical for measuring the impact of these standards and demonstrating the importance of the efforts of the entire forensic science standards development community. A full report detailing the status of Registry implementation will be released later this fall/early winter.

The survey remains open on a rolling basis for any FSSPs who would like to submit a new survey or update their data. Additional information and links to the survey can be found here. If you have any specific questions or are seeking direct assistance, please do not hesitate to contact us at [forensics@nist.gov](mailto:forensics@nist.gov).



## Annual OSAC Implementer Meeting: Mark Your Calendars

The FSSB Implementer Cohort will host the Annual OSAC Implementer Meeting on **November 14 from 2:00 to 3:30 p.m. EST.** (An Email invitation will be sent to all FSSPs who have submitted an OSAC survey.)

During this meeting, OSAC implementers will learn about the success of the 2024 Open Enrollment Season and new Implementer Cohort initiatives—webinars and workshops on standards implementation, the Mentor Exchange Program, and more! They will also have the opportunity to share feedback on the implementation process and their experience with using the Qualtrics platform.



## OSAC UPDATES

### 2024 Sharon B. Nakich Award Recipient



Dr. Tatiana Trejos, 2024 Sharon B. Nakich Award Recipient.

Congratulations to **Dr. Tatiana Trejos**, OSAC Trace Materials Subcommittee (SC) member and Ignitable Liquids, Explosives, & Gunshot Residue SC affiliate for being awarded the 2024 Sharon B. Nakich Award!

Throughout her career, Dr. Trejos has been a tireless advocate for the trace evidence discipline. To that end, she has contributed a large body of academic work to assist in improving processes and has been an active member of the OSAC Trace Materials Subcommittee since its formation. Over the years, she has served as a task group chair and a member of multiple interdisciplinary task groups writing standards that are now in use among the forensic community. Without seeking credit or self-promotion, Dr. Trejos regularly responds to trace evidence community members who are seeking clarification on specific questions, assistance in preparing for Daubert hearings, and facilitates introductions of academic researchers with practitioners to improve the research process by understanding current practices and their limitations.



Through her academic work, Dr. Trejos has introduced the next generation of forensic scientists to the standards development process early in their careers and has fostered many interdisciplinary collaborations. She has assisted her students in attending OSAC meetings as observers or notetakers and sharing their research. This has led to collaborations with practitioners in the Trace Materials Subcommittee and research that better meets the needs of the trace community.

She is actively conducting foundational research in trace evidence that will be relied on for years to come. Several of her publications have fulfilled the research needs of the Trace Materials Subcommittee.

Dr. Tatiana Trejos is an inspiring colleague in the forensic sciences and treats everyone with respect and compassion. Her aptitude, motivation, and demeanor encourage everyone around her, especially when she is able to calmly respond to criticisms received on standards under development within the subcommittee. She is able to redirect a potential conflict by using her depth of knowledge to clearly articulate why the critique fails to meet the needs of the community or to suggest a more nuanced approach that would be acceptable to both sides. Her kindness to all and spirit of teamwork have made OSAC SC members work much more collegial, and we are better for knowing her.

Submitted by Sandra Koch, Ph.D.,  
Trace Materials Subcommittee Chair



## **NEW! Published Crime Scene Investigation & Reconstruction (CSI&R) Article**

*The Journal of Forensic Identification* recently published, [“Improving CSI Response: An Early Roadmap for the Increased Quality and Effectiveness of Crime Scene Investigations,”](#) by Joe C. Trevino, III and Michael P. Kessler, OSAC Scene Examination SAC Chair. In this article, you will learn about [OSAC’s Crime Scene Investigation & Reconstruction SC](#) research that was conducted to obtain data on adequate crime scene investigator (CSI) staffing levels via crime scene response. Using a survey with questions that targeted factors affecting the quality and effectiveness of an investigation that was administered to both investigators and managers across many levels of government, the researchers were able to conclude, with few exceptions, that there was consensus between



Michael P. Kessler, OSAC Scene Examination SAC  
Chair

investigators and managers. The data collected from this study will assist crime laboratory employers and policymakers in addressing staffing or response according to agency-specific needs that will increase the quality and effectiveness of crime scene investigations at a customizable scale.

## **FY24 Fall Forensic Science Standards Board (FSSB) Quarterly Meeting**

On September 9-10, 2024, OSAC's FSSB met at RTI International in Raleigh, NC, for the final FY24 FSSB quarterly meeting. During this meeting, SAC Chairs reviewed FY25 subcommittee goals and deliverables, shared updates on FSSB task groups, and approved member appointments.



From left to right: Pate Skene, Jeri Roper-Miller, David Kaye, William Trenkle, Marc LeBeau, Christopher Taylor, Michele Smith, Andrew Smith, Marcela Najarro, Jeffrey Gurvis, Elissia Conlon, Jeffrey Nye, William Guthrie

## OSAC OUT & ABOUT

### 57th Annual Rocky Mountain Division of the IAI Conference (RMDIAI)



Steven Johnson presenting at the 57<sup>th</sup> Annual Rocky Mountain Division of the IAI Conference (RMDIAI)

Steven Johnson, OSAC Registry Implementation Ambassador, attended and presented at the 57<sup>th</sup> annual educational conference of the Rocky Mountain Division of the IAI (RMDIAI) in Glenwood Springs, CO, September 11-13. It was the most attended conference in the division's history with nearly one-third of the members participating. The RMDIAI represents forensic science practitioners from New Mexico, Colorado, and Wyoming. Interest in the OSAC mission continues to grow as more and more agencies and crime laboratories are recognizing the importance and benefits of standards implementation. Mr. Johnson was honored to be asked to present and share the OSAC mission.

### 53rd Annual Midwestern Association of Forensic Scientists (MAFS) Meeting



OSAC Registry Implementation Ambassador Mark Stolorow attended the 53rd Annual Fall Meeting of the Midwestern Association of Forensic Scientists (MAFS) in Kansas City, MO, on September 8-13, 2024. At the General/Management session, he gave a half-hour presentation, *Updates on Implementation of Standards on the OSAC Registry*. The presentation began with a brief review of the most recent standards development updates, including OSAC achieving the milestones of more than 200 standards on the OSAC Registry and more than 200 FSSPs implementing standards on the OSAC Registry. The presentation also provided a detailed description of the available tools and resources to help FSSPs with standards implementation. The presentation concluded with a summary of how organizations can achieve OSAC

Registry implementation excellence. The MAFS meeting was attended by approximately 250 forensic scientists and students, including representatives of many of the 43 midwestern FSSPs, which are implementers of standards on the OSAC Registry.

## UPCOMING FORENSIC SCIENCE CONFERENCES

- October 1-4: 23rd Annual Association of Quality Assurance Managers (AFQAM) Conference | Daytona Beach, FL
- October 7-11: International Association of Bloodstain Pattern Analysts (IABPA) Annual Conference | Kansas City, MO
- October 19-22: International Association of Chief of Police (IACP) Annual Conference and Exposition | Boston, MA
- November 16: Annual American College of Veterinary Pathologists (ACVP) Conference | Seattle, WA
- November 21-22: 2024 National Association of Forensic Science Boards (NAFSB) Conference | Albany, NY
- November 20-23: Arizona Identification Council (AIC) Educational Conference | Tucson, AZ
- February 17-25, 2025: American Academy of Forensic Sciences (AAFS) | Baltimore, MD

## OTHER FORENSIC SCIENCE NEWS & TRAINING

### NIST Report Outlines Strategic Opportunities to Advance Forensic Science in the U.S.



The National Institute of Standards and Technology (NIST) has published [\*Strategic Opportunities to Advance Forensic Science in the United States: A Path Forward Through Research and Standards\*](#), which identifies four “grand challenges” facing the forensic science community in the United States, one of which is having science-based standards and guidelines for forensic science practices (p. 20). The report provides a strategic roadmap for addressing these challenges through scientific research and standards. It also assesses the state of the field 15 years after a landmark report from the National Academy of Sciences identified critical gaps in the scientific foundations of several forensic disciplines.



## Upcoming Wildlife Forensic Biology Workshop



On November 16, the OSAC Wildlife Forensic Biology SC Vice-Chair, Tabitha Viner, will present a workshop titled: “Fleshing Out the Foundations of Forensics,” during the Annual American College of Veterinary Pathologists (ACVP) meeting in Seattle, WA. This workshop will discuss the merits of ANSI/ASB Standard 170, *Standard for Veterinary Forensic Postmortem Examination*, 1st. Ed. 2024 which is slated to begin the OSAC Registry process soon!

## 2024 Forensics@NIST Event

Join NIST’s scientists *virtually* on November 18-20, 2024, to learn how they are using advanced methods in metrology, computer science, and statistics to strengthen forensic science. Topic areas to be covered include Biometrics, Digital/Multimedia, Drugs/Toxicology, Evidential Statistics, Firearm and Toolmarks, Forensic Genetics, Quality Assurance, Trace, and CSAFE Forensic Statistics Center of Excellence.

Seats for the workshops are limited to 175 attendees so make sure to [REGISTER](#) prior to **November 18!**

Visit [NIST’s News and Events webpage](#) to learn more about the presentations and workshops being offered!



## From the Facial and Iris Identification Subcommittee: SAVE THE DATE!

[Facial and Iris Identification Research Symposium Meeting Link](#)



**RESEARCH NEEDS SYMPOSIUM**  
Hosted by the OSAC Facial and Iris Identification Subcommittee

**OSAC**  
Organization of Scientific Area  
Committees for Forensic Science

**JOIN US VIRTUALLY!**  
Thursday, February 27, 2025  
1:00PM - 2:30PM EST

The Facial and Iris Identification Subcommittee of OSAC invites you to learn more about research needs and collaboration efforts as they relate to the Facial and Iris Identification disciplines.

## AAFS Standards Resources and Training

As part of a cooperative agreement with NIST, the American Academy of Forensic Sciences (AAFS) is developing [training, tools, and resources](#) to enhance implementation efforts and broaden awareness of forensic science standards among communities of interest.

- [Standards factsheets](#) provide a clear, concise, and easy way to understand the purpose of a specific standard, why it is needed, and the benefits of adoption. **Standards factsheets are available for 135+ standards on the OSAC Registry.**
- [Standards checklists](#) are a tool that forensic science service providers can use to track progress towards implementation, identify gaps or barriers to implementation, or document objective evidence of implementation or compliance with a standard. **Checklists are available for 130+ standards on the OSAC Registry.**
- AAFS Connect offers free standards videos and webinars. Learn about the standards development process, standards development activities in various disciplines, and information about specific SDO published standards on the OSAC Registry.



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**Contact Us.** If you have feedback or questions or want to learn more about how you can help strengthen forensic science through standards, contact us at [forensics@nist.gov](mailto:forensics@nist.gov).