Scientific & Technical Review Panel Final Report for OSAC 2022-S-0013 Standard Guide for Testimony in Seized Drugs Analysis

Organization of Scientific Area Committees (OSAC) for Forensic Science

STRP Final Report
OSAC 2022-S-0013
Standard Guide for Testimony in Seized Drugs Analysis

Organization of Scientific Area Committees (OSAC) for Forensics Science
August 23, 2022

Disclaimer:

This report was produced by an independent Scientific and Technical Review Panel (STRP). The views expressed in the report do not necessarily reflect the views or policies of the U.S. Government. Visit the OSAC website for more information on OSAC's STRP process.

Scientific & Technical Review Panel Members

- Judge Kent Cattani, Arizona Court of Appeals
- Linda Jackson, Virginia Department of Forensic Science
- Karlie McManaman, Georgia Bureau of Investigation
- Jakeline Moral, Houston Forensic Science Center
- Aristides Passas, Georgia Bureau of Investigation
- Kimberlie Ross, United States Postal Inspection Service
- Barbara "Bobbie" Spellman, University of Virginia - School of Law

Report Summary:

The Scientific and Technical Review Panel (STRP) for "Standard Guide for Testimony in Seized Drugs Analysis" is an independent panel appointed by the National Institute of Standards and Technology (NIST). A STRP is established with a range of experts to consider how well a standard meets the needs of the forensic science, law enforcement, and legal communities, and to recommend improvements to the standards under review. The STRP appreciates the efforts of Charlene Rittenbach, Seized Drugs Subcommittee member and Claire Dragovich, Seized Drugs Subcommittee Vice Chair, while serving as the subcommittee liaisons to this STRP during the review process.

The STRP began its review process with a kickoff meeting on February 11, 2022, and concluded with this STRP final report. The panel reviewed the draft standard and prepared comments for the Seized Drugs Subcommittee.

Report Components:

The STRP reviewed this draft standard against OSAC's *STRP Instructions for Review* which include the following content areas: scientific and technical merit, human factors, quality assurance, scope and purpose, terminology, method description and reporting results. The details below contain a brief description of each reviewed content area and the STRP's assessment of how that content was addressed in the draft OSAC Proposed Standard.

1. **Scientific and Technical Merit:** OSAC-approved standards must have strong scientific foundations so that the methods practitioners employ are scientifically valid, and the resulting claims are trustworthy. In addition, standards for methods or interpretation of results must include the expression and communication of the uncertainties in measurements or other results.

1.1 Consensus View – Although this standard is not scientific in nature, the STRP believes that it addresses the foundational specifications for a well-rounded testimony program related to the analysis of seized drugs. Testimony is a type of oral reporting. This standard includes a robust training program as well as procedures for standardized, open communication and quality assurance.

1.2 Minority View – None.

2. **Human Factors:** All forensic science methods rely on human performance in acquiring, examining, reporting, and testifying to the results. In the examination phase, some standards rely heavily on human judgment, whereas others rely more on properly maintained and calibrated instruments and statistical analysis of data.

2.1. Consensus View – The STRP believes that this draft standard adequately addresses the relevant human factors issues related to testimony. Section 5.2.11

provides both a definition of cognitive bias (sec 5.2.11.1) and an explicit mention of the biases most relevant to testimony (sec 5.2.11.2). The list does not exclude other biases as being of possible relevance (by use of the word "includes"). Section 6.5 addresses minimizing bias when interacting with attorneys; section 7.1.3.1 reminds the Forensic Science Providers (FSPs) to be aware of the biases that might arise in an adversarial environment; and sections 9.2.3 and 9.2.11 address the need to avoid the potential spread of biases from newly learned task-irrelevant information by limiting when an FSP can add to, or deviate from, results and opinions present in the original report.

2.2. Minority View – The minority believes that what is present in the standard is good but not sufficient.

First, the two major types of bias of concern are those made explicit in the standard in section 5.2.11.1 (i.e., various types of context biases) but also the biases that result from being exposed to task-irrelevant information either during analysis or during trial preparation. Warnings about the latter are hidden in various sections (as noted in the Consensus View), but we believe should be made more explicit. In particular, section 5.2.11.2 should include an acknowledgment of biases due to exposure to task-irrelevant information when preparing to testify and when testifying. Mentioning that problem in 5.2.11.2 would make clearer which biases should be of concern to the FSP when engaging in pre-trial communications with other parties (sec 6.5) and why the FSP should not add to or deviate from the original report (in secs 9.2.3 and 9.2.11). A brief mention of bias should also appear in sections 9.2.3 and 9.2.11.

Second, when preparing to testify, FSPs should be aware that they could be asked questions about task-irrelevant information that they may have learned during analysis. Section 5.2.11 states that FSPs should have an understanding of

bias in both testimony and analysis. The STRP surmises that information about bias during analysis is unlikely to appear in the report; regardless, the FSP should be prepared to testify about potential biases that arose during analysis.

Third, Section 11.1 provides ideas for ongoing training of FSPs. The STRP believes that human factors issues should be included in the ongoing training, in part because new research may reveal novel questions, or answers, as to how human factors are relevant to seized drug analysis or testimony.

Fourth, as a technical comment, Footnote 1 is the source of the definition of "cognitive bias" provided in sec 5.2.11.1, which is a direct quotation from the source. So, the footnote should be provided at the end of that 5.2.11.1, not at the end of 5.2.11.

3. **Quality Assurance:** Quality assurance covers a broad range of topics. For example, a method must include quality assurance procedures to ensure that sufficiently similar results

will be obtained when the methodology is properly followed by different users in different facilities.

3.1. Consensus View – The STRP believes that this draft standard specifies the appropriate quality assurance requirements needed to create a robust testimony program related to the analysis of seized drugs. The draft standard provides a framework to develop a testimony monitoring and evaluation program or improve a previously existing program that complies with accreditation standards. Other quality assurance and quality control topics related to the analysis of seized drugs such as method validation and control logs are properly addressed in the draft standard.

3.2. Minority View – None.

4. **Scope and Purpose:** Standards should have a short statement of their scope and purpose. They should list the topics that they address and the related topics that they do not address. Requirements, recommendations, or statements of what is permitted or prohibited do not belong in this section.

4.1. Consensus View – The STRP agrees that the scope and purpose are clearly stated and accurately reflect the contents of this standard. The core topics covered in this standard – testimony training, evaluation, and monitoring – are each addressed. The title is consistent with the standard and scope, and the scope clearly states when the standard should be used.

4.2. Minority View – None.

5. **Terminology:** Standards should define terms that have specialized meanings. Only rarely should they give a highly restricted or specialized meaning to a term in common use among the general public.

    5.1. Consensus View – Terminology is well defined and does not use a lot of terms that should have been defined. The definitions provided are succinct and easy to understand. A good balance was struck in deciding when to define or not define a term.

    5.2. Minority View – None.

6. **Method Description:** There is no rule as to the necessary level of detail in the description of the method. Some parts of the method may be performed in alternative ways without affecting the quality and consistency of the results. Standards should focus on standardizing steps that must be performed consistently across organizations to ensure equivalent results. Alternatively, standards can define specific performance criteria that are required to be demonstrated and met rather than specifying the exact way a task must be done. For example, it may be enough to specify the lower limit for detecting a substance without specifying the equipment or method for achieving this limit of detection.

    6.1. Consensus View – The STRP agrees that the methods described and the minimum content required by the draft standard for testimony training should provide a uniform background and standardization for those who testify. Additional sections regarding Trial Preparation, General Testimony Qualifications – Voir Dire, and Technical Testimony provide examples of both proper procedures and testimony as well as certain behaviors and assertions that are inappropriate. Lastly, the methods described for Testimony Evaluation are detailed in order to provide continuous improvement of technical and non technical aspects of testimony.

    6.2. Minority View – None.

7. **Reporting Results:** Methods must not only be well described, scientifically sound, and comprehensive but also lead to reported results that are within the scope of the standard, appropriately caveated, and not overreaching.

    7.1. Consensus View – The STRP understands that this draft standard requires the correct training and expertise to provide reliable and accurate testimony. It demonstrates comprehensive instructions on how best to orally communicate expert opinions clearly to the trier of fact. This standard provides sufficient examples to effectively maintain neutrality in their FSP testimony.

    7.2. Minority View – None.