# Scientific & Technical Review Panel Final Report for 2021-S-0027 Standard Guide for Laboratory Photography

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

# STRP Final Report
# 2021-S-0027
# Standard Guide for Laboratory Photography

Organization of Scientific Area Committees (OSAC) for Forensics Science
February 25, 2022

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## 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

- Barbara Andree, Bureau of Alcohol, Tobacco, Firearms and Explosives (Retired)
- Michelle Montonera, Boulder County Coroner's Office
- Robert Thompson, National Institute of Standards and Technology (NIST)
- Raymond Valerio, Office of the Queens County District Attorney
- David "Ski" Witzke, Forensic Digital Imaging & Analysis (Retired)

## Report Summary:

The Scientific and Technical Review Panel (STRP) for "Standard Guide for Laboratory Photography" 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 Aaron Matson and Rand Swartz, Video/Imaging Technology and Analysis (VITAL) Subcommittee members, while serving as the subcommittee liaisons to this STRP during the review process.

The STRP began its review process with a kickoff meeting on October 4, 2021 and concluded with this STRP final report. The panel reviewed the draft standard and prepared comments for the Video/Imaging Technology and Analysis Subcommittee.

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## 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 – The STRP believe this standard provides information essential for the effective (accurate and reliable) photographic capture/preservation of physical evidence in a laboratory or other controlled environment. This standard also contains several recommendations for lighting as well as other considerations/guidance on camera settings for proper photographic techniques. Moreover, this information is relevant regardless of the size of laboratory.

    1.2 Consensus View – The STRP also believes this standard is well organized and well written.

    1.3 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 adequately addresses issues related to human factors and performance. To the extent that the guide addresses the human interaction of photographic methods toward evidence documentation, the standard recognizes the relevance of experience, and training, for the photographic documentation of evidence in the laboratory and other controlled environments. The standard includes numerous informative diagrams that illustrate the application of certain special illumination techniques to aid in the understanding of critical concepts involved in photographic evidence documentation.

2.2. Minority View – None

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 quality assurance topics are properly covered in this draft standard. Evidence handling with contamination prevention, recommended photographic equipment and techniques, applicable safety measures, and retention and storage of photographs are all discussed throughout the document. Additional information concerning proper documentation and photographic requirements for specialty laboratory visualization techniques is also included.

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 – Section 4. Significance and Use elaborates on the use of photography in the laboratory (i.e., creating a permanent record of the items of evidence, any developed evidence, or digital enhancement of the items of evidence (such as latent fingerprints, footwear impressions, toolmarks, firearms, questions documents, etc.). The STRP believes this delineation would also be appropriate in section 1. Scope and Purpose.

4.2. Consensus View – In addition, the Scope and Purpose does not address (either by reference or by exclusion) any other standard that focuses on photography of other types of evidence such as bruises, bite marks, etc. These standards include, but are not limited to, the “Standard Guide for Post Mortem

Examination Photography", etc.

4.3. Consensus View – In contrast, Scope and Purpose, subparagraph 1.2 specifically states that it excludes techniques for special equipment for documenting laboratory analysis of questioned documents, firearms, fire debris, etc.

4.4. 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 – The STRP finds that the draft standard defines appropriate terms with specialized meaning consistent with ASTM E2916 Standard Terminology for Digital and Multimedia Evidence Examination. STRP revisions to narrow the scope of the draft standard helped clarify relevant terms. The document balances the need for definitions while avoiding defining commonly used terminology. Examples are appropriately added to various terminology such as in Section 4.1.

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 considers that the proposed standard meets the Method Description requirement. This opinion is based on the fact that the standard provides an outline for recommended equipment and steps for taking appropriate documentation photographs with guidance on settings for examination quality photographs and special techniques. The STRP verified that the standard minimizes ambiguity by providing examples of lighting techniques that would be used in taking the photographs.

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 believes that the standard adequately describes how evidence should be handled and photographed within the laboratory setting. Clear instruction is provided for documentation photography and associated special photography techniques.

7.2. Minority View – None