

OSAC REVIEW SPRING 2025 (OSAC = Organization of Scientific Area Committees)

NAME OSAC UPDATE #23: OSAC 2021-N-0018 (OSAC Proposed)

Standard for On-Site Collection and Preservation of Physical Evidence

This Standard was developed by the Crime Scene Investigation and Reconstruction Subcommittee of OSAC. It has been submitted to a standards development organization and may change as it undergoes revisions in that consensus-based process.

*This is a brief summary of OSAC 2021-N-0018, and as such may leave out or misinterpret important details. **See link to full document (below).***

(Like all OSAC developed Standards, Best Practices, and Guides, these are voluntary and separate from NAME standards and accreditation.)

As part of the OSAC standards development process, this document was subject to an open comment period with adjudication. This is a link to the comments received and their adjudication:

<https://www.nist.gov/document/osac-2021-n-0018-combined-adjudicated-comments>

Value:

This *Standard for On-Site Collection and Preservation of Physical Evidence* is primarily for crime scene investigators but overlaps with our Medical Examiner work. The responsibilities of crime scene investigators and death investigation authorities at death scenes varies from jurisdiction to jurisdiction, sometimes because of differing law. In some Medical Examiner offices, forensic pathologists or medicolegal death investigators may need to collect evidence at the scene. This standard could be used as a training document for medical examiner staff. The general principles in the standard also apply to medicolegal death investigators.

Scope: Sets the requirements for on-scene collection and preservation of physical evidence by any personnel responsible for scene response in order to secure the integrity of the evidence. This is required so that reliable,

accurate, and relevant conclusions can be obtained as part of the investigation.

Definition of physical evidence: “Any material, object, or substance that can be collected or documented to inform the understanding of a scene.”

Collection and Preservation of Physical Evidence—shall be collected and preserved so as to maximize evidence integrity and minimize contamination, tampering, alteration, or loss of evidence.

- PPE is required for both the wearer’s safety and to protect the evidence from contamination. The exact PPE requirements will depend on the scene circumstances. A mask and gloves are the minimum when collecting an item subject to DNA analysis.
- If multiple items of evidence are to be collected, PPE can be a source of cross-contamination.
- Chain of custody shall be documented for all physical evidence and is to be established at the point of collection.
- If an item is too large for available packaging, preserve the part(s) of the item of evidentiary value.
- Attempt to use final packaging at the scene, but, if necessary, use temporary packaging, then transfer to long-term packaging in controlled conditions.
- Avoid excessively large or tight packaging. Packaging shall be sturdy with a mind that sharp or fragile evidence may need additional padding.
- If packaging is reusable, ensure that packaging and packaging tools are contamination-free.
- Individual items should be packaged and sealed separately. Commingled items may be packaged together or separately depending on the anticipated analysis.
- Wet items are to be temporarily packaged to prevent leakage, then dried and packaged later in breathable or moisture-controlled packaging.
- Greasy items are packaged to prevent leakage.
- Gases and liquids shall be packaged in non-porous containers.

- Packages are to be labeled with unique identifiers, and documentation should include storage considerations, such as the need to refrigerate evidence.
- Prior to sealing, items not currently in the custody of the investigator shall be placed in a secure storage location.
- Evidence must be properly sealed, and this includes the individual creating the seal writing his/her initials or other unique identifier across the seal. Breaching the package would result in obvious damage to the seal.
- Any evidence collected shall be stored in a secure manner.

Full Document:

<https://www.nist.gov/document/osac-2021-n-0018-standard-scene-collection-and-preservation-physical-evidence-version-20>