

515 CMR 7.00: LONG TERM RETENTION AND PRESERVATION OF EVIDENCE BY GOVERNMENTAL ENTITIES

Section

- 7.01: Purpose
- 7.02: Definitions
- 7.03: Scope and Applicability
- 7.04: Storage: General
- 7.05: Storage: Quality Control (Temperature and Humidity)
- 7.06: Storage: Non-toxicological Biological Evidence
- 7.07: Storage: Toxicological Biological Evidence
- 7.08: Storage: Non-biological Evidence - General
- 7.09: Storage: Non-biological Evidence - Arson and Explosive Evidence
- 7.10: Security
- 7.11: Chain of Custody
- 7.12: Documentation of Evidence Retention
- 7.13: Implementation
- 7.14: Severability

7.01: Purpose

The purpose of 515 CMR 7.00 is to govern long term retention and preservation of evidence or biological material by any governmental entity as required by M.G.L. c. 278A, § 16(b).

7.02: Definitions

Biological Evidence. Samples of biological material-such as hair, tissue, bones, teeth, blood, semen, or other bodily fluids-or evidence items containing biological material. ¹

Breathable/Porous Container. Packaging through which liquids or vapors may pass (e.g., paper bags and cloth bags). ¹

Chain of Custody. Identification of the person or agency having custody of evidence and the place where that evidence is kept, in chronological order from the time evidence is collected to its destruction. A formal, written process that records the persons having custody of evidence from initial point of receipt or custody by a representative of a law enforcement agency to its final disposition by the agency. The record also reflects the dates and reasons evidence is transferred from one location or person to another.

Combustible Liquid. Any liquid that has a closed cup flashpoint at or above 37.8°C (100°F). ²

Contamination. The unwanted transfer of material from another source to a piece of physical evidence. ¹

Degradation. The transition from a higher to a lower level of quality. ¹

Designated Evidence Personnel. The individual(s) who receives, inventories, packages, labels or transports evidence and who has access to evidence storage areas.

Evidence. Material, regardless of form, which is received by an agency for the purpose of obtaining information relevant to a criminal investigation. ³

Evidence Custodian. The person who is responsible for evidence processing in a given location (e.g., property and evidence room, hospital, court, crime laboratory). This person can be an evidence collector or handler as well.

Evidence Packaging. The manner in which items with potential evidentiary value are wrapped, bagged, or boxed to be preserved, documented, and labeled. ¹

7.02: continued

Evidence Storage Area. A secure limited access location or designation to store evidence with the proper climate control.

Flammable Liquid. A liquid that has a closed cup flashpoint below 37.8°C (100°F).

FTA™. An absorbent cellulose based paper that contains four chemical substances to protect DNA molecules from degradation and preserve the paper from bacterial growth. ⁴

Long Term Storage. The evidence retention period for a period of time that a person remains in the custody of the Commonwealth or under parole or probation supervision in connection with that crime, without regard to whether the evidence or biological material was introduced at trial.

NIST. National Institute of Standards and Technology. ⁵

Non-toxicological Biological Evidence. Samples that are biological in nature such as hair, tissue, bones, teeth, blood, semen, saliva, skin cells or other body fluids as well as items of evidence potentially containing biological materials.

Packaging. Container used to house individual items of evidence. ¹

Personal Protective Equipment (PPE). Items used to prevent an individual's direct contact with blood borne) pathogens. PPE includes disposable gloves, disposable overalls, disposable shoe covers, laboratory coats, masks, and eye protection. ¹

Quality Control. Activities designed according to established standards that are used to ensure the quality of analytical data and to ensure this data satisfies specified criteria. ⁴

Toxicological Biological Evidence. Samples such as blood, urine, vitreous humor, gastric contents, tissues and other body fluids from either ante (operating under the influence) or post mortem (autopsy) cases. ¹

References:

¹ *The Biological Evidence Preservation Handbook: Best Practices for Evidence Handlers* www.nist.gov/forensics/upload/NIST-IR-7928.pdf

² National Fire Protection Association. NFPA 921: *Guide for Fire and Explosion Investigations 2014*

³ Massachusetts State Police Crime Laboratory. Quality Assurance Manual QAMS-D001-v4.0

⁴ Butler, John M. *Forensic DNA Typing: Biology, Technology, and Genetics of STR Markers.* Elsevier 2005

⁵ Massachusetts State Police Crime Laboratory. DNA Unit Administrative Manual DNA-D300-v3.0

7.03: Scope and Applicability

(1) Any governmental entity that is in possession of evidence or biological material that is collected for its potential evidentiary value during the investigation of a crime, the prosecution of which results in a conviction, shall retain evidence or biological material for the period of time that a person remains in the custody of the Commonwealth, or under parole or probation supervision in connection with the crime, without regard to whether the evidence or biological material was introduced at trial.

7.03: continued

(2) Because 515 CMR 7.00 only governs the long term storage of evidence in post-conviction circumstances, it does not apply, for example, in the following circumstances: when evidence is ordered destroyed by the court; when evidence is ordered forfeited to the Commonwealth; or when evidence is held during the pendency of trial. The foregoing list is not exhaustive.

(3) 515 CMR 7.00 sets fourth standards for:

- (a) maintaining the integrity of biological materials over time, including methods for evidence packaging, storage, and preservation;
- (b) the designation of officials at each governmental entity with custodial responsibility; and
- (c) requirements for contemporaneously recorded documentation of individuals having and obtaining custody of any evidence or biological material.

7.04: Storage: General

(1) Personal protective equipment (PPE) should be used to protect the evidence handlers from potentially hazardous biological materials as well as to protect the evidence from loss, cross-transfer, contamination, and/or deleterious change.

(2) Upon receipt of evidence or biological material for long-term storage, items shall be packaged in a manner that complies with chain-of-custody and storage requirements relative to that specific type of evidence.

(3) Evidence shall be stored in a manner that is reasonably designed to preserve its condition and to prevent its destruction or deterioration.

In certain circumstances, evidence which has previously been packaged or stored in less than ideal conditions may be repackaged and stored appropriately to prohibit any further deleterious change. The Massachusetts State Police Crime Laboratory should be consulted to assess the condition of the evidence and advise the custodial agency as to proper repackaging guidelines.

(4) Each package shall be labeled with information essential to efficient evidence processing, filing, and retrieving, including at a minimum, case or incident number and item number or similarly identifying information.

(5) Each item of evidence or biological material shall be packaged separately to avoid comingling of items to prevent cross-contamination.

7.05: Storage: Quality Control (Temperature and Humidity)

(1) Custodial agencies shall ensure temperature and humidity conditions at all locations where evidence is stored are maintained appropriately, as this is essential to achieving optimal preservation.

(2) Appropriate personnel at custodial agencies may keep a manual and/or electronic quality control log of the daily temperature and humidity readings. These logs shall be accessible to authorized personnel upon request.

7.06: Storage: Non-toxicological Biological Evidence

(1) Because moisture can cause biological material to be destroyed by bacterial growth, non-toxicological biological evidence shall be thoroughly dried prior to packaging and storage unless:

- (a) It is not possible to dry the evidence as is (*e.g.*, a tube of liquid blood). In this case, it is acceptable to retain a sample of the blood on a medium such as FTA™ paper that is suitable for long-term storage conditions and discard the remainder of the sample.

7.06: continued

(b) If evidence cannot be dried or stored on alternate media such as tissue samples, bone, liquid urine, or blood, the evidence shall be stored in impermeable, nonporous, airtight containers and frozen. Glass containers shall never be used for packaging, as freezing can cause the vial to explode or crack.

(2) Breathable (porous) containers which minimize the retention of potentially damaging moisture shall be utilized for the storage of non-toxicological biological materials.

Breathable containers include, but are not limited to, previously unused paper bags, glassine envelopes, coin envelopes, butcher paper, and cardboard boxes. (For additional information on packaging, refer to Page 16 of the *NIST Biological Evidence Preservation Handbook*.)

(3) Evidence containing non-toxicological biological material shall be stored under conditions that reduce the rate of bacterial growth and the degradation of DNA.

Depending on the nature of the evidence, acceptable conditions may include refrigeration, freezing, or in a temperature controlled environment. (Refer to Table 111-1 and Table 111-2 of the *NIST Biological Evidence Preservation Handbook* for specific information regarding the storage options.)

(4) At no time shall non-toxicological biological evidence be stored in environments where the potential for large temperature and humidity fluctuations outside of the ideal range exists

(5) Conditions of non-toxicological biological evidence storage shall, at a minimum, include protection from moisture, excessive heat, and sunlight.

7.07: Storage: Toxicological Biological Evidence

(1) Evidence containing toxicological biological material (antemortem or postmortem) shall be stored under conditions that reduce the rate of decomposition and bacterial growth.

Ideal conditions for toxicological biological evidence shall be maintained at 0°C to -30° C (32°F to -22°F) (frozen).

(2) At no time shall toxicological biological evidence be stored in environments where the potential for large temperature and humidity fluctuations outside of the ideal range exists.

(3) Conditions of toxicological biological evidence storage shall include protection from moisture, excessive heat, and protection from sunlight.

(4) Tissue samples, liquid urine, or liquid blood shall be stored in impermeable, nonporous, airtight containers such as a metal can or plastic vial and frozen. Glass containers should not be used for long-term storage packaging, as freezing can cause the vial to explode or crack. Custodial entities shall avoid employing preservation agents such as formalin or formaldehyde.

7.08: Storage: Non-biological Evidence - General

(1) Evidence shall be stored in a room temperature environment not to exceed 27°C (80°F).

(2) Ideal conditions for evidence in the form of a food product (*e.g.*, milk, juice, food) shall be maintained at 4°C to 8°C (39°F to 47°F) (refrigerated).

(3) Evidence shall be stored in an environment not to exceed 60% humidity.

7.09: Storage: Non-biological Evidence - Arson and Explosive Evidence

(1) Explosive powders and/or unexploded evidence components shall be stored in storage lockers that are in compliance with the requirements of the federal Bureau of Alcohol, Tobacco, Firearms and Explosives (ATFE). The storage unit shall be temperature- and humidity-controlled, vented, and explosion proof.

7.09: continued

- (2) Fire debris shall be sealed within Kapak bags or in metal cans within Kapak bags. Acceptable can volumes are: one pint, one quart, and one gallon. Extract from fire debris analysis should be stored in a glass vial within a sealed Kapak bag.
- (3) Flammable-combustible liquids shall be preserved in glass vials. These vials should be contained within a shatter proof external container (*e.g.*, metal can).
- (4) Debris from explosions shall be packaged within Kapak bags or metal cans within Kapak bags.
- (5) Chemical reaction bombs shall be maintained in sealed plastic pouches (*e.g.*, Kapak bags).
- (6) Explosive powders shall be maintained in static free bags.
- (7) Device components shall be placed into unused envelopes such as a manila envelope.
- (8) Gunshot residue sampling vials shall be sealed in plastic pouches (*e.g.*, Kapak bags) or within paper envelopes

7.10: Security

- (1) Access to evidence storage areas shall be limited to those personnel designated by the proper authority at the custodial agency.
- (2) Custodial agencies shall maintain a list of authorized personnel who have access to storage locations and this list shall be easily available, if requested.
- (3) Custodial agencies shall document personnel who enter each storage location by means of a manual or electronic log or security system.

7.11: Chain of Custody

- (1) Chain of custody must be maintained when evidence is removed from a secure storage location. The item(s) of evidence transferred, personnel making the transfer, and the new custody location of the evidence must be documented contemporaneously by date.
- (2) Evidence shall be tracked through a manual log or entered into an electronic tracking system database contemporaneously.

7.12: Documentation of Evidence Retention

- (1) Security logs indicating access to the evidence shall be maintained and retained for the period of time equivalent to the evidence retention period.
- (2) Temperature and humidity control logs shall be maintained and retained for the period of time equivalent to the evidence retention period.

7.13: Implementation

- (1) Governmental entities shall develop, document, and implement policies and procedures to meet the requirements prescribed by 515 CMR 7.00. At a minimum, these policies shall include:
 - (a) a procedure to ensure consistency of the overall evidence storage retention process and
 - (b) a written directive as to the specific storage and packaging instructions for all types of evidence.
- (2) It is recommended that the Massachusetts State Police Crime Laboratory be consulted when an agency is developing packaging directives or encounters a unique type of evidence or biological material.

515 CMR: DEPARTMENT OF STATE POLICE

7.14: Severability

If any article, section, subsection, clause, or phrase of 515 CMR 7.00 is for any reason held to be unconstitutional, contrary to statute, in excess of the authority of the Department of State Police, or otherwise inoperative, such decision shall not affect the validity of any other article, section, subsection, sentence, clause, or phrase of 515 CMR 7.00.

REGULATORY AUTHORITY

515 CMR 7.00: M.G.L. c. 278A, § 16(b).