

Minimizing Contamination

Table of Contents

1	SCOPE	2
2	EQUIPMENT/MATERIALS/REAGENTS.....	2
3	PROCEDURES.....	2
3.1	PPE Requirements.....	2
3.2	Pre-Processing Decontamination Procedures	3
3.3	Process to Prevent Contamination	3
3.4	Post-Processing Decontamination Procedures	4
3.5	Personal Hygiene	5
4	SAFETY	5
5	REVISION HISTORY	5

Minimizing Contamination

1 SCOPE

The Evidence Management Unit (EMU) of the FBI Laboratory is responsible for maintaining the basic laboratory procedures necessary to minimize contamination during the EMU workflow. These procedures apply to all EMU personnel who perform opening, safety checks, evidence breakdown, inventory, photography, mailing, or otherwise process evidence.

2 EQUIPMENT/MATERIALS/REAGENTS

- Bleach Solution (1:10 Dilution)
- CaviCide Disinfectant or equivalent
- General Laboratory Supplies
- Isopropyl Alcohol (70% or higher)
- Personal Protective Equipment (PPE)

3 PROCEDURES

EMU personnel will perform these procedures in a manner to minimize and control cross-contamination between cases and items of evidence within a case.

3.1 PPE Requirements

PPE will be worn to minimize the indirect transfer of biological material, explosive residue, and other trace materials from one item to another and/or to EMU personnel during evidence handling procedures. Laboratory coats, eye protection, disposable gloves, and face masks will be worn, as appropriate, by EMU personnel when directly handling evidence.

- A. Applicable PPE must be worn when handling unsealed containers or individual items of evidence.
- B. Laboratory coats must be changed between cases if torn or visibly soiled. At a minimum, non-disposable laboratory coats must be laundered or replaced on a bi-weekly basis. Alternatively, a disposable lab coat may be used.
 1. A disposable laboratory coat can be worn when handling any bulk (i.e., visible quantity) explosive materials. Disposable laboratory coats must be disposed of immediately after processing such items.
- C. During breakdown or inventory, face masks that cover both mouth and nose must be worn when handling items that may contain biological substances and are likely to require DNA analysis. Face masks must be changed if they become visibly soiled or torn.
- D. If proximal packages containing items contaminated with a biological substance (e.g., suspected wet blood, mold, other potentially infectious material (OPIM)) or

hazardous substance are opened, EMU personnel will use appropriate engineering controls (e.g., fume hoods, biological safety cabinets) during handling and photography. EMU personnel will apply proper hazard warning stickers to the proximal and/or outermost package containing items contaminated with a biological substance or OPIM as appropriate. Refer to the FBI Laboratory Safety Manual Bloodborne Pathogen Exposure Control Plan for additional information.

3.2 Pre-Processing Decontamination Procedures

- A. Before beginning evidence processing, EMU personnel will clean the processing table and surrounding area. The cleaning materials used will be based on evidence type. The appropriate cleaning process will be repeated throughout evidence processing, as needed, to minimize contamination based on the specific process being performed, evidence type, evidence packaging, etc.
 - 1. For non-TEDAC evidence, the processing table and surrounding area will be cleaned with CaviCide (or equivalent).
 - 2. For TEDAC evidence, the processing table and surrounding area will be cleaned with either a bleach solution or Cavicide (or equivalent) followed by isopropyl alcohol.
- B. After the surface has dried, EMU personnel will place a clean disposable covering over the work surface.
- C. When performing evidence processing, the proximal container holding an item will not be opened if doing so may negatively impact examinations. If, in such a case, the proximal container must be opened for any reason (e.g., to perform a safety check), EMU personnel may consult with a qualified examiner from the unit/discipline which may be affected and/or may open the container in the presence of such a qualified examiner. EMU personnel will label the container with the appropriate handling precautions as needed.
 - 1. A note will be made in the appropriate communication log recording the reason the packaging was opened. If an examiner was contacted and/or present, this information will also be recorded in the appropriate communication log.

3.3 Process to Prevent Contamination

- A. EMU personnel will change gloves between each proximal container when directly handling individual items of evidence if transfer of trace, biological, or other materials is a concern based on expected examinations. Gloves must be changed if they become visibly soiled or torn.

- B. When evidence is removed from the proximal container, double gloves may be worn to facilitate the removing and donning of the outer gloves.
 - 1. EMU personnel will remove the outermost layer of disposable gloves, as needed, to minimize the direct transfer of trace or biological materials or if they are suspected to have been contaminated with trace or biological materials.
- C. If multiple examinations are requested for submitted items, the examinations must be conducted in a designated sequence that maximizes results and minimizes the potential for loss, cross-transfer, contamination, and degradation.
 - 1. If an item needs to be repackaged, EMU personnel will use clean laboratory tools (e.g., forceps) or gloved hands to avoid contact with any other surfaces or objects.
- D. If possible, EMU personnel should return an item to its original proximal container after processing unless there is obvious damage to the container or the original container is not of the appropriate type.
 - 1. After processing an item, EMU personnel will discard the disposable covering placed on the work surface by folding or removing the covering in a manner to minimize contamination of the area. The same covering can be used for multiple items if doing so does not affect possible examinations.
 - 2. If it is believed that trace materials from the evidence being processed were deposited onto the disposable covering, EMU personnel will retain the covering. The covering will be packaged with the original evidence or placed in new packaging. The covering will be itemized or added to the original evidence's description as appropriate.
- E. EMU personnel will dispose of the covering and gloves in an appropriate waste container.
- F. EMU personnel will repeat the steps in [Section 3.2](#) and [Section 3.3](#) for each new proximal container as needed.

3.4 Post-Processing Decontamination Procedures

At the end of the processing day, EMU personnel will clean the processing table and surrounding area with the appropriate solution as described in [Section 3.2.A](#).

3.5 Personal Hygiene

Refer to the FBI Laboratory Safety Manual Safe Work Practices and Procedures for additional information on personal hygiene.

- A. Because of the nature of the cases and items received for examination by the FBI Laboratory and the concern for cross-contamination, EMU personnel who process evidence within EMU space must wear clothing and other personal items that are free of explosive residue.
 - 1. EMU personnel engaged in explosive range operations or any other contact with bulk explosives outside of the laboratory space must shower or bathe to remove any potential contamination from hair and skin, change clothing, and clean other personal items (e.g., glasses, watches) prior to entering EMU laboratory and office spaces.
- B. Prior to leaving laboratory space, EMU personnel must remove any PPE.

4 SAFETY

Refer to the FBI Laboratory Safety Manual for the following information:

- Biological Safety
- Bloodborne Pathogen Exposure Control Plan
- Hazardous Waste Disposal
- Personal Hygiene
- Personal Protective Equipment
- Safe Work Practices and Procedures

5 REVISION HISTORY

Revision	Issued	Changes
05	0/07/2022	Updated the requirements for Isopropyl Alcohol to include anything higher than 70%. Added 3.2.A.1 and 3.2.A.2 to clarify which cleaning process applies to which type of evidence. Clarified verbiage in Section 3.2.C and 3.2.C.1 to acknowledge in some instances consulting an examiner is not needed. Updated formatting to standardized template.
06	02/03/2025	Removed 3.5 Photography guidance.