



**ILLINOIS STATE POLICE
Division of Forensic Services
Forensic Sciences Command**

ESH Appendix 26. COLLECTION AND PRESERVATION OF PRIMER GUNSHOT RESIDUE EVIDENCE

Overview

1. The submission criteria discussed below are intended to address the vast majority of Primer Gunshot Residue (PGSR) evidence submissions. However, specific case circumstances may influence the acceptance of certain evidence. Good communication with the Forensic Sciences Command (FSC) Laboratory is critical to ensuring the most efficient analysis of the most probative evidence.
2. The probative value of PGSR is to associate an individual (or an inanimate object) with a firearm, which has not previously been associated with that individual/object. PGSR hand samples collected within 6 hours of a shooting incident are usually the most probative. Thus, they will be the first samples analyzed. Samples from decedents may exceed the 6 hour timeframe. Hand coverings will not be processed for PGSR.
3. If the hand samples are negative, the laboratory may analyze the suspect's clothing. **Only clothing that has already been associated with the suspect, either through direct observation or via the Forensic Biology/DNA (FB/DNA) Section, will be analyzed.** The cuffs of long sleeve clothing items will be sampled per FSC procedures. If the submitting agency wants other areas on the clothing item sampled, or different clothing items sampled, the agency needs to specify those areas (examples: front interior waistband of pants, interior left pocket of coat).
4. *PGSR analysis DOES NOT determine the distance between an object and the muzzle of a discharged firearm.*

Submission Criteria

1. PGSR cases which **WILL** routinely be accepted are crimes-against-person incidents where the suspect has been arrested without a firearm. Examples of incidents routinely accepted are **Homicides, Aggravated Batteries, Armed Robberies, and Questionable Deaths with a Suspect(s)**.
 - A. Prior to submission, the submitting agency and the receiving laboratory will evaluate all information/case reports to determine if the requested PGSR evidence is probative to the investigation. The submitting agency must provide sufficient details to support the request for PGSR analysis.
 - B. If the information provided by the originating agency, after submission, is deemed insufficient to determine the probative value of the PGSR request, the originating agency will be notified by the laboratory. Once documented notification is made, the agency will have **14 days** to respond and provide the needed information. If the agency does not respond within 14 days, the case will be cancelled and the evidence will be returned unanalyzed.
2. PGSR cases which **WILL NOT** routinely be accepted are cases where the PGSR evidence is of limited, or no value.

Incident Criteria (DO NOT SUBMIT)	Justification
PGSR kits from all gunshot victims, including suicides	It would not be unusual to find primer residue on a victim's hands or clothing, particularly when the discharge was in close quarters (e.g., inside a vehicle).
PGSR kits from individuals found in possession of a firearm, or identified via surveillance video of being in possession.	Primer residue can be deposited on an individual's hand via discharge or handling a firearm.

3. Sampling/Collection Information:
 - A. Sampling devices consist of a carbon based adhesive on a 1/2 inch aluminum pin mount stub in a protective vial. Cotton swabs should not be used for sampling on any surface and will not be examined.
 - B. Any item requiring FB/DNA examination should be submitted to that section without PGSR sampling. Any PGSR collections from items can be made in the laboratory in conjunction with the FB/DNA examiner.
 - C. Care should be taken to prevent contamination by cleaning the work area where samples are to be collected and by wearing appropriate personal protective equipment. A control sample is to be opened and exposed to the sampling environment during collection of PGSR samples.
 - D. Proper collection of PGSR is critical to the analysis outcome. The use of common sense will be important for the proper collection of PGSR from objects other than hands. In any collection event, the number of stubs used is dependent upon how quickly the stub surface is loaded with debris/sample and/or loses its adhesiveness. Particle collection is achieved by dabbing the sample adhesive to the item throughout the defined location until adhesive tackiness is diminished or the area has been sufficiently sampled.
 - E. All sample vials should be appropriately marked and all packaging should be sealed and appropriately marked for identification.
4. If there are questions regarding the proper sampling technique for PGSR, the appropriate paperwork to submit, and/or the probative value of PGSR samples, please call the Forensic Science Center at Chicago (FSC-C) at 312-433-8000. Ask for a supervisor in the Microscopy/Trace Section.