

Montana Forensic Science Division (FSD)  
Chemical Analysis Unit (CAU)  
**Primer Gunshot Residue (pGSR) Evidence Acceptance Guidelines**

The analysis of pGSR is a time-intensive and costly analysis. To be mindful of state resources, evidence will be analyzed on a case-by-case basis. Please submit the agency report with the evidence. A pGSR analyst will contact the lead investigator prior to the analysis to discuss the circumstances of the case and ensure the correct analysis is being requested/performed (i.e. CAU pGSR analysis vs analysis in the Firearm Section). These guidelines are meant to help foster communication with our customers and we understand that there may be extenuating circumstances, and that accommodation may need to be made, which is why it is imperative we discuss these cases prior to analysis.

Officers are encouraged to collect potential pGSR residues as soon as possible after the incident from individuals of interest. pGSR is usually removed from the hands of a living subject after 4-6 hours of normal activities. It is better to collect potential residues and later determine if analysis is not needed than miss the window of evidence collection. If not collected at the scene, the person's hands should be bagged at the time of apprehension prior to being placed into a police vehicle.

The **BEST** evidence for pGSR analysis is a kit collected from the hands and face of a person suspected of firing a weapon. **pGSR kits can be ordered by calling Tri-tech Forensics; 1-800-438-7884, item GSR-SEM(1MT). We can only analyze kits for use with a scanning electron microscope (SEM).**

**In some circumstances, the analysis of samples for pGSR will provide no additional investigative information. The following evidence will not routinely be analyzed for pGSR by the CAU:**

1. pGSR kits collected from all subjects that have sustained a gunshot wound (including suicides).
2. pGSR kits collected from subjects that are known to have showered since the alleged shooting. If the subject only washed their hands prior to samples being collected, then only the face stub will be analyzed.
3. pGSR kits collected from subjects apprehended in the possession of a firearm or if the incident was on video, such as a surveillance camera clearly showing the incident.
4. Clothing worn at the time a subject sustains a gunshot wound. The Firearms Section should be consulted regarding analysis of the clothing.
5. Clothing that is not the outermost garment. This includes shoes, undergarments, undershirts collected from a subject suspected of discharging a firearm.
6. Clothing not worn during the alleged shooting.
7. Clothing that has been washed prior to collection.
8. pGSR evidence collected to satisfy curiosity or satisfy the courts when the analysis of the kit would not be based on accepted scientific method or reasoning.
9. pGSR kits collected from subjects where the time of incident to time of collection is greater than 24 hours.
10. People that assisted in basic life support efforts (e.g., CPR) that came into direct contact with a person that sustained a gunshot wound.
11. Witnesses that are not related to the incident (by-standers).
12. Miscellaneous items found at the scene. Although pGSR can remain on undisturbed objects for a long period of time, it is not possible to determine how or when the residues were deposited on the object. For example, interiors or exteriors of cars, walls, tables, or other items found at the scene.
13. Firearms and components (e.g., magazine, bullets, cartridge cases) should be submitted to the Firearms section.
14. Suspected impact sites (bullet strikes) should be submitted to the Firearms section.

NOTE: When pGSR kits from the subject and clothing from the same subject are submitted for pGSR analysis, the clothing will only be analyzed for pGSR if no particles characteristic of pGSR were confirmed on the subject's kit and analyzing the clothes would provide additional investigative information (please contact lab about appropriate packaging).

**Case Coordination:**

- Even though the analysis of items for pGSR may not be probative, consultation between the Firearm section and CAU will confirm the proper course of action for cases involving different/unique types of evidence.
- Private laboratories may be able to analyze items of evidence, at the agency's expense, that fall outside the above guidelines.

**Should you have any questions or concerns please contact: MT-FSD CAU, 406-728-4970**