



Gunshot Residue Analysis (GSR) Submission Criteria

SEM is a time-consuming analysis (each stub can take up to 5 hours of instrument time to analyze and only one sample may be run at a time) so our ability to handle a large volume of casework is reduced. In an attempt to efficiently use limited instrument analysis time, GSR examinations should only be conducted in cases where significant information of value may be obtained. Therefore, as a minimum, all cases should meet the following criteria:

- **It is important to use the kits provided by FDLE or similar kits ordered by your agency since quality control analyses have already been performed on materials from the manufacturer prior to production.** This precludes the necessity of running a control sample with every kit thereby delaying your results. If you submit a kit from another manufacturer which contains no control sample, the kit will be returned to you unworked.
- **Fill out the GSR Data Collection sheet contained in the GSR kit completely and submit to the Laboratory with the kit.** If you neglect to submit this sheet, you will be contacted for the information before your evidence is analyzed and your results will be delayed.
- **The time interval between shooting and sampling should not exceed 8 hours.** Gunshot residue is easily removed from the hands and the likelihood of finding GSR after a time lapse of greater than 8 hours is considered remote.
- **Do not sample subjects found in the possession of or who are known to have handled a firearm.** This analysis cannot distinguish between handling a firearm or cartridge and firing the weapon, thus under these circumstances this test will provide no information of value.
- **Do not sample subjects known to have washed/rinsed their hands or bathed since the alleged shooting incident.** Washing or rinsing the hands can be expected to remove essentially all gunshot residue present.
- **Do not sample surfaces or materials other than hands.** While GSR analysis of items other than hands can be performed, the forensic significance is limited because the persistence of GSR on other surfaces is largely unknown. Difficulty in determining persistence on other surfaces precludes association of GSR found with a specific shooting incident, thereby reducing significance of the analysis.
- **Sample individuals thought to be valid suspects in the case and not for "elimination" purposes.** Remember that each additional kit can consume up to 20 hours of instrument analysis time.

For further information, please contact the Gunshot Residue Analysis section at the Daytona Beach Crime Laboratory (386) 274-3829.