



Critical success factors for Gunshot Residue (GSR) recovery in Rape and Sexual Assault Cases



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RECOVERY OF GSR

- Dedicated GSR sampling kits should be used to optimise the recovery of GSR from skin and hair surfaces.
- If dedicated GSR sampling kits are not available then sterile DNA swabs can be used to sample body surfaces by first wetting the swab with sterile water.
- Recommended kits are either tape or pin stub kits and the samples should be pressed firmly across the surfaces.
- The sampling kits should be used as soon as possible after the incident and as much information as possible provided regarding the areas sampled
- Any body surface thought to have come into contact with a firearm should be sampled.
- Separate sampling tapes or stubs should be used for different areas of the body e.g. left hand, right hand, neck, hair etc.
- Internal body surfaces are unlikely to retain GSR and in such instances underwear if available should be recovered and submitted for analysis.
- Any items of clothing thought to have come into contact with a firearm should be removed as soon as possible, packaged and submitted for analysis.

PERSISTENCE OF GSR

- Can remain for up to several hours on subjects' hands, up to 12 hours on hair surfaces and possibly longer on body surfaces not subject to washing or disturbance which may result in a loss of GSR.
- Washing of body surfaces or any movement can result in a loss of GSR.
- On clothing that has been continually worn GSR can remain for up to a day on the outer surfaces and indefinitely inside pockets.

CONTAMINATION AVOIDANCE

- Subjects should be sampled as soon as possible by any medical or scientific personnel following the GSR kit instructions and taking all control samples required.
- Personnel carrying out sampling for GSR should not have had any prior contact with firearms or spent ammunition.
- If armed officers are involved in an incident and have come into contact with the subject provide as much information as possible.
- GSR sampling kits and items of clothing recovered from subjects should be kept separate from firearms and ammunition at all times.

ITEMS/SCENARIOS UNLIKELY TO GENERATE USEFUL RESULTS

- Samples from subjects taken days or weeks after an incident unless a more recent exposure to GSR is thought to have occurred.
- Samples taken after a subject has bathed or showered.
- Internal samples.

INFORMATION THAT SHOULD BE CONTAINED WITH SUBMISSION

- Complete schedule of exhibits relating to specific case.
- Details relating to armed officer involvement.
- All timings relating to recovery of items.
- Information relating to what the subject has said in relation to the incident.

Please contact FFC Ltd for any advice at enquiries@forensicfirearmsconsultancy.com or tel. 07919 392 397.