GSR, Number Restoration & Trace Metal

Finding evidence associated with weapons can link events, individuals, or other crimes. Many illegally-owned weapons have serial numbers that are often destroyed or marred so using serial number restoration to recover evidence is critical. Additionally, gunshot residue, the result of firing a weapon, can link perpetrator or victim to a weapon or a crime scene. We have the tools, kits, and the training to help you recover the evidence you need.

Firearm, Toolmark ID & Shooting Reconstruction Course

This advanced course will introduce the methods used by firearm and toolmark examiners. Students will examine large caliber fired bullets, such as .45 caliber; rifle and various shotshell components; large caliber cartridge cases; and types of toolmarks, including pry bars, screwdrivers, and knives. Students will learn how examiners obtain information that may aid investigators in searching for a firearm or tool, which was used in a crime, including how a fired bullet, cartridge case, or tool may be matched to a particular firearm or tool. The class will also explore the reconstruction of shooting incidents, covering range determinations, and direction of fire and gunshot residue identification.

For more information about this and all other training courses, visit www.sirchie.com or call us at (800) 356-7311.
Gunshot Residue Analysis (GSR)

When a weapon is fired, gunpowder residues are blown back towards the shooter. In most cases, trace amounts of residue are left on the shooter’s hand. Detecting these residues can give you valuable information about who fired the weapon.

To detect GSR, samples must be collected off a subject’s hands and sent to a laboratory for analysis using Scanning Electron Microscopy / Energy Dispersive X-ray (SEM/EDX). This testing determines the presence of antimony, lead, and barium, quantities of each particle, and the morphology of the particles, which are unique to GSR.

Another test is Atomic Absorption Analysis (AAA), developed in the 1970s. While this test will tell you if barium, antimony, and lead are present, it will not tell you the form of the particles. Without knowing the form, other residue, such as brake dust or lead batteries can produce a positive result.

**Note:** If you are going to use AAA method tests, please verify that your lab will process the AAA samples. Most state labs no longer process AAA samples.

Scanning Electron Microscopy Kit (SEM)

This collection kit contains all the necessary items to recover residue from a suspect's hands or clothing. Items should then be sent to your lab for the SEM test.

- **No. GRA200**  Primer Residue Collection Kit for SEM
- **No. GRA200S**  Primer Residue Collection Kit for SEM (# Studs)

Atomic Absorption Analysis Kit (AAA)

Swab the suspect's hands or clothes with the AAA test kit and send it to the laboratory for analysis. To note, all GSR tests must be verified by a lab. Available in 10 tests to a kit.

- **No. AAA100**  Atomic Absorption Analysis Kit, 10 tests

Combination Kit: AAA and SEM Analysis

This kit offers the necessary tools for the AAA and the SEM analysis tests. It's ideal for departments who use both testing methods.

- **No. GRA100**  Primer Residue Collection Kit for SEM & AAA

Primer Residue Collection Kit for SEM

These tests are specific for SEM analysis. Each features two studs. All tests should be submitted to lab for SEM analysis.

- **No. GRA300**  Primer Residue Collection Kit for SEM, 2 Stud
- **No. GRA300S**  Primer Residue Collection Kit for SEM, 2 # Studs
Gunpowder Particle Detection Kit

Determining the distance of firearm discharge is an important factor in crime scenes. This kit uses nitrate ions to distinguish between close-range and distant firearm discharge. After you develop the nitrate particles, you should photograph the test paper for evidence documentation.

No. GPD100 Gunpowder Particle Detection Kit

Trace Metal Detection Kit

With this kit, you can make metal trace patterns visible on a suspect's skin or clothing. Once the suspected area is treated with a test solution (included in the kit), you can illuminate with shortwave ultraviolet (254nm) light.

No. TMDT100 Trace Metal Detection Kit

Explosives Residue Test Kit

Get a quick screening for explosive residue to verify the presence of nitrates. Due to improvements in testing techniques, this process is extremely sensitive and ideal for you to use in the lab or the field.

No. ERTT10 Explosives Residue Test Kit

Gunpowder Particle Test Kit

Use this kit as a fast, reliable field test to detect trace nitrates found in gunpowder. It’s a presumptive test in a simple-to-use pouch with results appearing in seconds and ideal for on-the-spot testing at crime scenes or wherever you apprehend a suspect. Additional tests should be performed & sent to the lab for verification.

Note: All GSR lab samples should be taken before testing with BlueView.

No. BV100 BlueView Gunpowder Particle Test Kit, 10 tests

Firearms and Trace Metal Detection

Master Firearms Detection Kit

To investigate any crime involving firearms, you’ll need this kit. Tools and tests included are primer residue detection and if there was contact with a weapon. To make your life easier, all components are pre-measured, packaged, and contaminant-free.

No. MFD200 Master Firearms Detection Kit
Serial Number Restoration

Serial Number Restoration Gels/Liquids
You’ll be able to restore metal surfaces in the field with our Restor-A-Gel. With a gel consistency, you can apply it with a spatula to either a vertical or horizontal surface. It can also be used with the Field and Lab Restoration Accelerator (284A). Available for steel, aluminum, or copper.

No. RAG1001 Restoration Gel for Steel, 1 oz.
No. RAG2001 Restoration Gel for Aluminum, 1 oz.
No. NIA Restoration Liquid for Aluminum, 0.25 oz.
No. NIC Restoration Liquid for Copper, 0.25 oz.
No. NIS Restoration Liquid for Steel, 0.25 oz.

Restor-A-Gel Number Restoration Kit
Use this kit to restore serial numbers and other identifying marks that suspects have tried to destroy. The kit contains everything you need for iron and non-iron metals.

No. RAG500 Restor-A-Gel Number Restoration Kit

Serial Number Restoration Reagents for Plastics
With Resto-Plas, you can restore stamped serial numbers on most commercially available plastics, including TVs and stereo equipment. Easy-to-use in the field, this kit contains six tests.

No. RPR1006 Restoration Reagents for Plastics, 6 ea.

Field and Lab Restoration Accelerator
To restore serial number and other identifying marks a suspect removed by filing or grinding, use this accelerator. It operates via “D” batteries and can be taken anywhere; perfect for field or lab use.

No. 284A Field and Lab Restoration Accelerator

Master Number Restoration Kit
You won’t need any other tools with this master kit to restore serial numbers or identifying marks. You’ll be able to find marks on iron, steel, aluminium, copper, and their alloys with all the necessary equipment in the field.

No. MNR100 Master Number Restoration Kit