



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.

No. FSR100



For class schedule or to register, visit www.sirchie.com/training.



Often Bought Together:
Indicates items often purchased in conjunction with other items.

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.

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.



GRA200 Contents:

- 1- GRA202 Gunshot Residue Collection Vial, Right Palm
- 1- GRA203 Gunshot Residue Collection Vial, Left Palm
- 1- GRA204 Gunshot Residue Collection Vial, Right Back
- 1- GRA205 Gunshot Residue Collection Vial, Left Back
- 1- GRA201 Test Data Label
- 1- Black Nitrile Gloves, pair
- 1- Instruction Sheet
- 2- KCP164 Evidence Integrity Seals
- 1- GRA200C carton, 6.5" x 3.25" x 1.25" with attached Integrity Seals

No. GRA200 Primer Residue Collection Kit for SEM

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

Atomic Absorption Analysis Kit (AAA)

The AAA process detects the presence of barium, antimony, copper and lead. Barium and antimony are present in the primers of most United States-made and some European brands of ammunition, while copper and lead particles originate from cartridge cases and projectiles. Upon detonation of a cartridge, these elements are deposited on the shooter's hands. The AAA100 kits are used to swab the entire surface of the suspect's hands. The samples taken are then submitted for laboratory analysis. Due to the extreme sensitivity of Atomic Absorption Analysis, the swabs, preservation tubes, nitric acid solution and container must be free from contamination. SIRCHIE® has developed this kit to fulfill this requirement. The AAA100 kit contains 10 individual test kits and the components of each are handled under controlled conditions to ensure absolute minimum contamination.

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.



AAA100 includes 10 tests with:

- 1- KCP123 Polyethylene Dispenser, 5% Nitric Acid with Controlled Flow Applicator and Protective Cap, 3ml
- 6- AAA1001 - AAA1006 Vials, Open End, Contaminant-Free with 12mm Polypropylene Closures with Specimen Swabs
- 1- EIL021 Police Seal Warning Label
- 1- Black Nitrile Gloves, Pair
- 1- KCP120 Case, Molded Styrene, 4.625" x 3.5" x .875"

No. AAA100 Atomic Absorption Analysis Kit, 10 tests

Pricing Information:
For current pricing visit
www.sirchie.com, or
call 800.356.7311

Often Bought Together:
Indicates items often
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with other items.

Combination Kit: AAA and SEM Analysis

Specifically designed for those departments with access to scanning electron microscopy and atomic absorption analysis. The GRA series gunshot residue analysis kits feature special alloy aluminum specimen mounts containing no barium, lead or antimony—the most common constituents in primers. Simply remove the cap with carbon-covered metal stub, apply to the questioned hand area and return the metal stub to its original location in the holder. Specific and sensitive collection for gunshot residue in an economical and uncomplicated kit. Also included in the GRA100 are all the necessary components to collect primer residue for atomic absorption analysis.



GRA100 comes complete with:

- 1- GRA101 Gunshot Residue Collection Vial, Right Palm
- 1- GRA102 Gunshot Residue Collection Vial, Left Palm
- 1- GRA103 Gunshot Residue Collection Vial, Right Back
- 1- GRA104 Gunshot Residue Collection Vial, Left Back
- 1- GRA106 Zip-Top Bag, 2.5" x 3", with 12 Cotton-Tipped Applicators, 2.5"
- 1- KCP124 Vial, Left Back, Contaminant Free
- 1- KCP125 Vial, Right Back, Contaminant Free
- 1- KCP126 Vial, Left Palm, Contaminant Free
- 1- KCP127 Vial, Right Palm, Contaminant free
- 1- KCP128 Vial, Cartridge Case, Contaminant Free
- 1- KCP129 Vial, Control, Contaminant Free
- 1- KCP123 Polyethylene Dispenser, 5% Nitric Acid with Controlled Flow Applicator and Molded Protective Cap, 3ml
- 1- Black Nitrile Gloves, pair
- 2- KCP164 Evidence Integrity Seals
- 1- GRA100C Carton, 6.5" x 3.25" x 1.25" with Attached Integrity Seals
- 1- Instruction Sheet

No. GRA100 Primer Residue Collection Kit for SEM & AAA

Primer Residue Collection Kit for SEM

The GRA300 is designed for use by Departments that anticipate submitting evidence for Scanning Electron Microscopy (SEM). The GRA Series of kits feature special alloy aluminum mounts that contain no barium, antimony or lead—the most common constituents in cartridge residue. GRA tests are specific and sensitive for collection of gunshot residue using SEM techniques, and are economical and not complex.



GRA300 Contents:

- 1- Factory sealed, tamper-evident Kit Envelope, 6" x 9"
- 1- Instruction Sheet
- 1- GRA Information Form
- 1- Right Hand Vial with SEM Stub
- 1- Left Hand Vial with SEM Stub
- 1- Black Nitrile Gloves, pair
- 1- KCP164 Evidence Integrity Seal

No. GRA300 Primer Residue Collection Kit for SEM, 2 Stud

No. GRA300S Primer Residue Collection Kit for SEM, 2 # Studs

Gunpowder Particle Detection Kit

The No. GPD100 kit provides a sensitive and specific method for the detection of nitrite particles at the crime scene. The sensitivity of the test eliminates the possibility of omission and error attending visual examination of the crime scene. By utilizing this kit, it is possible to distinguish between close-range and distant firearm discharge. Close-range firing and approximate distances can be determined by the powder tattooing on the body or clothing of the victim. After the development of nitrite particles, test paper should be photographed for a permanent record of particle dispersion.

Three-Step Process:

1. Spray prepared reagent solution over entire surface of gunpowder detection contact paper and place directly over the area of clothing to be tested.
2. Place sheet of untreated contact paper on top of treated sheet and apply pressure over entire area of sheet.
3. Positive test results for nitrate is indicated by the appearance of orange specks within 2 minutes of application.



Often Bought Together:
(SF0081L) Black Nitrile
Gloves, Large

GPD100 Contents:

- 6- GPD01 Gunpowder Particle Reagent A, 1/6 Dram
- 6- GPD02 Gunpowder Particle Reagent B, 1 oz.
- 12- GPD03 Gunpowder Detection Paper
- 1- SB4 Pump Spray Bottle
- 12- GPD05 Gunpowder Particle Removers
- 1- GPD100C Molded Copolymer Case w/Molded Inserts

No. GPD100 Gunpowder Particle Detection Kit

Master Firearms Detection Kit

The MFD200 is a necessary kit for the investigation of any crime involving the use of firearms. Specific detection of primer residues (antimony and barium) and the determination of contact with a weapon (trace metal) can be performed. All the components are pre-measured, packaged, and contaminant-free for excellent sensitivity and unlimited laboratory testing.

Firearms Discharge Tests included in the MFD200 are:

- Atomic Absorption Analysis (AAA)
- Scanning Electron Microscopy (SEM) to test for: Barium, antimony, copper, and lead
- Trace Metal Detection Technique (TMDT) to test for: All metals

Note: Always wear eye protection when using shortwave UV light sources.



Often Bought Together:
(SF0081L) Black Nitrile
Gloves, Large

MFD200 Contents:

- 4- AAA100 Atomic Absorption Analysis Kits
- 1- SB4 Spray Bottle, 4 oz.
- 1- CUV100TS Shortwave Mini UV Light Source
- 4- KCP230 AA Batteries, Alkaline
- 3- TMDT01 Trace Metal Reagents, 1 oz.
- 1- GRA200 (SEM) Scanning Electron Microscopy Collection Kit
- 1- MFD2001 Carrying Case, Molded Copolymer with Molded, Plastic Inserts, 17.5" x 10.25" x 8.625"

No. MFD200 Master Firearms Detection Kit

Pricing Information:
For current pricing visit
www.sirchie.com, or
call 800.356.7311

Often Bought Together:
Indicates items often
purchased in conjunction
with other items.

Explosives Residue Test Kit

This kit provides rapid screening for explosive residue to verify the presence of nitrates. Due to improvements in testing technique, the process is extremely sensitive and ideal for field or lab use. Tests have been performed with debris the size of a grain of salt—while not conclusive for the presence of explosives, it is an effective screening tool for pinpointing “hot” locations.



ERTT10 Contents:

- 20- 288DP Disposable Pipettes with Capillary and 3ml Bulb
- 10- 290P2 Color Developing Reagent, Ampoules, 2ml
 - 1- ACN2 Acid Neutralizer, 2 oz
 - 3- EIL011 Evidence ID Labels
- 10- ERI Extract Reagent 1, Ampoules, 1ml
 - 1- KCP1391 Plastic Tweezers, 4"
 - 1- KCP140 Spatula, Stainless, Micro
- 3- KCP173 Vial, Glass, 1/2 oz. with Closure
- 10- KCP174 TLC Plates, Silica Gel 60A, 5cm x 10cm
- 100- KCP191 Pipette Microcap 20µl Capillary
- 15- KCP217 Cotton Balls
- 10- KCP171 Vials, Glass, with Closure, 1/2 Dram
 - 1- ERTT101 Molded Copolymer Case with Latch, 16.375" x 8.625" x 7"

No. ERTT10 Explosives Residue Test Kit

Trace Metal Detection Kit

The trace metal detection technique (TMDT) makes trace metal patterns visible on skin and clothing that has been treated with a test solution and then illuminated by shortwave ultraviolet light. Examination allows an investigator to determine whether or not a suspect has been in contact with certain metal objects, the type of metal or metals in the object and also to determine what type of weapon or metal object was handled.

Note: Always wear eye protection when using shortwave UV light sources.

TMDT100 includes:

- 12- FPT1 Super Cleaner Towelettes
- 4- AA Batteries, Alkaline
- 1- SB4 Spray Bottle, 4 oz.
- 1- CUV100TS Shortwave UV Mini Light
- 4- TMDT01 Trace Metal Reagents, 1 oz.
- 1- TMDT1001 Carrying Case, Molded Copolymer with Machined Plastic Insert

No. TMDT100 Trace Metal Detection Kit

BlueView™ 10 Tests 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. 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.

BV100 Contents:

- 1- Instruction Sheet
- 10- Pouch with Reagent Ampoule
- 10- Gunpowder Particle Collection Lifters
- 1- Straight handle magnifier

No. BV100 BlueView Gunpowder Particle Test Kit, 10 tests

Serial Number Restoration

Serial Number Restoration Gels/Liquids

RESTOR-A-GEL™ enables investigators to perform restoration in the field on metal surfaces. The gel consistency of the reagent permits application with a spatula to either a vertical or horizontal surface. No damming or tear-down of engine is required; applies just like grease. Gel reagents have 50% more concentration for minimum etching time; also can be used with our 284A Field and Lab Restoration Accelerator.



RESTOR-A-GEL™ Features:

- Gels for aluminum, copper, and steel
- Increased concentration
- Simplified application
- Use on horizontal or vertical surfaces
- Apply to surfaces previously impossible to etch
- Relatively inexpensive compared to liquid etching solutions

No. RAG1001	Restoration Gel for Steel, 1 oz.
No. RAG2001	Restoration Gel for Aluminum, 1 oz.
No. RAG3001	Restoration Gel for Copper, 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.

Serial Number Restoration Reagents for Plastics

Restore the original manufacturer's stamped serial numbers on most commercially available plastics, including items such as TVs and stereo equipment with RESTO-PLAS™. Just apply the special reagent to the surface, air dry, then apply direct heat with a hot air dryer. Ground off numbers pop up for easy recording and photographing. Each reagent test unit includes 4 ml of plastic etching reagent in a resealable glass vial and four cotton-tip applicator swabs.

No. RPR1006 Restoration Reagents for Plastics, 6 ea.

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.

This is a complete kit containing the necessary reagents to restore serial numbers and other identifying characteristics that have been destroyed—leaving no visible tracks. Obliterated marks on ferrous and non-ferrous metals can be restored to visibility with RESTOR-A-GEL® compounds.



RAG500 Contents:

- 1- ACN2 Acid Neutralizer, 2 oz. (59ml)
- 6- KCP163 Emory Papers, 2" x 3"(5.1cm x 7.6cm)
- 2- KCP207 Vial, Amber, w/Snap-On Cap, 30 dram
- 6- KCP209 Stirrers, Wood
- 15- KCP217 Cotton Balls
- 2- RAG1001 Restor-A-Gel® for Steel, 1 oz. (30ml)
- 2- RAG2001 Restor-A-Gel® for Aluminum, 1 oz. (30ml)
- 2- RAG3001 Restor-A-Gel® for Copper, 1 oz. (30ml)
- 1- RAG5003 Metal Surfacing Solution, 2 oz. (59ml)
- 1- RAG5004 Aluminum Surfacing Solution, 2 oz. (59ml)
- 1- KCP168 Bastard File
- 1- RAG500C Molded Copolymer Case w/Molded Plastic Inserts; Dimensions: 12.125" x 7.25" x 4.5" (30.8cm x 18.4cm x 11.4cm); Weight: 3.25 lbs. (1.5kg)

No. RAG500 Restora-A-Gel Number Restoration Kit

Pricing Information:
For current pricing visit
www.sirchie.com, or
call 800.356.7311

Field and Lab Restoration Accelerator

This electrolytic-acid etching accelerator is for use in restoring obliterated serial numbers and other identifying marks that have been removed by filing or grinding. It operates from self-contained dry cell 1.5 volt "D" batteries (included) for maximum portability and flexibility. It has been totally redesigned with more simplified controls and improved circuitry and reduces etching time from hours to minutes. This compact, lightweight model is ideal for field or lab use.



284A Features:

- Battery-operated for convenience and portability
- Variable current (use MIN for copper, aluminum and soft metals; use MAX for steel, iron and very hard metals)
- Use with liquid or "gel" reagents

284A Specifications:

- Housing: Black, ABS injection-molded
- Power Source: 4 ea. D-cell alkaline batteries (included)
- Probe Cord: 3 ft (91.4cm) Cord, one phone plug, one alligator clip
- Probe, Large: 2"L x .5"W (2.5cm x 1.3cm) brass electrode, phone plug adapter
- Probe, Small: 1"L x .5"W (2.5cm x 1.3cm) brass electrode, phone plug adapter
- Side Covers: 0.062" thick aluminum alloy, black wrinkle paint
- Dimensions: 6.5"W x 4.25"D x 2.5"H (16.5cm x 10.8cm x 6.3cm)
- Weight (without batteries): 0.96 lb (0.4kg)

No. 284A Field and Lab Restoration Accelerator

Master Number Restoration Kit

This is a complete kit for use in the field or lab and permits the use of liquid etching reagents in resealable glass ampoules or the RESTOR-A-GEL® Reagents. It includes all the necessary support equipment and the No. 284A restoration accelerator. Identifying marks on iron, steel, aluminum, copper and their alloys may be restored with ease using this kit. Complete instructions with application recommendations are included.



MNR100 Contents:

- 1- 284A Field Model Restoration Accelerator
- 4- KCP235 D-Cell Batteries, Alkaline
- 1- KCP168 File, Bastard
- 3- 288DP Pipettes, Disposable with Capillary and 3ml bulb
- 1- ACN2 Acid Neutralizer, 2 oz.
- 6- KCP163 Emory Papers, 2" x 3"
- 1- KCP197 Jar, 8 oz., Polystyrene
- 6- KCP209 Stirrers, Wood
- 15- KCP217 Cotton Balls
- 2- NIA RESTOR-A-GEL for Aluminum, 1/8 oz.
- 2- NIC RESTOR-A-GEL for Copper, 1/8 oz.
- 2- NIS RESTOR-A-GEL for Steel, 1/8 oz.
- 2- RAG1001 RESTOR-A-GEL for Steel, 1 oz.
- 2- RAG2001 RESTOR-A-GEL for Aluminum, 1 oz.
- 2- RAG3001 RESTOR-A-GEL for Copper, 1 oz.
- 1- RAG5003 Metal Surfacing Solution, 2 oz.
- 1- RAG5004 Aluminum Surfacing solution, 2 oz.
- 1- STM1003 Modeling Clay, 1/4 lb
- 1- MNR100C Molded Copolymer Carrying Case with Molded Plastic Inserts 17.5" x 10.25" x 8.625"

No. MNR100 Master Number Restoration Kit



Featured above: Interior & exterior of customized Hostage Negotiation Vehicle.



Mobilize every task from evidence collection to mobile crime labs to cyber crimes investigation and more! Count on Sirchie, the industry standard for products and training used by law enforcement across the globe, for your next Special Purpose Vehicle.

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