The mission of the Montana Forensic Science Division is to use operationally efficient and financially responsible practices as the laboratory provides accurate, objective, and timely forensic analyses to the criminal justice community in order to maximize value to the citizens of Montana.
Forensic Sciences Division - East

The Billings Crime Lab only accepts controlled substance evidence for cases that do not require processing by any other section of the lab.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence Submission Steps</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry</td>
<td>7</td>
</tr>
<tr>
<td>Toxicology</td>
<td>8</td>
</tr>
<tr>
<td>Serology/DNA</td>
<td>9</td>
</tr>
<tr>
<td>Firearms</td>
<td>10</td>
</tr>
<tr>
<td>Toolmarks</td>
<td>11</td>
</tr>
<tr>
<td>Gunshot Residue</td>
<td>12</td>
</tr>
<tr>
<td>Latent Prints</td>
<td>13</td>
</tr>
<tr>
<td>Fracture Matches and Tape</td>
<td>14</td>
</tr>
<tr>
<td>Hairs/Fibers</td>
<td>15</td>
</tr>
<tr>
<td>Footwear and Tire Impressions</td>
<td>16</td>
</tr>
<tr>
<td>Arson</td>
<td>17</td>
</tr>
<tr>
<td>Paint</td>
<td>18</td>
</tr>
<tr>
<td>Human Remains</td>
<td>19</td>
</tr>
<tr>
<td>Packaging</td>
<td>20, 21</td>
</tr>
<tr>
<td>Breath Alcohol</td>
<td>Statewide Law Enforcement DUI Training, Intoxilyzer Maintenance and Repair, Statewide DUI Program Administration</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Drug Identification, Gunshot Residue</td>
</tr>
<tr>
<td>Serology/FNA</td>
<td>Blood Alcohol Impressions</td>
</tr>
<tr>
<td>Firearms</td>
<td>Firearm Functioning, Identification of Fired Ammunition Components and Toolmarks, Distance Determination, Fracture Match, Serial Number Restoration</td>
</tr>
<tr>
<td>Toolmarks</td>
<td>Impression</td>
</tr>
<tr>
<td>Medical Examiner</td>
<td>Latent Prints, AFIS, IAFIS</td>
</tr>
<tr>
<td>Autopsies, Biological Specimen Collection, Skeletal Analysis</td>
<td>Biological Materials Analysis (for type/source), Genetic Analysis, CODIS</td>
</tr>
</tbody>
</table>

## Crime Lab Sections
Evidence Submission Steps

1. SECURITY AND MANAGEMENT
   • Clear the area of all people except those essential to the investigation.
   • Limit the number of officers collecting evidence.
   • Avoid using the same entry/exit path the suspect used, if it can be determined.

2. DOCUMENTATION
   • Record the location of evidentiary items prior to removal or movement.
   • Photograph items in their original position, using a measuring device in all photos.
   • Take both overall and close-up photos.
   • Photograph items in their original position, using a measuring device in all photos.
   • Record the location of evidentiary items prior to removal or movement.

3. AVOIDING CONTAMINATION
   • Wear non-shedding clothes to a crime scene.
   • Wear non-powdered gloves and disposable lab coats to package evidence.
   • Change gloves often if contaminated.
   • Handle evidence as little as possible.

4. COLLECTION

5. PACKAGING
   • Air-dry wet evidence.
   • Package all exhibits on a clean surface, such as butcher paper.
   • Use sterile or new containers.
   • Package evidence in proper evidence containers. Do not package too tightly.
   • Do not mark on the actual item of evidence.
   • Label all evidence with the submitting officer’s name, agency case number, a description of the item, and the exact location of the item relative to a fixed object, if applicable.
   • Keep biological samples and perishable items in the refrigerator.
   • Store evidence in a vault or location with controlled and secure access.

6. SEALING EVIDENCE
   • Seal all openings using red evidence tape, a heat seal, or approved self-adhesive seals.
   • Do not use staples.
   • Initial or sign all seals.
   • Package and seal items separately as much as possible to prevent contamination.

7. SUBMISSION FORM
   • Type or print legibly.
   • Ensure the item description and the agency item number match the submitted item.
   • Complete the “Received From/By” and date on the chain of custody.
   • Forms are available at: https://dojmt.gov/crime/forms.

8. SUBMISSION TO LAB
   • Evidence should be submitted along with the following:
     » Properly filled out Submission Form with completed chain of custody.
     » Incident Reports and known prints.
     » Scene or evidence photos that may be beneficial to analysis.
   • Delivery:
     » In person: 8am-5pm
     » United Parcel Service or FedEx
     » US Postal Service

For information on collecting specific evidence types, refer to each section’s guidelines as listed in the table of contents.

Chemistry

Plant Material
• Dry all plant material. Fresh or damp plants will mold if sealed in plastic.
• Cut plants from a grow operation off at the soil line. By statute, roots do not contribute to sample weight.
• The lab no longer analyzes non-felony marijuana cases.

Hypodermic Syringe Evidence
• Hypodermic syringe evidence should be approved by the County Attorney prior to submission. An approval letter or email from the County Attorney should accompany the evidence.
• Submit approved syringes in a biohazard safety canister.
• Syringe evidence encompasses hypodermic syringes (with or without needles), plungers, caps and contents.

Drug Field Test Kits
• Do not submit test kits with the evidence.
• Do not test residues with test kits.

Chemistry does not perform quantitation. Please contact the lab for a list of private laboratories that perform this service.

Clandestine Laboratory (clan lab)
• Prior to processing the evidence, contact DCI at (406) 444-3874 or a local agency certified in clan labs.
• Due to the hazardous materials associated with clan labs, hand deliver evidence to the Missoula Lab and fill out a memorandum of understanding. For questions regarding the submission of clan labs, please contact the lab.

Fingerprints
• If latent print examination is needed on drug packaging, drugs must be removed and repackaged.
• Submit the drugs and the packaging as separate exhibits.

Eastern Crime Lab (Billings Lab)
• Drug evidence for Blaine, Hill, Stillwater, Fergus, Judith Basin, Wheatland, Sweet Grass, Carbon, and all counties east, should be submitted to the Billings Lab.
• Drug cases involving other evidence requests must be sent to the Missoula Lab.
Toxicology

**DUI Requirements:**
- Blood alcohol and drugs - 2 gray top tubes, 20mL blood.

**Toxicology Requirements:**
- Blood alcohol and drugs - 2-4 gray top tubes, 20mL blood.
- Urine drug screening - 2 gray top tubes, 20mL urine.
- Vitreous alcohol - 1 red top tube, 5mL vitreous fluid.
- Carbon monoxide poisoning - 1 green top tube, 10mL blood. (Not included in the Toxicology kits, but the lab can provide if contacted.)

**Urinalysis Requirements:**
- Alcohol and drugs - 2 gray top tubes, 20mL urine.
- Samples must be previously screened.

**Drug Endangered Child Requirements:**
- Urine drug screening - 2 gray top tubes, 20mL urine.

**Sexual Assaults:**
- Urine alcohol and drugs - 2 gray top tubes, 20mL urine.
- Blood alcohol and drugs - 2 gray top tubes, 20mL blood.

**DUI Testing:** Samples will first be tested for alcohol. If a BAC of 0.10 or higher is found, further testing will not be done unless requested by emailing DOJTox@mt.gov. If the BAC is lower than 0.10, drug testing will be done automatically.

Serology/DNA

If the submission form is missing in the kit or a new form is needed, submission forms are available at: https://dojmt.gov/crime/forms.

**Kits:** Each kit contains a toxicology submission form, collection instructions, collection tubes, seals, labels, and packaging material.

**DUI Testing:**
- Samples will first be tested for alcohol. If a BAC of 0.10 or higher is found, further testing will not be done unless requested by emailing DOJTox@mt.gov. If the BAC is lower than 0.10, drug testing will be done automatically.

**General Instructions**
- Change gloves often and between handling different evidence items.
- Air-dry all samples before submitting them.
- Wrap and seal each item separately.
- **Do not package Serology/DNA kits in plastic.**
- Do not submit overly large items to the laboratory without prior approval.
- For limited samples, such as "touch" samples or hair, include a consumption letter from the attorney assigned to the case.

**Serology/DNA Kit Initiative (SAKI)**
- Due to Senate Bill No. 52, all sexual assault kits collected and given to law enforcement are required to be submitted to the Crime Lab within 30 days.
- These kits are now tracked. For questions regarding the tracking of kits, please contact the SAKI Coordinator, Kayla Bragg, at 406-444-5896.

**Collection**
- Liquids: Absorb liquid blood, semen, saliva, or other body fluid onto sterile swabs.
- Dry stains: Absorb stain onto clean swabs moistened with sterile water.
- Sexual assaults: Collect the evidence as soon as possible. Medical staff must collect the victim’s evidence using a Sexual Assault Kit (SIRCHIE Item #MT100A). The suspect’s evidence may be collected using a Sexual Assault Kit or sterile swabs.
- Apparent hairs: Pick up hair with clean forceps or a Post-it note, being careful not to damage the root tissue.
- Soft tissue: Store soft tissue in sealed, plastic containers and freeze. Do not use formaldehyde.
- Bones and teeth: Package whole bones or teeth in paper. Store at room temperature.
- Reference samples: Rub inside of cheeks with sterile cotton swab. Package swabs from different individuals separately.

**Sexual Assaults:**
- Urine alcohol and drugs - 2 gray top tubes, 20mL urine.
- Blood alcohol and drugs - 2 gray top tubes, 20mL blood.

**For the complete Serology/DNA manual, please visit:**
Firearms

Render the weapon safe before transporting. Use the proper unloading technique according to the type of weapon. Never place any hard object in the barrel or action of a firearm.

- Package each evidence item separately in an appropriate container such as a cardboard box.
- Indicate the brand, model, serial number, and caliber on the evidence label.
- If cylinder chamber position is deemed important, properly mark the cylinder by placing an “X” on both sides of the chamber located under the hammer.
- If biological or trace material needs to be collected from the weapon, wrap it in clean paper before packaging it in a box.

**SUBMITTING CLOTHING FOR DISTANCE DETERMINATION**

- Air-dry wet clothing.
- Handle items as little as possible.
- Lay each item flat and sandwich wrap between pieces of paper. Fold the wrapped clothing and place in a paper bag.
- Do not package different articles of clothing together.
- Label inner and outer containers with biohazard stickers if they contain blood.

Toolmarks

- Collect any whole or broken tools from the crime scene.
- Submit all suspected toolmarks on an object.
- If it is not possible to submit the evidence bearing the toolmark, submit a cast. This should only be done as a last resort and with a good casting material such as Forensic Sil, Mikrosil, or another silicone casting material.
- Mark directions (“up/down/inside/outside,” as appropriate) directly on casts and toolmark evidence, such as a door jamb, so long as the writing is in a toolmark-free area.
- Package all evidence separately.
- Tools should be wrapped and sealed in paper. They must also be stabilized for shipping. This can be accomplished by securing it in bubble wrap and an extra box with additional packing material.

To avoid contamination or loss of evidence, never attempt to fit a tool into a toolmark.
**Gunshot Residue (GSR) Kits**

- GSR can be lost through normal activities. Bagging hands until collection may help limit the amount of loss.
- Optimal time of collection is 0-4 hours after the incident.

- Carefully read and follow the instructions provided with each kit.
- Collect GSR from subjects as soon as possible.
- Open vials by gently pulling apart the brown plastic base and clear vial body.
- Do not handle the sticky black tape on metal stubs.
- Dab the sticky surface up and down the areas of interest.
- Continue dabbing until all areas have been covered, even if the stub is no longer sticky.
- After collection, place the clear vial body securely onto the brown plastic base.
- Place the vials and completed information sheet into envelope and seal.
- Do not place anything over the area on the envelope that displays the lot number of the GSR kit.
- Before stubbing any surfaces that are not persons (e.g., clothing, cars, surfaces), please contact the laboratory for instruction.

GSR kits can be ordered by calling TRI-TECH FORENSICS at 1-800-438-7884, item number GSR-SEM(1MT).

**Latent Prints**

When it is not possible to send items in to the lab and circumstances require latent lifts:

- Examine the item visually with a light source.
- Prior to dusting, photograph any visible prints with a high resolution format such as TIFF or RAW. Ensure that the ruler and camera are on a plane parallel to the impression when photographing.
- Allow wet prints to dry before Dusting.
- Do not apply powders to greasy, bloody, dusty, or putty evidence.
- Dust with powder, photograph again, and lift with lifting tape. Place the lift on a lift card of contrasting color from the powder.
- Use of a silver-colored powder is discouraged.
- Use of notecards or paper in place of lift cards is discouraged. The best results are obtained when lifts are placed on the proper side of designated lift cards.
- Do not discard any latent lifts, even if it appears that no ridge detail was lifted. Send all lifts to the lab for analysis.

Label the lifted print with your initials, the date, case number, location lifted, and an arrow indicating the direction of orientation of the latent print on the item of evidence. Include a sketch.

Whenever possible, it is encouraged to send items in to the lab for processing, as the lab has a number of physical and chemical processing techniques available.

Packaging:

- Avoid plastic; package the item in paper or cardboard.
- Secure the item from moving around or being rubbed by the packaging.
- Known fingerprint cards are considered evidence and should be packaged and sealed as such.
- Mark evidence with sharps or biohazard warnings, when appropriate.
Hair and Fibers

Please contact us for a list of private laboratories that perform this analysis. The lab can analyze hair for DNA analysis only. Hair comparisons between known and unknown hair samples are not performed.

Collecting Hair Evidence
- Dry wet or damp hair prior to packaging.
- Package hair in a re-sealable plastic bag and then double package in paper.
- If hair is attached to an object, cover the hair with paper and tape the edges. Submit the object with the hair intact, if possible.
- If a hit-and-run results in the deformation of a windshield or car part, submit the affected areas. Microscopic amounts of hair (as well as fibers and blood) may be present.
- Package hairs recovered from different locations in separate containers.
- Tape-lift items to secure any hairs that were overlooked.
- Vacuum only as a back-up technique.

Collecting Known Hair Standards
- Collect known hair standards from all individuals involved, including subjects for exclusion.
- Ideally, a known hair sample should include both pulled and brushed hairs.
- Pull hair samples, rather than cut. If cutting is necessary, cut or shave as close to the roots as possible.
- A known head hair sample consists of at least 50 head hairs from all over the scalp.
- A known pubic hair sample consists of at least 25 hairs from all over the pubic region.
- Hair can be a rich repository of transferred trace materials. Depending on the trace material, the subject’s hair can be combed with a fine tooth comb over paper (for glass or foreign hairs) or tightly tape-lifted (for fibers).

Tape-Lifting Procedure
- Use precut tape strips with tab ends or other high-quality, wide, clear tape. If the tape is on a dispenser, discard the exposed tape.
- Repeatedly apply tape to an area until the tackiness is reduced.
- Affix the tape to a clear transparency or page protector.
- With a permanent marker, label the transparency or page protector and label with a permanent marker.
- Several lifts of the same object may be placed on one transparency.
Footwear and Tire Impressions

Photographing

- Side lighting should be used to enhance details, from each side of the impression.
- Do not remove debris that is imbedded in the impression. If loose debris has fall onto the impression AFTER it was made and is clearly lying on top, it can be carefully removed. Make sure to photograph it both before and after removal.
- Include a scale in the photo in the same plane as the impression.
- Take both overall crime scene views and close-ups.
- After initial photos, a contrasting agent such as grey primer spray paint may be used for photographing snow impressions.

Casting

- Casting kits should be available for use at the crime scene, which contain a two pound Ziploc bag of Dental Stone and 10-12 ounces of water.
- Gently pour the Dental Stone mixture on the outside of the impression and allow it to flow in.
- Allow it to dry between 30 minutes and several hours before removal.
- Do not clean cast.
- Use a pencil or sharpie to label the back of the cast with the case number, date, initials, and cardinal direction.
- Allow 24-48 hours to dry, then package in paper and cardboard.
- Ordinary Dental Stone cannot be used to cast impressions in the snow. Specialized casting material for use in snow may be ordered from forensic supply companies. Please call if you have any questions.

The lab does NOT currently accept footwear or tire impressions.

Arson

The lab does NOT currently analyze ignitable liquids/potential accelerants for arson evidence.

Package arson evidence in unused paint cans. Fill cans approximately halfway, leaving plenty of air space. Plastic bags are not suitable.

Collect samples from the edge of pour patterns and protected areas.

Absorbent materials retain ignitable liquids best.

Collect and submit “negative” comparison samples of each type of sample substrate.

Samples of ignitable liquids should be shipped separately from questioned samples collected at the scene.

Be aware of other types of evidence present at the scene.

Freeze arson evidence as soon as possible.
Paint

Automotive Paints

• Examine both the victim’s and suspect’s vehicles for paint transfer.
• Remove any loose chips with tweezers.
• Collect any paint transfers by chipping or scraping them loose with a clean razor blade.
• Collect known paint from the same area of the vehicle, away from the area of damage.
• Ensure that all layers of paint are collected.

Burglary

• Submit any tools found at the crime scene.
• Submit a known paint sample collected adjacent to toolmarks.

The lab does NOT currently analyze paint samples.

Human Remains

Remains

• Keep proper chain of custody.
• Seal the body bag, making sure to include both zippers.
• Photograph the seal.
• Bag the hands of possible homicide victims in PAPER, never plastic.
• When dropping off bodies at the lab, sign the decedent into the log book with as much information as possible. Place the individual on a table and place in the cooler. Leave any paperwork with the log book and not the body.

Treat bodies as evidence.

Skeletal Remains

• Federal laws protect against the disturbance of Native American remains.
• Thorough documentation is crucial to preserving contextual evidence, including photographs at all stages of collection, mapping, and detailed descriptions.
• Package bones individually in paper.
• Cushion well for mailing.

Federal Laws protect against the disturbance of Native American remains.
Packaging

Correct: Sealed with evidence tape and initialed.
Incorrect: Stapled or no initials on seal.

Correct: Initials ON the heat seal.
Incorrect: Initials NEXT TO the heat seal.

Correct: Seal covering top of Ziploc bag.
Incorrect: Seal around opening of Ziploc bag.

Correct: Gun secured in cardboard box.
Incorrect: Gun packaged in paper.

Correct: Two items packaged separately.
Incorrect: Multiple items packaged together.

Correct: Syringe/knife in sharps container.
Incorrect: Syringe/knife not in sharps container.

Correct: DNA evidence packaged in paper.
Incorrect: DNA evidence packaged in plastic.

Correct: Evidence packaged in loose container.
Incorrect: Evidence packaged too tightly.