

Miami Valley Regional Crime Laboratory

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2009 Evidence Technician School

The Laboratory is now accepting applications (included in this newsletter or at the front counter) for the 2009 Evidence Technician Schools. A 2009 Application must be utilized.

The course will again be an 80 hour course. Because of increased demand, only two applications per department will be accepted. Applications need to be submitted prior to Dec. 1, 2008. Applications received after that date will be placed on a waiting list. If a request was submitted for the 2008 classes and an officer was not accepted, the officer will need to re-apply.

Officers will receive a letter when they are assigned to a class. A copy of the letter will also be sent to the chief of the agency.

If a department does not have a named officer for the application, an application may be submitted by the chief to request a slot. In the name field just list "to be assigned later". An updated application with an officer's name must be submitted at least one month prior to an assigned class or the slot will be re-assigned. **Slots will not be assigned without an application.**



Fingerprinting Services

The Miami Valley Regional Crime Lab provides two types of fingerprinting services: Web Check and Live Scan (fingerprint cards). The laboratory cannot fingerprint for Florida gun permits or any other requests that require a police officer's signature.

Fingerprinting Hours are Mon-

day through Friday from **9:00**

AM to 3:00 PM.

The fees are as follows:

\$10.00 for each fingerprint card

\$30.00 for the state Web

Check

\$40.00 for the FBI Web Check

\$60.00 for both the state and

the FBI Web Check

Payments must be made by

cash, money order or business check.

The person being fingerprinted must provide a valid photo ID and the name and address of where they need the results to be mailed.

If you have any questions, you may contact Sue Hay at 225-4990.

Inhalants by: Brooke J. Ehlers

Inhalants are legal and useful household, school and office products used to get high. They are widely abused by teenagers because they are readily available, cheap, easy to conceal and legal. It is estimated that about 1,000 substances can be misused as inhalants. They are divided into four categories: volatile solvents, aerosols, gases and nitrates.

Volatile solvents vaporize at room temperature and include chemicals such as, acetone, benzene, difluoroethane, and toluene. These solvents can be found in common household products including gasoline, lighter fluids, glues, computer duster and spray paints.

Aerosols contain propellants and solvents and are commonly found as pressurized cans containing fluorocarbons. Other sources of aerosols are balloons containing helium and items with Freon.

The most common source of a gas inhalant is nitrous oxide, which is commonly known as laughing gas. This gas is also found in small cylinders called "whippets". Two chemicals, ether and chloroform, can also be abused inhalants.

Nitrates are types of inhalants also used to increase sexual encounters. The two most common nitrates are amyl nitrate and butyl nitrate. Amyl nitrate (Poppers and Snappers) was originally created for heart patients. Butyl nitrate (Rush, Locker Room and Bolt) is used as a room odorizer. These substances smell sweet and fruity when fresh, but like sweaty socks when stale.

Inhalants are abused by either sniffing, huffing or bagging. In

sniffing, the vapors are taken in through the nose; huffing entails breathing the vapors in through the mouth; and bagging would introduce the vapors through a bag. Fumes may be sprayed on a cloth and inhaled directly through the nose or mouth, or the cloth may be placed in a plastic or paper bag to increase the concentration of the vapors. In some cases, users will place their heads directly inside of the bag to produce an intoxicating effect. Young users have been known to put inhalants on cuffs and collars or inside empty soda cans and sniffing them over a period of time, such as in school.

Signs of abuse may include: drunk or disoriented appearance; paint stains on face, hands or clothing; hidden empty spray paint or solvent containers and chemical-soaked rags or clothing; slurred speech; strong chemical odors on clothing and breath; nausea; loss of appetite and rash around the nose or mouth.

Inhalant abuse results in a rapid euphoric effect that is similar to alcohol intoxication. Users report feeling dizziness, a loss of inhibitions, lightheadedness and agitation. Long-term use can produce muscle weakness, weight loss, inattentiveness, depression, memory impairment and kidney and liver damage. Death may also occur from heart failure, asphyxiation, aspiration or an accident from impaired judgment. Withdrawal symptoms include sweating, rapid pulse, insomnia, vomiting and hallucinations.

Street names for inhalants would include: Boppers, Moon Gas, Ox, Huff, Hippie Crack, Toilet Water, Poor Man's Pot, Climax, Glading, Head Cleaner,

Bang and Gluey. Inhalants are not regulated under the Controlled Substances Act (CSA), but in Ohio can be charged as a misdemeanor harmful intoxicant.

The proper way to package a harmful intoxicant liquid is in a glass jar or large plastic screw top urine tube. Cloth items and bags should be placed in metal cans. Inhalant evidence can NOT be placed in plastic or paper bags or small liquor vials. If you have a question regarding the proper packing of evidence please call the Chemistry Section at 937-225-4990.



Hairs as Evidence – Questions and Answers by: Suzanne Noffsinger

Hair and fiber examinations constitute the largest number of requests for the Trace Evidence Section. Hair transfers are often observed in violent cases such as homicides and sexual assaults but hairs are also good evidence in robberies, burglaries and other crimes. The transfer of hair from a suspect to a victim, or vice versa, may increase the likelihood that those two people were in close contact at or around the time of a crime. Hair evidence can also help identify an unknown victim or be used to determine the source population of a questioned hair.

What is a hair comparison? A hair comparison begins with a microscopic examination of the class characteristics of a questioned hair. These characteristics are then microscopically compared side-by-side to an individual's hair standard. The analyst determines whether or not the questioned sample is consistent with originating from that individual.

What should I submit for a hair standard? A suitable hair standard consists of at least 25-50 hairs pulled from various areas of the scalp or pubic region. Standards should be collected as close to the time of the offense as possible to ensure continuity of the hairs appearance. Hairs should be collected from all victims and suspects, along with any other individuals for elimination purposes.

How do I collect and package hair evidence? If possible, submit the item for processing at the Lab. If processing large evidence items at the scene, hair

evidence is best collected with tweezers. Be careful not to crush the hair with the tweezer tips. Package the hairs in a paper packet or an envelope and place this inside a second envelope. Tape lifts are also an efficient way to process large evidence items for hairs. This method will collect fibers and other debris as well. Apply the tape lift to an acetate sheet. Package the completed tape lift in a large envelope or a small paper bag. Clear book tape and acetate sheets are available at the Lab for member agencies.

Can you get DNA from a hair root? When a hair is forcibly removed, cells from the hair follicle often adhere to the root. These cells are referred to as follicular material. This material may contain nuclear cells from which DNA can be extracted and a DNA profile obtained. Hairs that have matured and were shed naturally do not typically exhibit follicular material at the roots. These hairs are generally not suitable for DNA examination.

What hairs will the Lab test for DNA? The Trace Evidence Section often conducts microscopic comparisons on head or pubic hairs with follicular material at the root prior to forwarding them to the DNA Section for testing. One might call this a hair comparison screening. This screening is to confirm that a probative association between the questioned hair and the hair standard exists prior to committing the DNA Section's resources toward analysis of the hair. Body hairs are not suitable for microscopic comparison; therefore, these hairs may be forwarded directly for DNA test-

ing if they exhibit follicular material at the roots.

How often do you get DNA results from a hair root? The results of a 3-year MVRCL study revealed that a partial or full DNA profile was obtained from follicular material at hair roots in approximately 12% of the samples tested.

What about mitochondrial DNA and hairs? The DNA contained within a hair shaft is called mitochondrial DNA (m-DNA). Our DNA lab does not currently conduct m-DNA analyses; however, the FBI does. The FBI requests that hair comparison screenings be completed on head and pubic hair evidence prior to submission of hair evidence for DNA or m-DNA testing.

What information should I include on the Lab submission sheet? Please include the relationship of the victim and suspect. It is important to know if the victim and suspect lived in the same household, were acquaintances or were total strangers.

Continuing to provide hair comparison evaluations is one way that MVRCL maintains its commitment to our member agencies. Hair evidence is, and always has been, good probative evidence that can assist in the investigation and prosecution of many types of crimes. If you have specific questions regarding hair evidence, please contact the Trace Evidence Section.



A hair under a microscope

Field Questions

What do you enter in to the open case file in firearms?

The system that maintains our open case file is the National Integrated Ballistic Identification Network (NIBIN). At this time the only type of evidence that is entered are cartridge cases, and test fired cartridge cases from pistols. Therefore, there is no need to submit long guns or revolvers for open case checks. However, if a report is needed for test firing weapons on criminal cases, long guns and revolvers should be submitted.

Prior to entry cartridge cases are screened for sufficient characteristics. If an association is made between cases a supplemental report will be issued.

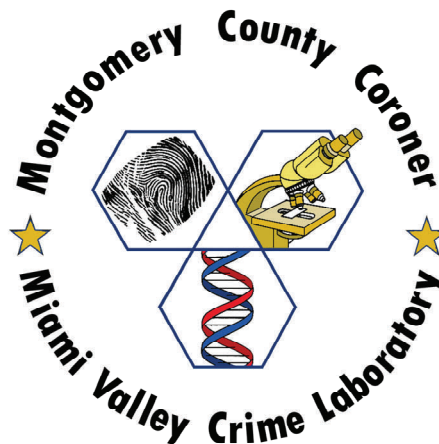
Remember to submit your questions for the next newsletter to tduerr@mcohoio.org

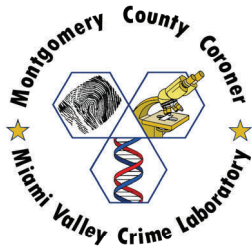


Evidence Submission to the Firearms Section

Just a reminder:

When submitting evidence for a tool mark comparison, the comparison will only be performed if the tool can be associated with a suspect. If the tool is submitted for fingerprints and no prints are found, the evidence will be returned because it is assumed that no linkage can be made to a suspect.





Miami Valley Regional Crime Laboratory 2009 Evidence Technician School Application

Requirements for Admission:

- A full time Police Officer with a minimum of three years full time experience
- Will be utilized as an Evidence Technician
- Relieved of regular duties while attending the course
- Recommended by the Chief or Chief designee

**Due to demand for the EV Class, only two applications per department will be accepted.
Applications Due by Dec. 1, 2008 (After Dec. 1 applicants will be placed on a waiting list).
Application does not guarantee assignment to a class.**

(Please Print or Type)

Name: _____

Department: _____ Phone: () _____

Address: _____

City: _____ State: _____ Zip: _____

Email _____

I am *unavailable* to attend (Circle months): Jan. Feb. March
Apr. May June Sept. Oct.

Officer Signature _____ Date _____

Chief/Designee Signature _____ Date _____

Mail or fax completed form to:

Tim Duerr
361 W. Third St.
Dayton, OH 45402
Fax: (937) 498-7918

Office Use:
Received:

Class Assigned:

Status/Results of a Case

When calling for results or status of a case, please ask the front office. Many times the analyst are actively working on a case and unable to take phone calls. Also, the front office personnel are the only ones that can provide you with the copies of reports whether faxed or mailed.

Laboratory Holidays (Laboratory Closed)

Monday	October 13	Columbus Day
Tuesday	November 11	Veterans' Day
Thursday	November 27	Thanksgiving
Friday	November 28	Day After Thanksgiving
Thursday	December 25	Christmas
Thursday	January 1, 2009	New Years Day
Monday	January 19, 2009	Martin Luther King Jr. Day

**THE MIAMI VALLEY
REGIONAL CRIME
LABORATORY**

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