

Miami Valley Regional Crime Laboratory

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WHAT IS CODIS???



CODIS – COMBINED DNA INDEX SYSTEM - DNA database which houses DNA profiles at the Local, State, and National levels for comparison. Forensic Unknown profiles from questioned evidence which do not match the victim (and may be from the suspect) can be uploaded. These profiles are compared to other Forensic Unknown samples, and to the suspect and Convicted Offender databases. If a hit is made with a Convicted Offender, we will request that you submit a new standard from that offender, so we can confirm the match and write a report stating that the DNA standard submitted from the offender matches the profile of the DNA evidence in question.

Samples which are from the suspect's clothing or belongings (not abandoned property) which match the suspect cannot be uploaded into the database.

Forensic Unknown samples which match the victim cannot be uploaded into the database.

Reminder from Fingerprints

REMINDER: There is no need to put each latent print card in a separate envelope. Latent print cards collected from one case can all be put in the same envelope for submission to the lab. Some agencies are separating them and placing them each in an envelope.

Barbara Askins
LP Examiner
Miami Valley Regional Crime Lab

Evidence Technician School

Applications for the 2010 Evidence Technician School are available in this newsletter and at the laboratory web site. Due to high demand for the class, only two applications (with officers names) will be accepted for each police department. Applications must be received by December 1, 2009 to be considered for placement in one of the 2010 Evidence Technician Schools. Application received after that date will be placed on a waiting list. Reception of an application does not guarantee a position in one of the schools.

Departmental Training?

Is your department sponsoring training in 2010? If you would like it to be included in the January newsletter contact Tim Duerr at 937-225-4990 or duerrt@mcoho.org.

BZP

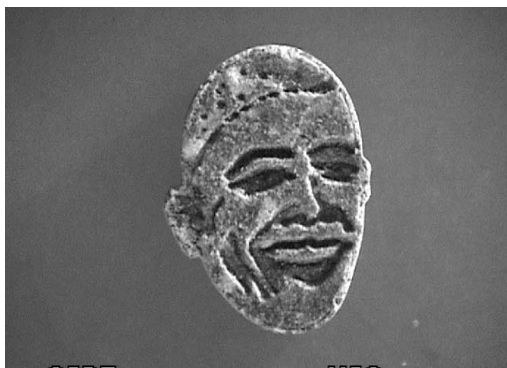
By: Jennifer Watson

1-Benzylpiperazine (BZP) has become a common substance encountered in suspected 'Ecstasy' tablets. BZP is a synthetic designer drug that provides stimulant effects. Like most stimulants, it decreases appetite, increases blood pressure and heart rate, and produces anxiety, dizziness, and insomnia. Street names for BZP may include A2, Legal E, Benny Bear, Frenzy, Nemesis, and Sunrise.

BZP is commonly seen in a tablet form of various colors and logos, but can be found in capsules as a powder. It is usually ingested orally, but can be snorted or smoked. BZP is commonly used in combination with other substances to enhance its effects. While the list is not all inclusive, BZP tablets have been found to contain substances such as caffeine, procaine, 3, 4-methylenedioxymethamphetamine (MDMA), ketamine, and methamphetamine. BZP is often offered as an alternative to MDMA at rave parties.

Paraphernalia associated with BZP would be similar to the paraphernalia commonly seen with MDMA and may include Skittles®, M&Ms®, candy necklaces, candy bracelets, or any other items prevalent at rave parties. The drug is abused primarily by teenagers and young adults. Oral dosages of BZP range from 20 to 200 milligrams and the effects generally last from 6 to 8 hours.

BZP should be packaged for submission to the laboratory like other pills and powders in leak-proof and spill-proof containers. BZP is a Schedule I controlled substance as listed in the Ohio Revised Code (ORC). Any questions or concerns regarding information or packaging of BZP can be directed towards the chemistry section at 937-225-4990.



DNA Collection by: Annette Davis

Blood, semen or saliva stains *(questioned stains from evidence)*

Collect onto two sterile cotton swabs moistened with distilled water. Place swabs in an envelope or slide box to dry. Label where the stain is from.

Controls are no longer needed!

DNA standard *(a sample taken from a known individual - usually a suspect, victim or elimination standard)*

Buccal swabbing (preferred) – Have the person you are collecting the standard from take two sterile cotton swabs and scrub the inside of the cheek with the pressure you would use to brush your teeth for about ten seconds. Place swabs in an envelope labeled with the name of the individual the sample is taken from.

There is no need to collect samples from different areas of the mouth – the DNA is the same.

No controls are needed.

Blood standard – Collect one lavender top Vacutainer (EDTA) tube. Have the witnessing officer initial it. Label with the name of the individual who the sample is from.

Samples for wearer identification – *(abandoned clothing articles shed by the suspect, not items taken off the suspect, or from their vehicle or residence, etc.)*

Example: a ball cap or ski mask worn by a bank robber that is left at the scene, or falls off as they are being chased.

Submit the item - we will collect the samples.

Samples for touch DNA – *(looking for the suspect's DNA on an item they handled or touched - use common sense on what is reasonable to submit)*

Example: steering wheel in a recovered stolen auto.

Swab the item with two swabs. Place in envelope or slide box to dry. Controls are not needed. Please also submit a standard from the PRIMARY person who's DNA would be expected on that item (usual driver of the car). This is necessary because we often get mixtures on samples like this, and if we have the primary person, we may be able to subtract them out and be left with a suspect profile. Also, we need to know that the profile we obtain is NOT from the victim in order to upload it to CODIS.

Condom – *(from a sexual assault)*

Allow it to air dry. Package in a slide box or envelope.

DO NOT package in a plastic tube, specimen cup or plastic bag.

Suspect samples – *(from a sexual assault)*

Buccal swabbing

Head and pubic hair standards

If within a day or so of the assault, also collect these samples:

Pubic hair combing

Swabbing of fingers/fingernails – *(in cases of digital penetration, the victim's DNA may be found on his fingers)*

Underwear – *(DNA from the victim's blood or vaginal secretions may be on the inside of his underwear)*

PLEASE DO NOT SUBMIT:

Control – *(an area next to the stain that does not have a stain on it)* This used to be required historically with enzyme typing many years ago, to pick up any background contaminants, but with DNA, it is not needed. We will not analyze these.

Distilled water standard – *(sample of water on swabs)* Some agencies are sending these along with questioned samples or standards. We will not analyze these.

Counterfeit Tablets

By: Brooke Ehlers

The Miami Valley Regional Crime Lab is encountering an increased amount of counterfeit pharmaceutical tablets. The fake tablets are visually similar to their legitimate counterparts, however, upon instrumental analysis they have been found to contain other substances. Some of these substances are scheduled drugs; others have similar effects to controlled drugs, but are not scheduled.

In a recent batch of cases, pills embossed with the logo “GG 249” were physically identified by the Drug Identification Bible as a Sandoz product containing the Schedule IV controlled substance, Alprazolam. Analysis at the lab has found that these pills actually contain the Schedule IV controlled substance, Diazepam and the non-controlled substance, Phenazepam. Cases involving counterfeit tablets are appearing all over the country including, Texas, Alabama, Tennessee and California.

If you are using a reference book or poison control center to physically identify tablets, be aware that the analysis from the lab may differ.



In addition to Drug Analysis, counterfeit tablets can also be sent to our Documents Section. Differences that are not able to be seen with the naked eye can be distinguished by a counterfeit examination. Below are other examples of mimic tablets that have been submitted to the laboratory for Drug and Questioned Document examinations. Although these tablets contained the reported active ingredient, the physical appearance of the tablets showed they were not legitimately manufactured tablets.

Please contact Brooke Ehlers with any questions.

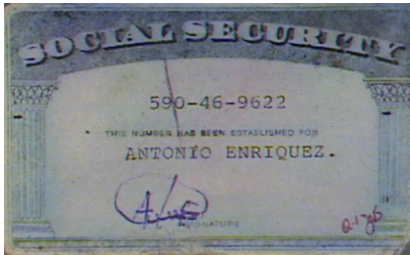


Mimic Viagra and Cialis Tablets

Counterfeit Examinations

By: Julie Bowling

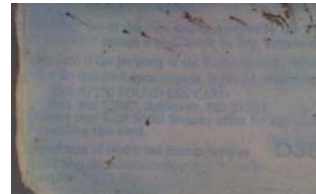
Counterfeit items may be submitted to the Miami Valley Regional Crime Laboratory for examination through the Questioned Document Section. These items include, but are not limited to currency, gift certificates, coupons, identification cards, and pharmaceuticals. Unless the item is a federally recognized document (ID or currency) or a pharmaceutical, a known standard must be submitted with the evidence for comparison to the counterfeit item. This examination will result in a report that will validate the item as either genuine or counterfeit. Be aware that many documents are “weathered” to make them appear genuine, when in fact they are counterfeit.



Counterfeit ID



Inkjet print process



“Weathered” document

Packaging Bio-Hazardous Evidence

When packaging bio-hazardous evidence, it is a requirement that all openings be sealed. For instance, if a firearm has blood on it and is packaged in a gun box, all openings, including the holes in the bottom must be taped over to prevent leakage and contamination of surfaces and personnel. If items are not properly sealed, they cannot be accepted by the front office personnel of the laboratory.

Along with properly sealing all openings of the packaging material, the packaging must clearly indicate either with a bio-hazard sticker or red ink that the evidence contained within is contaminated.



Glass Analysis

By: Tracey Cassel

Glass is common in our everyday environment and can be considered evidence when it is broken during the commission of a crime. When glass is broken, fragments may be transferred to nearby persons or objects. The mere presence of glass fragments on the clothing of an alleged burglar in a case involving entry through a broken window may be significant evidence. The value of the evidence is strengthened if the fragments are determined to be indistinguishable from the broken window. On the other hand, if the recovered fragments are found to differ from the broken window glass, then that window can be eliminated as a possible source of the glass on the suspect's clothing.

A forensic glass analysis involves the examination of two or more glass fragments to determine if they could have originated from the same source. The analyst may examine samples for color, thickness, fluorescence, density, and refractive index. An analysis with a positive result would yield a report stating that the two pieces of glass "are consistent with originating from the same source".

Please note that a fracture match is the only means of obtaining a conclusive result in a glass comparison. A glass fracture match consists of glass pieces that exhibit corresponding geometric alignment along a break. This indicates that these pieces of glass were once adjacent parts of the same section of glass.

Follow these guidelines when collecting/packaging glass evidence:

- Collect known samples from the source, not from the ground.

- Use new, clean paper packets or pill tins for small samples. Submit these inside an evidence envelope.

- Package clothes in paper bags, not plastic.

- Double package to prevent loss of sample.

- Package known and questioned samples separately to avoid contamination.

- Clearly label the outside of each container to include the location from which the sample was collected.

Contact the Trace Evidence Section if you have any questions.



Status/Results of a Case

When calling for results or status of a case, please ask the front office. Many times analysts are actively working on cases and unable to take phone calls. Also, 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	Oct. 12th	Columbus Day
Wednesday	Nov. 11th	Veteran's Day
Thursday	Nov. 26th	Thanksgiving
Friday	Nov. 27th	Day after Thanksgiving
Friday	Dec. 25th	Christmas
Friday	January 1st	New Years Day

THE MIAMI VALLEY REGIONAL CRIME LABORATORY

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Fax: 937-496-7916
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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 Monday through Friday from 9:00 AM to 3:00 PM.

The fees are as follows:
\$10.00 for each fingerprint card
\$40.00 for the state Web Check
\$40.00 for the FBI Web Check
\$70.00 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.

Minors must be accompanied by a parent or legal guardian.

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

Crime Laboratory Web Site

www.mchio.org/government/mvrcl

Montgomery County Coroner's Web Site

www.mchio.org/government/coroner

Feed back on the newsletter can be sent to duerrt@mchio.org



Miami Valley Regional Crime Laboratory

2010 Evidence Technician School

Application

Requirements for Admission:

A Full Time Police Officer with a minimum of three years full time experience.
Will be utilized by the department as a primary Evidence Technician
Will be relieved of regular duties while attending class.
Recommended by the Chief or Chief designee.
Application must be received by December 1, 2009 (applications after date will be placed in a waiting file)

Application Does not Guarantee Entry to Class

All fields required: (please print or type)

Officer's Name: _____

Department: _____

Department Phone: (_____) _____

Department Address: _____

Officer's Email Address: _____

Officer's Signature: _____
Date: _____

Officer has three years full time experience: Y N

Officer will be utilized as a primary evidence technician: Y N

Chief/Chief Designee:

Print: _____

Signature: _____ Date: _____

Office use: Rec'd _____ Class Assigned: _____

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