

**Oklahoma State Bureau of Investigation - Criminalistics Services Division
(OSBI CSD)
Facilities and Available Services**

FACILITIES:

The OSBI CSD provides services at the following 5 facilities:

OSBI Forensic Science Center (FSC)
800 East Second Street
Edmond, OK 73034
(405) 330-6724

OSBI Eastern Regional Facility
(Evidence Submission Only)
701 West Carl Albert
McAlester, OK 74501
(918) 423-6672

OSBI Northeast Regional Laboratory
1995 Airport Parkway
Tahlequah, OK 74464
(918) 456-0653

OSBI Southwest Regional Facility
(Evidence Submission Only)
607 SW E Ave.
Lawton, OK 73501
(580) 291-8127

OSBI Northwest Regional Laboratory
1305 E. Garriott
Enid, OK 73701
(580) 242-2600

For the convenience of OSBI CSD customers, evidence may be submitted at any CSD facility, with the exception of evidence submitted for digital evidence examinations. OSBI CSD personnel will transport evidence between facilities when necessary to provide the appropriate or most timely analysis.

SERVICES:

The following services/analytical methods are available. However, the OSBI reserves the right to select the most appropriate method and to select the item(s) most appropriate for analysis (see [“Notice to Customers” – OSBI CSD OMA 1.1](#)). If a particular test method or service is desired for a specific item, please contact a Criminalist from the discipline in question for assistance with the review of the request.

Biology (FSC and NERL):

1. Screening

Evidence can be screened for biological material including blood, semen, and hair. Certain items in sexual assault cases can also be screened for the presence of male DNA.

2. Confirmatory Testing

Tests are available to confirm the presence of blood and semen.

3. Hair Evaluation

Hair samples can be evaluated to determine whether the hair is animal or human and, if human, whether adequate sample is present for nuclear or mitochondrial DNA testing.

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4. DNA Analysis

The OSBI CSD can perform two types of Short Tandem Repeat (STR) DNA analysis – autosomal and/or Y-STR analysis. Y-STR analysis generates a DNA profile based on locations on the Y-chromosome only, which means in order to generate a profile, the sample must contain male DNA. DNA analysis is only available at the FSC and NERL facilities.

The OSBI CSD can forward evidence to an FBI Regional Mitochondrial DNA Laboratory for analysis.

5. Database Entry/Search

All eligible DNA profiles obtained during the analysis of casework can be entered into the state CODIS (Combined DNA Index System) database and national database (NDIS). Eligibility is determined based on the type of sample the profile was obtained from and the completeness or rarity of the profile. Eligibility requirements for the state database are established by the OSBI CSD and eligibility requirements for NDIS are established by the Federal Bureau of Investigation (FBI). These eligibility requirements may change over time as the size of each database increases and as software and search capabilities change. Once profiles are entered into CODIS or NDIS, the profiles are typically not removed unless a change occurs which impacts the profiles' eligibility. Please contact the CODIS Unit to verify whether a specific sample remains in the database.

Controlled Substances (FSC, NERL, and NWRL):

1. Controlled Substance Identification

Identification of controlled and some non-controlled substances.

2. Clandestine Laboratory Analysis

Analysis can be conducted on clandestine laboratory samples to detect controlled substances, precursors, and chemicals related to the illegal manufacture of controlled substances.

3. Poison Identification

Some poisons such as Strychnine can be identified by the drug lab. Other compounds such as Ethylene Glycol (antifreeze) that can be used as poisons can also be identified.

Digital Evidence (FSC)

1. Computer Forensics

Computers and hard drives may be processed for data recovery and searched to locate specific file types, key words or number patterns and to determine usage and internet history.

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2. Mobile Device Forensics

Cell phones and other mobile devices can be processed to extract data. SIM cards and memory cards may also be extracted and processed to locate target information.

Firearms/Toolmarks (FSC):

1. Function Test

Firearms submitted for analysis can be tested to determine if the weapon is functional (i.e. capable of discharging a cartridge).

2. Fired Bullet and Casing Analysis

Fired bullets and/or fired casings can be compared to other fired evidence (bullets/casings) or to a suspect firearm.

In addition, fired bullets and fired casings can be examined and may sometimes provide information regarding potential makes and models of firearms that could have fired the evidence. This is dependent on the amount and type of characteristics present on the fired evidence.

3. Serial Number Restoration

Analysis can be performed to attempt to restore the serial number of a firearm.

4. Distance Determination

In some cases, evidence can be examined to determine an approximate distance between an object and the point/location from which a firearm was fired (muzzle-to-target distance).

5. Database Entry/Searching

Test fires from suspect firearms or fired evidence can be evaluated to determine suitability for entry into the National Integrated Ballistics Information Network (NIBIN) via the Integrated Ballistic Identification System (IBIS). Items entered into IBIS will be automatically searched against the default region (Oklahoma and selections of ATF and Texas). The OSBI can conduct searches of other regional databases on request. Under normal circumstances, items which have been entered into IBIS will remain in the database and are not removed.

6. Toolmark Analysis

Analysis can be conducted to determine whether or not a particular tool was used to generate impressions or striations on the item submitted (padlock, window frame, etc.). The OSBI doesn't examine questioned toolmarks without known tools for comparison purposes.

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Latent Evidence (FSC):

1. Footwear Analysis

Photos or casts of questioned footwear impressions can be compared to known shoe samples.

The OSBI CSD cannot examine questioned footwear impressions without known shoes for comparison purposes.

2. Latent Print Analysis

Processing:

Items suitable for latent print development which have been properly collected and packaged can be processed to detect and lift/capture latent prints for comparison or AFIS entry.

3. Latent Print Comparison

Questioned latent prints submitted or recovered from items submitted for processing can be compared to known inked impressions submitted or to known impressions from retained records when the subject's information (name, race, sex, date of birth, and SID number) is provided.

4. Database Entry/Searching

All latent prints (including palm prints) of appropriate quality that are not identified to a known can be evaluated for entry into the Oklahoma Automated Fingerprint Identification System (AFIS). The OSBI CSD can also enter latent prints (including palm prints) into the FBI's Next Generation Identification (NGI) System, which allows prints to be searched against records from the FBI files.

Note: Unidentified latent prints which are entered into AFIS or the FBI's NGI System may be removed upon identification, once the statute of limitations has passed, or at the discretion of the examiner. Please contact the Latent Evidence Unit (LEU) to determine whether prints from a specific case are still in AFIS or the FBI's NGI System.

Toxicology (FSC):

1. DUI Cases

Blood or urine collected from individuals suspected of driving under the influence can be analyzed for the presence of alcohol or drugs.

2. Drug Facilitated Sexual Assault

Blood and/or urine collected from an individual reporting a drug facilitated sexual assault can be analyzed for the presence of impairing substances.

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3. Alcoholic Content

Liquids suspected of containing alcohol can be analyzed to determine the presence and quantity of alcohol. (Ex: suspected moonshine)

4. Poisons

Samples suspected of containing poison can be tested for select poisons, such as the active ingredient in Visine.

5. Toxic Vapors

Blood may also be analyzed for other substances which cause impairment such as toxic vapors inhaled by a suspect (i.e. huffing).

Trace Evidence (FSC):

1. Ignitable Liquids Residue Analysis

Properly packaged samples of fire debris can be analyzed for the presence of ignitable liquids such as gasoline, paint thinner, or diesel, etc.

2. Primer Gunshot Residue Analysis (GSR)

Evidence submitted using an OSBI GSR Evidence Collection Kit can be analyzed for the presence of elements that are characteristic of gunshot residue (lead, antimony, and barium).

3. Manufactured Fibers:

Questioned fibers can be analyzed and compared to reference or known samples submitted to determine if the questioned and known sample may have originated from the same source. This comparison applies to man-made fibers only.

Analysis of questioned fibers can also be conducted to determine the composition of the fiber(s). However, this analysis is limited to the material (e.g. nylon, acetate, etc.) and color. The OSBI CSD does not have the capability to indicate what item(s) may have been a source of the questioned fiber(s).

The OSBI CSD does not perform hair comparisons.

4. Paint Evidence:

Questioned paint samples can be analyzed and compared to known samples, when available, to determine if the questioned and known samples may have originated from the same source.

If known paint samples are unavailable, then unknown samples may be submitted for possible Make and Model determination utilizing the Paint Data Query (PDQ) database.

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5. Elemental/Chemical Analysis:

Evidence can be analyzed to determine its elemental composition. The most common application of this analysis is to identify the presence of poisonous materials such as lead, arsenic, and mercury. Elemental analysis can also be conducted to identify elements used in clandestine drug manufacturing, such as phosphorus and iodine.

6. Fracture Matches:

Miscellaneous types of evidence that are torn or broken can be compared to a sample suspected to be the source of the evidentiary sample. For example, duct tape removed from a victim can be compared to a roll of duct tape found in a suspect's possession.