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

OSBI Woodward Evidence Facility
3300 Oklahoma Ave., STE 1600
Woodward, OK 73801
(580) 256-1771

OSBI McAlester Evidence Facility
701 West Carl Albert Parkway
McAlester, OK 74501
(918) 302-9535

OSBI Lawton Evidence Facility
1010 SW Railroad St.
Lawton, OK 73507
(580) 291-8127

For the convenience of OSBI CSD stakeholders, evidence may be submitted at any CSD facility. 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 Stakeholders" – OSBI CSD QMA 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.

   The OSBI CSD does not perform hair comparisons.

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.

   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 and NERL):

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 Controlled Substances Units. Other compounds such as Ethylene Glycol (antifreeze) that can be used as poisons can also be identified.

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 or other suitable items containing serial numbers.

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 casings from crime scenes 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 NIBIN will be automatically searched against the default region (Oklahoma and selections of ATF, Arkansas, Kansas, Missouri, New Mexico, and Texas). The OSBI can conduct searches of other regional databases on request. Under normal circumstances, items which have been entered into NIBIN 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.

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.

3. **Alcoholic Content**
   Non-biological 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.

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, 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. **Fiber Analysis:**
   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 and natural fibers.

   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).

4. **Pressure Sensitive Tape Analysis:**
   Tape analysis is used to determine if a common source exists between two or more items of tape evidence. Physical characteristics, as well as chemical composition and even physical fit analysis, can be used in this area.

5. **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.

6. **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.

7. **Physical Fit:**
   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.

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FastTRAX:

NIBIN entry via FastTRAX* can be performed at the FastTRAX Regional NIBIN Site located at the OSBI Forensic Science Center in Edmond, OK or at a pre-arranged mobile FastTRAX event. This service is the same as database entry via submission to the laboratory; however, a Criminalistics Examination Report will not be generated. Instead, a Site Agreement form listing the items entered into NIBIN will be provided.

Use of the FastTRAX service does not preclude the firearm and/or fired evidence from submission to the OSBI firearms laboratory for function testing and/or comparisons, which will result in a Criminalistics Examination Report.

**NIBIN Entry via FastTRAX is not a part of the OSBI Laboratory accreditation and is to be used only for the purpose of an investigative tool.*

Rapid DNA:

Rapid DNA screening* can be performed at OSBI-approved Rapid DNA workspaces that are a part of the Statewide Rapid DNA Investigative Lead Program by certified Rapid DNA operators. This service is available to be performed on suitable samples of presumed single source biological fluids (i.e., blood, saliva) with sufficient biological material remaining for confirmation through conventional DNA laboratory analysis.

**Rapid DNA is not a part of the OSBI Laboratory accreditation and is to be used only for the purpose of an investigative tool.*