Oregon State Police

FORENSIC SERVICES DIVISION

# NEWSLETTER

Fall 2019

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We believe great questions can come from anyone, anywhere. Have something you'd like to know? Send your questions to annalise.vine@osp.oregon.gov and you might see an answer in the next edition of our newsletter.

# HIGH THROUGHPUT PROPERTY CRIME

## OSP Property Crime History

In 2013, the DNA unit of the Oregon State Police Forensic Services Division started a pilot project for the analysis of DNA evidence from property crimes. The project was called High Throughput Property Crime, or HTPC. Prior to the start of this project, DNA evidence from property crimes would be submitted to the Biology Processing unit of each local laboratory. The Biology Processing analysts would screen the evidence for the presence of bodily fluids and forward a sample to the DNA Unit at the Portland Laboratory for analysis. The backlog of evidence from property crimes in each laboratory was extremely large, as the analysis of evidence from person crimes was prioritized. It could take over a year to get DNA results from a property crime. The DNA unit wanted to find a way to meet the needs of our customers in a more efficient manner with a goal of providing DNA results in less than 30 days from the date the evidence was received.

## High Throughput Property Crime (HTPC) Project

The HTPC project had two main components. The first component was to train law enforcement agencies to collect DNA evidence themselves using a standardized HTPC evidence collection kit with specific submission guidelines. Each participating agency was provided training that included a presentation and hands-on practice. HTPC kits were created that contained everything necessary to collect DNA evidence while at a crime scene. The HTPC kits were in a green envelope with collection instructions printed on the envelopes. The kits contained: a pair of gloves, a mask, sterile water, a Bode swab, and evidence tape. Once a swab or item had been collected, it was placed in the HTPC envelope and sealed. All other kit components were discarded. The types of evidence that could be submitted for DNA analysis were limited to blood, saliva, aggressive handling, and wearer (clothing items). In addition, only 3 items of evidence could be submitted per case. An HTPC Form 49 (laboratory submission form) was also created with the addition of a space for the submitting agency to provide a summary of the case, including information about where at the scene the evidence was collected. This Form 49 was green in color to match the green envelope of the HTPC evidence collection kit. HTPC evidence was submitted directly to the DNA unit at the Portland laboratory.

The second component of the HTPC project involved internal laboratory changes. The DNA unit purchased and validated several instruments which allowed us to process more items simultaneously, thus increasing our throughput (hence the program name!). We also changed our workflows to more efficiently use our time and work better together as a team.

# Implementing HTPC

We worked with our partners at the Oregon Association Chiefs of Police and the Oregon State Sheriff's Association to identify law enforcement agencies to assist in piloting this project. We also involved the corresponding District Attorney's Offices to ensure they had the resources to prosecute these crimes. The original pilot agencies were Bend PD, Salem PD, and Washington County Sheriff's Office. As the laboratory gained experience and was able to expand our capacity, Beaverton PD, Deschutes County Sheriff's Office, Keizer PD, and Redmond PD were added to the project.

# Project Results

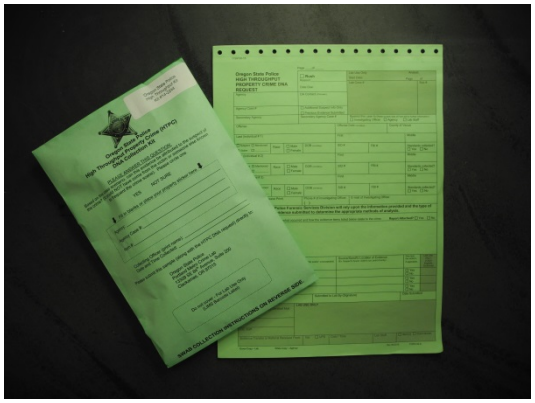
The project was extremely successful. Out of 2,884 cases worked, 41% resulted in a profile being entered into CODIS. Of the profiles entered, ~62% hit to a convicted offender or another case. This information was received by the submitting agency within 30-45 days of the evidence being submitted. One interesting success story is that DNA analysis was able to link one suspect to 24 different stolen vehicles in Salem!

In 2015, a statewide survey revealed that law enforcement agencies across the State of Oregon had a backlog of almost 6,000 SAFE kits that had never been submitted to the laboratory for DNA analysis. The State committed to analyzing these previously un-submitted kits and Senate Bill 1571 (Melissa's Law) became effective in March 2016. In anticipation of these SAFE kits being submitted to the DNA unit for analysis, the decision was made to suspend DNA analysis of all property crimes, including the suspension of the HTPC program, as of January 1, 2016. Pilot agencies were encouraged to continue to collect evidence from these cases using the HTPC model in the hopes that we would be able to resume the program soon.

# HTPC Now

In October 2018, the SAFE kit backlog was eliminated. The DNA unit began accepting HTPC cases from the 7 pilot agencies in January 2019. We focused on working through the backlog of cases these agencies had collected before accepting current cases. That backlog of cases is gone, and agencies are now submitting current cases. As we found with the original pilot project, the HTPC program continues to be successful, with 60% of the samples analyzed resulting in a profile entered into CODIS.

The goal for the HTPC program is to expand it statewide in early 2020. There are several things that need to be accomplished before we can do this. First, we must finish training 3 DNA analysts. We anticipate their training will be completed by the end of 2019. Second, much like when the project began, we will be purchasing and validating a new instrument to expand our capacity to analyze the expected increase in sample submissions. Once the instrument is validated, our analysts will need to be trained on how to use it. And finally, we need to train all law enforcement agencies across the state to collect evidence as part of this program. The training will occur around the state and will be coordinated with the local forensic laboratories.



Property crimes affect many Oregonians and we are excited about bringing back this type of analysis to our law enforcement partners. As we get closer to the expansion of this program, you will be provided with additional information. If you have any questions about the HTPC program, please contact the DNA Unit Supervisor, Stephenie Winter Sermeno, at 971-673-8261 or swinter@osp.oregon.gov.

# FIELD TESTS AND FENTANYL SAFETY

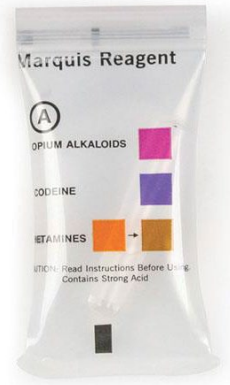
The following is a safety alert regarding several field tests commonly being used by Law Enforcement Agencies in Oregon – NIK, MobileDetect, and NARK II.

**IF YOU SUSPECT FENTANYL, IT IS ALWAYS BEST TO SEND THE SUBMISSION TO YOUR LOCAL LABORATORY AND REFRAIN FROM FIELD TESTING IT AT ALL**
See Section 14.2.5.1 of the Physical Evidence Manual for guidance:
https://www.oregon.gov/osp/Docs/PhysicalEvidenceManual.pdf

In the situations where field tests are employed, please be aware of the following:

## NIK

### *Test A (Marquis Reagent)*




This test will produce an **orange** color reaction for both Methamphetamine and Fentanyl, but will produce no color change for Cocaine (a light peach color may develop over time with strong/pure Cocaine samples).

### *Test G (Modified Scott's Reagent)*


This test is a multi-step test and will produce a **blue** color reaction at the first step for both Cocaine and Fentanyl. However, Fentanyl will *not* produce the final result of a pink layer/blue layer.

Your sample *could* be Fentanyl ONLY if…NIK Test A → **Orange** -- **AND** -- NIK Test G → **Blue***

**Blue**

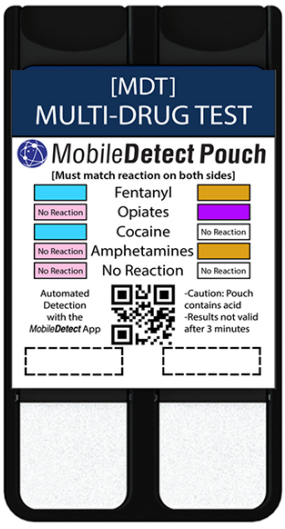
**After breakage of first ampoule ONLY. Fentanyl will not produce pink/blue layers after second and third ampoules have been broken.*

***It is not recommended that officers employ two color tests when the substance is suspected fentanyl.***

Note: This bulletin does not represent OSP endorsement or validation of any commercial product.

## MOBILEDETECT

### *Multi-Drug Test*




This test is essentially a combination of the two NIK Tests already described (Test A + first ampoule of Test G). If you must use a field test, please use this (both sides) when you're unsure of the identity of the substance.

## NARK II

### *Test 33*


**THIS TEST CONTAINS THE SAME CHEMICALS AS THE NIK TEST A (MARQUIS REAGENT) AND SHOULD NOT BE USED ALONE TO FIELD TEST FOR FENTANYL.** Methamphetamine and Amphetamine will produce an orange color reaction, which will produce a misleading result.

# PENDLETON FORENSIC LABORATORY

## Location and Counties

Address
612 Airport Road, Pendleton, Oregon 97801

Counties in Service Area
Sherman, Gilliam, Morrow, Umatilla, Union, Baker, Wallow, Malheur and Grant


## Disciplines Offered

Drug Chemistry
Biology Processing
Latent Print Processing
Firearms Processing and Serial Number Restoration
Field Investigations

## Who works here?

Currently 5: an acting lab director, three scientists and a forensic lab specialist
Hopefully more in the future!

## Lab News

On May 15, 2019 the Pendleton Forensic Lab moved to its new location on Airport Rd., directly adjacent to the OSP Patrol Office and Pendleton P.D. Along with upgrades that come with the new construction, updates include a conference room, break room, lactation room, laundry room, file room, drug chemistry suite, latent print processing suite, biology screening rooms, drying room, attached vehicle bay and secure parking area.

# FORENSIC TOXICOLOGY

## WHAT IS IT?

In the toxicology discipline we test for the presence of controlled substances and common pharmaceutical drugs in bodily fluids. The section is broken up into three sub-sections which are Blood Alcohol, Ante-mortem Toxicology and Post-Mortem Toxicology. Our Toxicology labs are located in Clackamas and Springfield.

## TYPES OF EVIDENCE

In the toxicology section we test blood for ethanol and urine for drugs in DUII investigations. We also assist the State Medical Examiner's Office in death investigations. In those cases, we analyze a variety of biological specimens, such as blood, urine, vitreous humor (the fluid from the eye), or stomach contents.


## TESTING PERFORMED

The toxicology section uses a variety of techniques to provide a comprehensive analysis.

We use immunoassay techniques that are designed to detect general classes of drugs of abuse such as opiates, amphetamines, and benzodiazepines.

We also use more specific techniques that include chromatography and mass spectrometry. Chromatography separates drugs into their component parts. Mass spectrometry allows for the determination of the unique chemical fingerprint of a drug so that we can compare it to a library of known standards.

## TOXICOLOGY NEWS

Since the spring of 2017, the toxicology section has hired and trained six new toxicologists.
The implementation of an instrument called LC-QTOF has expanded our testing capabilities and increased efficiency.

For more on the LC-QTOF and other toxicology topics, see the toxicology edition of our newsletter!
https://www.oregon.gov/osp/Docs/FSD-Newsletter-3-SUMMER-2017.pdf

# FSD AROUND THE STATE

## GANAS EDÚCATE SUMMER SYMPOSIUM


Bend Forensic Laboratory Director Brian Medlock and Forensic Scientist Kori Barnum provided two workshops at the GANAS Edúcate Summer Symposium at Central Oregon Community College on June 24, 2019. This symposium is a 4-day residential college preparation program that introduces Latinx high school students and recent high school graduates to the college experience through structured academic, leadership, and cultural activities. The program goal is to expose students to different elements of the college experience that will better prepare them for the transition from high school into college, and offers a dynamic curriculum that integrates leadership, academic skills development, college preparation, and culturally relevant themes for Latinx students.

Crime Lab staff gave a presentation describing the different laboratory disciplines available through the Oregon State Police Forensic Services Division, dispelling common forensic misperceptions and misrepresentations found in popular culture, and outlining the qualifications required to obtain employment in forensics. Students were also able to tour our Crime Scene call-out vehicle and obtain some hands-on practice searching for body fluid evidence with an alternate light source, testing unknown substances for blood, and dusting and tape lifting for latent prints on various items.

## OREGON DEPARTMENT OF PUBLIC SAFETY STANDARDS AND TRAINING

The FSD instructed at the DPSST Basic Detectives Academy April 30 and May 1. Members of the trace analysis and field investigations units provided instruction on evidence collection and preservation, trace evidence, crime scene investigation, latent print processing, photography, lab overviews, and more.

## OSP AT THE PRIDE PARADE


In June, for the first time, OSP was an official participant in the Portland Pride Parade. Along with our partners at the Department of Corrections and employees from several OSP Divisions, Scientists and Managers from the FSD and their families took the opportunity show their support for the LGBTQ+ community by walking the parade route from Portland's Pearl District to Waterfront Park. They were accompanied by the Field Investigation call-out vehicle from the Portland Metro Forensic Lab and an OSP patrol car decked out in Pride colors. OSP members from the Bend Forensic Lab and Patrol Office also jumped at the chance to show their support at the Central Oregon Pride festival in Bend later that month. Participation in these events was an important opportunity for OSP to show its commitment to serving and supporting all communities of Oregonians with Honor, Loyalty, Dedication, Integrity, and Compassion.