

Application: OTS Grant FFY 2020

January 31, 2019

Type: General

Authorized Representative: Deby Mittelbrun

DUNS # 066691122

DUNS Exp. 09/27/2019

DUNS Registered Address: 800 S. Victoria Ave., Ventura, CA 93009-3500

DUNS City: Ventura

DUNS Zip Code: 93009-3500

Title: Handheld Analyzer for Traffic Officer Safety-Ventura County Sheriff's Forensic Services Bureau

Proposal: Due to the increased incidence of fentanyl cases encountered in the County of Ventura, and the inherent safety risk of exposure to fentanyl, the Ventura County Sheriff's Department has terminated all presumptive field-testing by officers in the field on **any** suspected controlled substance. This device would again allow officers to perform presumptive testing with **non-contact** sampling by scanning through plastic or glass minimizing contamination, reducing exposure and preserving evidence. The non-contact presumptive testing protects officers from being exposed to unknown chemicals and drugs during DUI/DUID arrests. This handheld device provides automated, tamper-proof records with scan results, including time-and-date stamps to establish probable cause for arrests and expedite prosecution.

Problem: The increased incidence of fentanyl cases encountered in the County of Ventura, and the risk of exposure to this lethal narcotic compound, has led to the termination of **all** presumptive testing on **any** suspected controlled substance in the field. Not only does this cause a safety risk for the officers but, also to the persons being evaluated for DUI/DUID. Without the knowledge of the controlled substance at hand, especially in the case of fentanyl and its analogues, it could be detrimental in the saving of lives or obtaining the proper medical attention needed at the scene of an arrest or accident.

In addition, as a result of lack of presumptive field tests, the number of cases submitted to the Forensic Services Bureau has exponentially increased. The number of cases submitted in 2014 of 218 cases per month and has increased to 428 per month in 2018. The number of fentanyl cases has doubled in the last two years. In spite of the increase in numbers, the lab's resources and the number of scientists have remained the same. In addition, the time to prosecute DUI/DUID cases where suspected controlled substances were confiscated is now extended. In the past, officers would utilize the presumptive test results as probable cause for arrests, search warrant affidavits, seizure of evidence/assets, charging

decisions and preliminary hearings. The officers now need to submit all items to the laboratory for analysis causing delays in prosecution, let alone huge backlog issues for the laboratory.

Goals: With the use of the handheld analyzer, “TruNarc”, officers will once again perform field-testing to ensure their safety and those suspected of DUI/DUID, as well as, individuals in the community who have contacted officers in the case of suspected fentanyl overdose.

The proposed TruNarc handheld analyzer is a field based, presumptive test that would replace the previously used NIK kit color wet chemistry test kits. This device would now allow allows officers *non-contact* sampling by scanning through plastic or glass minimizing contamination, reducing exposure and preserving evidence.

Scan results, including time-and-date stamp and system self-check are automated, tamper proof records. “Rapid results combined with automated reports streamline prosecution, reducing administrative burden and dramatically impacting the time and expense of drug-related arrests.”

The TruNarc analyzer is “Buy America” compliant, as well as, Trade Agreements Act (TAA) compliant manufactured at the ThermoFisher facility in Tewksbury, MA.

Goals include:

Increase Safety	<ul style="list-style-type: none">• Noncontact presumptive testing protects officers from being exposed to unknown chemicals and drugs, especially fentanyl and it’s analogues• The need for Law Enforcement Officers to handle potentially lethal narcotics is greatly reduced• Ability to quickly and safely identify seized drugs during DUI/DUID evaluations and arrests
Productivity	<ul style="list-style-type: none">• Tests for over 400 substances, including narcotics, stimulants, depressants, hallucinogens and analgesics• Quickly and efficiently run a large number of samples, especially important for search warrants and large seizures to be able to ID narcotics, cutting agents, and benign substances• Library regularly updated at no cost to include emerging drug threats• Easily establish the identity of suspected drugs in the field• Improve officer safety• Aid in the documentation of drug evidence such as the chain of custody• Establish probable cause for arrests• Establish probable cause in search warrant affidavits• Establish probable cause to support the seizure of evidence/assets• Establish probable cause in charging decisions• Establish probable cause in preliminary hearings/grand jury proceedings• Reduce the number of court continuances to obtain lab results

	<ul style="list-style-type: none"> • Reduce backlogs relating to laboratory analysis of suspected drugs • Conserve state laboratory resources • Aid in discovery • Aid in the resolution of cases at an earlier stage • Save money from wet chemistry test kits
Communication	<ul style="list-style-type: none"> • Provides automated, tamper-proof records with scan results, including time-and-date stamps to help expedite prosecution
Efficiency	<ul style="list-style-type: none"> • Delivers clear, real-time results for presumptive evidence • Valuable lab time is freed up for higher priority cases • Reduced demand for lab testing delivers significant cost savings • TruNarcs test report and ability to audit drug evidence supports due process

Objective:

Time reductions to increase resource allocation	<ul style="list-style-type: none"> • Delivers clear, real-time results for presumptive evidence • Valuable lab time is freed up for higher priority cases • Expedite certain drug cases
Increase operational efficiency for system users	<ul style="list-style-type: none"> • TruNarc uses generally accepted Raman spectroscopy technology to identify chemicals, including suspected illicit drugs. • The TruNarc analyzer is merely an application of well-established Raman spectroscopy technology. • Greatly increase the number of suspected narcotics that can be presumptively identified in the field, including fentanyl and other synthetic drug threats • Do not need to use any sample for testing • Quickly and accurately test a large number of samples
Increase community safety	<ul style="list-style-type: none"> • Increases field identification of emerging drug threats, especially synthetic drugs to identify current threats and trends in the community

Proof of Concept: The Controlled Substances section of the Ventura County Forensic Services Bureau has performed an in-house evaluation of the TruNarc analyzer. Sixty-nine items of evidence were analyzed using the TruNarc analyzer. Results were then compared to those confirmed by

traditional laboratory methods. The study demonstrated that the TruNarc was an accurate, effective testing solution for commonly encountered drugs in Ventura County.

Approximately 60% of the cases routinely submitted to the Controlled Substances Section of the Laboratory are confirmed positive for methamphetamine. Of the 69 items tested, 54 cases were confirmed positive for methamphetamine by the current in-house methods. 96.3% of these cases were correctly identified as positive for methamphetamine by the TruNarc system. 100% of cases confirmed for cocaine HCL by in-house methods were correctly identified by TruNarc system (n=5).

Regarding fentanyl, one case was analyzed and confirmed in-house for three fentanyl compounds. This item was identified as "Cyclopentyl Fentanyl" by TruNarc.

Regarding identification of non-controlled substances, one case confirmed for "No Controlled Substances" by in-house method (GCMS) was reported as "Inconclusive" by TruNarc system.

The results of the in-house evaluation support a single test for multiple controlled substances providing law enforcement with tool that is easy to use, fast and accurate, with non-contact sampling. This device will aid in the backlog of samples submitted to the lab by providing automated tamper-proof records for presumptive identification to be used in preliminary hearings.

The following agencies in the State of California are currently using the TruNarc analyzer (number of units precedes agency):

- 12 CA Department of Justice
- 10 CADOJ Bureau of Forensic Science
- 1 CA DOJ INCA TaskForce
- 1 Carlsbad Police Dept
- 2 Chula Vista Police Dept
- 1 City of Albany Police Dept.
- 1 County of San Mateo / DEA
- San Francisco/Santa Rosa
- 1 County of San Mateo/Northern California HIDTA
- 6 DEA/Los Angeles
- 1 DEA/San Diego
- 1 DEA San Jose
- 1 DHS/CBP Lab San Clemente
- 1 DHS/CBP LAX
- 3 DHS/CBP San Diego
- 3 DHS/HSI/Los Angeles
- 1 DHS/HSI-SAC-Riverside
- 1 DHS/HSI San Diego Office
- 1 DHS/HSI San Luis Obispo
- 1 Irvine Police Dept
- 1 La Mesa Police Dept.
- 1 LAPD Joint Hazard Assessment
- 2 LAPD Narcotics Division
- 1 /Livermore Police Dept.
- 3 Long Beach Police Dept.
- 1 Mendocino County Sheriff

- 1 Murrieta Police Dept.
- 1 Northern California HIDTA
- 1 Piedmont Police Dept.
- 2 Pleasanton Police Dept.
- 1 Redondo Beach Police Dept.
- 1 San Luis Obispo County Sheriff
- 17 San Diego County Sheriff's Dept Lab
- 2 San Mateo County Sheriff's Dept
- 1 San Mateo Police Dept
- 1 Santa Barbara Sheriff's Office
- 3 Torrance Police Dept.
- 1 Westminster Police Dept.
- 1 El Cajon Police Dept.

TruNarc Analyzer is a highly reliable and accurate handheld device that uses **Raman** spectroscopy:

Raman Spectroscopy: A Proven Technology

In 1930, Scientist C.V. Raman earned the Nobel Prize in physics for his work on the scattering of light and the discovery of the Raman effect. In the years following its discovery, Raman spectroscopy was used to provide the first catalog of molecular vibrational frequencies. Raman spectroscopy measures photons scattered after monochromatic light (from a laser) interacts with the molecule, which can cause the bonds in the molecule to move. Nuclear motion is induced during the scattering process, where energy is transferred from the incident photon to the molecule or from the molecule to the scattered photon. Every chemical has a unique molecular structure that scatters a distinct pattern of photons. The scattered light is therefore a unique "spectral fingerprint" that can be used to identify chemical(s).

Raman Spectroscopy is recognized by the Scientific Working Group for the Analysis of Seized Drugs ("SWGDRUG") as a technology that may be applied to the analysis of illicit drugs. Forensic laboratories across the country utilize Raman spectroscopy to identify chemicals, including illicit drugs.

Raman spectroscopy is also utilized in the pharmaceutical drug industry to identify active pharmaceutical ingredients (API), raw materials and counterfeit drugs. Raman spectroscopy is used and recommended by the US Food and Drug Administration (FDA) and the United States Pharmacopeia (USP) for chemical identification of pharmaceuticals. Analytical results and studies utilizing data from Raman spectroscopy have been reported in thousands of peer-reviewed scientific papers.

The TruNarc analyzer is a handheld application of this well established Raman spectroscopy technology. It analyzes wavelengths of spectral light emitted by a substance when exposed to a laser. This analysis determines the unique spectral fingerprint of the substance and compares it with an internal library of traceable spectra of known substances which are used in certified labs to insure the accurate identification of chemicals. TruNarc then provides a presumptive identification of the substance along with a graphical display of the comparison. A sample report is included below.

In 2012, the National Forensic Science Technology Center ("NFSTC") evaluated TruNarc on its accuracy, the reproducibility of results, and its overall performance. Based upon the positive results of the NFSTC report, along with suggested recommendations, updates to the TruNarc software and library have consistently increased the capabilities of the device.

The software version tested by NFSTC was 1.0, which contained 32 alarms, 55 clears, and 26 precursor chemical/warnings in the TruNarc library (113 total). Following upgrades 1.1 through 1.8, there are now 314 alarms, 79 clears, and 72 precursor chemical/warnings (465 total) included in the library.

- Raman spectroscopy, chemical agent detector provides non-contact, non-destructive sampling. The user can scan directly through plastic bags or glass containers to minimize contamination, reduce exposure and preserve evidence. This increases officer safety in the field and reduces potential contamination of the evidence. This method also reduces the potential contamination of drugs being introduced to the officer via direct contact. There is no need to open the packaging, handle the narcotic, or use up the narcotic for field-testing.
- Raman spectroscopy, chemical agent detector provides a clear, readable and objective result, and does not require user interpretation.
- Raman spectroscopy, chemical agent detector provides identification of the unknown in a single test. Secondary field confirmation of an illicit substance can be obtained when the colorimetric test is used in addition to the Raman spectroscopy, chemical agent detector, providing two independent field identifications methods. This assures the highest degree of confidence in the result with the least intrusion of the sample.
- Raman spectroscopy, chemical agent detector utilizes a proven scientific method for the analysis of seized drugs including methamphetamine. The detector utilizes Raman spectroscopy, a 'Category A' (most discriminating / most reliable) analysis technique under SWGDRUG (Scientific Working Group for the Analysis of Seized Drugs). Raman spectroscopy, chemical agent detector brings lab-proven technology to the field.

- The Raman spectroscopy, chemical agent detector device is able to analyze the most common drugs of abuse including Cocaine HCL, Cocaine base, Methamphetamine, MDMA (Ecstasy), Heroin, Ketamine, Oxycodone, BZP, GBL, GHB, PCP, Morphine, Fentanyl and many more
- Keep ahead of designer drug trends: Raman spectroscopy, chemical agent detector can identify many synthetic cathinones (bath salts) and synthetic cannabinoids. As new analogues of these drugs come to market, the Raman spectroscopy, chemical agent detector library can be updated to include these new analogues.
- Raman spectroscopy, chemical agent detector reduces operating costs. Raman spectroscopy, chemical agent detector software and library updates are no charge for the life of the instrument. Most substances can be identified with Raman spectroscopy, chemical agent detector alone, incurring no charge on the user for identification. When secondary confirmation is desired using colorimetric kits, only one test kit needs to be consumed.
- Improved speed of prosecution / investigation. Real time analytical support via Reachback provides 24-hour response to unknown samples, providing the fastest recognition of newly emerging drugs available or identification of substances not within the library.
- Durability. Raman spectroscopy, chemical agent detector is a rugged, splash-proof instrument designed for field use.
- Evidence integrity. Raman spectroscopy, chemical agent detector is a closed loop system that cannot be manipulated by the user. Raman spectroscopy, chemical agent detector does not permit the addition of spectra / chemicals, assuring all library items are lab certified.
- Raman spectroscopy, chemical agent detector can identify frequently used precursors in the illicit manufacture of methamphetamine and other drugs including Acetone, Ammonium nitrate, Ammonium sulfate, Diethyl ether, Ephedrine, Methyl ethyl ketone, Pseudoephedrine, Sulfuric acid, Toluene, White Fuel (camping) and many more.
- Raman spectroscopy, chemical agent detector can identify frequently used cutting agents including Baking soda, Benzocaine, Dextrose, Glucose, Inositol, Lactose, Levamisole, Mannitol, Procaine and many more.
- Confirming precursors and cutting agents can help prove manufacture and/or distribution of methamphetamine and other drugs.
- Raman spectroscopy, chemical agent detector provides accurate identification of narcotics, precursors and cutting agents in seconds saving time and money.

- Raman spectroscopy, chemical agent detector is capable of completing a self-test, which is used to confirm that the device is working to the specifications designed by the manufacturer. This information is recorded by the system and printed onto the reports following department standard operating procedure.
- Raman spectroscopy, chemical agent detector includes Scan Delay and Scan Timeout features to help ensure officer safety in dangerous environments such as a clandestine lab.
- Raman spectroscopy, chemical agent detector comes with easy-to-use PC software, which automatically downloads all scans from the device to a PC or laptop (via provided USB cable). All scans can be printed out for evidentiary purpose or attachment to arrest record system. Rapid results combined with automated reports can streamline the path to prosecution, reducing administrative burden and positively impacting the time and expense of drug-related arrests.
- Through use of the Raman spectroscopy, chemical agent detector and preliminary drug examination reports, organizations have seen a marked improvement in court efficiency and plea bargain rates. When a defendant pleads out, the drug evidence is not sent to the state lab, reducing the number of samples submitted. While this does not have a short-term impact on reducing backlog, it ensures that fewer simple possession cases are added to the backlog.
- Raman spectroscopy, chemical agent detector can increase the speed, efficiency and accuracy of prosecution. An increase in plea agreements before indictment (PBIs) has been attributed to use of Raman spectroscopy, chemical agent detector results and preliminary drug examination reports prior to grand jury. The increase in pleas helps further streamline prosecution by ensuring that offenders receive treatment and/or rehabilitation needed, or can begin repaying their debt to the State more quickly.

The Raman spectroscopy, chemical agent detector includes an on-site training class for up to 12 students. The class is a four-hour course and the instructor would travel to our locations. Travel expenses are included in the cost of the training. The trainers are experienced narcotics officers, well experienced in operating the Raman spectroscopy, chemical agent detector.

Implementation: 15 units will be purchased (each with an unlimited 5-year warranty). 10 units to be distributed, one to each of the largest agencies in the County of Ventura (see list below). One unit will be kept at the Forensic Services Bureau Controlled Substances Section to be used to monitor the reproducibility of those units in the field. Four units will be kept as backup or distributed to those agencies that have been identified to show need for field-testing.

Agencies chosen:

California Highway Patrol

Camarillo Police Department

Fillmore Police Department

Moorpark Police Department

Ojai Police Department

Oxnard Police Department

Simi Valley Police Department

Port Hueneme Police Department

Thousand Oaks Police Department

Ventura Police Department

The Raman spectroscopy, TruNarc detector includes an on-site training class for 12 students/agency. The class is a four-hour course and the instructor would travel to each of the respective agencies. Travel expenses are included in the cost of the training. The trainers are experienced safety officers, well experienced in operating the Raman spectroscopy, handheld analyzer.

Training will include:

- Overview of instrument and components
- What Raman spectroscopy, chemical agent detector identifies and what it does not identify.
- Ensures complete understanding of safety precautions when operating the equipment
- How the Raman spectroscopy, chemical agent detector identifies a substance
- How to ensure results are admissible AND defensible in court
- Using the instrument in point and shoot mode to:
 - Scan a pure substance
 - Scan a mixture
 - Scan a mixture with low concentration
 - Understanding results, what it says, how it means
 - Improve instrument resolution
 - Improve identification in poorly mixed samples
 - How to scan pills
 - How to scan liquids
 - Scanning through thick container
 - How ambient light affects scan results
 - Safely scan fentanyl and fentanyl mixtures
 - How to take an evidentiary scan that holds up in court
- Utilizing Raman spectroscopy, chemical agent detector Admin software
- Starting up your analyzer for the first time
 - Syncing data

- Adding information
- Creating and printing reports
- Searching history
- Dealing with Multiple analyzers
- Customizing reports for your office
- Exporting data
- Sending reach backs

BUDGET: See quote submitted below which includes purchase of 10 handheld analyzers, 5 year unlimited warranty, training for 12 officers/unit (agency). Quote also includes five additional units, unlimited 5 year warranty, No training.

TruNarc Quote_012019.pdf - Adobe Acrobat Reader DC

File Edit View Window Help

Home Tools TruNarc Quote_013... x

1 / 1 69.1% Share

*Quote Nbr	Creation Date	Due Date	Page
9030-6625-53	01/30/2019		1 of 1

Payment Terms	Delivery Terms
NET 30 DAYS	DEST
Valid To	Prepared By
01/30/2020	SHIPLEY, CHRISTINE
Customer Reference	Sales Representative
TRUNARC	EUGENIO FERRERA

To place an order Ph: 600-228-4732 Fax: 866-897-9046

Submitted To:	Customer Account:
DEBY MITTEBRUM GENO.FERRERA@THERMOFISHER.COM 000-000-0000	677348-801 VENTURA COUNTY SHERIFF'S OFFICE/ FORENSIC SERVICES 800 SOUTH VICTORIA AVE L3500 VENTURA CA 93009-3500

Fisher Scientific
Part of Thermo Fisher Scientific

FISHER SAFETY
3670 JOHNS CREEK COURT
SUITE 500
SUWANEE GA 30024-1297

Review and Place Order

Please note: This link initiates order review / placement through fishersci.com

*Please reference this Quote Number on all correspondence.

Don't have a profile? Register on fishersci.com

For complete Terms and Conditions, please [click here](#).

Nbr	Qty	UN	Catalog Number	Description	Unit Price	Extended Price
1	10	EA	17 720 429	TRUNARC UNLMD WRNTY5YR TRAIN12	28,754.70	287,547.00
				Vendor Catalog # 800-01045-01 Hazardous Material This item is being sold as 1 per each COMMENTS: NASPO CONTRACT MA16000243-1		
2	5	EA	17 720 428	TRUNARC UNLMD WRNTY 5 YRS	26,856.70	134,283.50
				Vendor Catalog # 800-01015-01 Hazardous Material This item is being sold as 1 per each COMMENTS: NASPO CONTRACT MA16000243-1		
MERCHANDISE TOTAL						421,830.50
Estimated Sales Tax						32,691.86
TOTAL						454,522.36

NOTES:
We now offer highly competitive financing with low monthly payments. Please contact your local sales representative for more information.

Tell us about your recent customer service experience by completing a short survey. This should take no longer than three minutes. Enter the link into your browser and enter the passcode: USA-PGH-CS2
<http://survey.medallia.com/fishersci>

Export PDF
Create PDF
Edit PDF
Comment
Combine Files
Organize Pages
Redact
Protect
Optimize PDF
Fill & Sign
Adobe Sign
Send for Review
More Tools

Convert and edit PDFs with Acrobat Pro DC
Start Free Trial

Total Costs: Only those summarized in the above quote.

Success Tracking: The Ventura County Forensic Services Bureau Controlled Substances Section will aid in the implementation of each of the handheld units.

The Controlled Substances section will analyze each submission with the in-house TruNarc device and compare the results to those obtained from the submitting agency. In addition, confirmatory testing will be performed by the laboratory to compare confirmed results to that of the TruNarc analyzer's presumptive results.

The number of cases received by the laboratory will be tracked to assess the number of cases adjudicated at preliminary hearings with TruNarc presumptive results as compared to the number previous to implementation of the TruNarc system.

The laboratory will request that safety officers report instances where the presumptive results from the TruNarc helped to identify substances when performing DUI/DUID evaluations that contributed to the safety of the officers and the motorists involved.