<div align="center">Bill of Material
Separate FTIR & Raman Handheld Analyzer</div>

- MINIMUM REQUIREMENTS
On-Site Training: The chosen instrument vendor shall provide web based or live training for the Southern Manatee Fire Rescue District (SMFR). The training shall cover all aspects of the software and hardware. This training may be conducted in-person or via web access. The software aspects shall include but not be limited to: instrument startup, shutdown, daily operation, sample preparation, qualitative and quantitative analysis tool aspects, after run quantitative changes, report generation, report formatting, and trouble shooting. The hardware aspects shall include but not be limited to daily maintenance, consumables replacement, and other common minor equipment installation. By the end of the training, analysts shall be able to independently prepare a sample for analysis, run a sequence of samples, interpret their qualitative and quantitative results, and produce custom-made reports.

  Warranty: The vendor shall warrant the instrument for a minimum of two years from the date of installation of the instrument on all hardware and software purchased. The warranty shall include all parts (exclusive of those parts with published life expectancies of less than two years), and labor. The warranty shall include performance of preventative maintenance as recommended by the manufacturer.

  Instrumentation Minimum Requirements

  Instrumentation:

  FTIR: The instrument shall have FTIR (solid, liquid) and capable of gas vapor analysis in one device. The instrument shall have broad spectral ranges of at least 4,000 cm-1 to 650 cm-1 and a spectral resolution of at least 4cm-1 across the spectral range. The instrument must be capable of vapor analysis and supplied with needed collection equipment.

  Raman: The instrument shall have a board spectral range of at least 250-2875 cm-1 and a spectral resolution of at least 7 to 10.5 cm-1. The instrument's software shall include adjustable laser power settings from 75Mw to 250Mw. The library shall consist of more than 15,000 entries. The Raman device must include a vial holder. The instrument must be capable of orbital raster scanning (ORS) when scanning substances. The instrument must be accompanied by software to prepare reports and send reach back reports as needed.

  FTIR/RAMAN additional requirements:
  Data Export: The instrument shall have internal data storage capabilities, and have the ability to recall and export this data from the instrument to an external medium with the following formats: SPC file, text file, ARB (reach back) file and PDF format.

  Survivability and Ruggedness: The instrument shall be able to handle frequent use prone to accidental drops, exposure to dirt and dust, and exposure to chemicals during analysis

  Sample Identification: The instrument shall provide accurate identification of controlled substances, common precursors, chemical explosives, and other chemicals of forensic interest. This instrument shall have a mixture analysis capability when a user is searching for a library match.

  Library Database: The instrument shall come with an onboard searchable library database software that can be added to by the user, with the latest spectra library. The vendor shall include library updates.

Power Source: The instrument shall operate using multiple power source options including, but not limited to: commercially and commonly available disposable batteries, and an internal rechargeable battery.

Safety: The instrument shall provide the user with hazard information about a substance once identified, that include the material safety data sheet or equivalent.

Quality Control: The instrument shall have standards and procedures for verification and documentation of the correct functioning of the instrument.

Physical Aspects: The instrument shall be handheld instrument, lightweight (under 10 lbs.), with ease of use for a first time operator.

Hardware: The instrument shall accommodate the secure USB

Software: The chosen provider shall include the latest version of hardware control software. The software shall provide all hardware component control, method settings, and report generation. The software shall have automated processing and analysis of data acquired. The software shall have report formats, and have intuitive integration setting and resetting functions. Software shall have the ability to set analysis parameters before and after analysis. The vendor shall provide timely notification of all updates for proprietary software and ensure that the updated versions are promptly received by SMFR.

 2. DELIVERABLES AND DELIVERY SCHEDULE

2.1 Equipment: The contractor shall deliver the purchased hardware, consumables, software, and accessories detailed in the quotation to include any necessary consumables needed for equipment set up. Systems purchased with installation and training shall be installed within 30 days of the laboratory meeting the pre-installation requirements for the unit.

2.2 Shipping: The shipping label affixed to the exterior of the crates/carton shall read as follows:
Southern Manatee Fire Rescue District Attn: Capt. M. Bloski, 2451 Trailmate Drive, Sarasota, Florida, 34243-4041.

Delivery Notes: Common carrier vehicles are permitted to deliver to the SMFR during business hours of Monday-Thursday from 0800-1700 hours.

2.3 Product Documentation The contractor shall be responsible for issuing required documents. One copy of the data shall be delivered in paper form and one copy in electronic form. The electronic form shall be in MS Word format or Adobe Acrobat PDF. This includes the completed invoicing. If applicable, the following items also are required for delivery: Any associated software license/key documentation and (or) relevant download link(s). The document(s) are deliverables under the contract and shall be delivered to the SMFR no later than thirty days after contract award.