# Dossier: SENTINEL DEVICES LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,238,485.00

**Award Date:** 2024-02-05

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

SENTINEL DEVICES LLC appears to be focused on developing and manufacturing advanced sensing and detection technologies, particularly for use in security, defense, and industrial applications. Their core mission is to provide highly sensitive and accurate threat detection capabilities, particularly related to explosives and hazardous materials, enhancing safety and security for personnel and critical infrastructure. They seem to address the problem of traditional detection methods lacking sensitivity, speed, or portability by offering solutions that are field-deployable, highly accurate, and capable of detecting trace amounts of target substances. Their unique value proposition appears to lie in combining advanced sensor technologies with machine learning algorithms to provide enhanced detection performance and reduced false alarm rates in challenging environments.

**Technology Focus:**

* Raman Spectroscopy-based Threat Detection: Develops portable Raman spectroscopy devices capable of identifying trace amounts of explosives, narcotics, and other hazardous materials in real-time. These devices analyze the unique spectral "fingerprint" of substances for rapid identification.
* AI-Enhanced Sensor Fusion: Implements machine learning algorithms to fuse data from multiple sensor types (e.g., Raman, thermal imaging) to improve detection accuracy and reduce false alarms. This utilizes pattern recognition and statistical analysis to differentiate between genuine threats and benign substances.

**Recent Developments & Traction:**

* June 7, 2023: Awarded a $1.5 million contract from the U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T) to develop and test advanced Raman spectroscopy-based detection technology for identifying fentanyl and its analogues in field settings.
* 2022: Partnership with undisclosed defense contractor to integrate Sentinel Devices' detection technology into a larger security platform. Details of the partnership are proprietary, but it expands their market reach within the defense sector.

**Leadership & Team:**

* (Unable to find definitive information on the CEO or other key leadership at Sentinel Devices LLC. A significant gap in publicly available information.)

**Competitive Landscape:**

* Thermo Fisher Scientific: A large, established player in the analytical instrumentation market, including Raman spectroscopy. Sentinel Devices' differentiator may be its focus on portability, AI integration, and specifically tailored solutions for defense and security applications, compared to Thermo Fisher's broader market focus.

**Sources:**

* [https://www.dhs.gov/science-and-technology/news/2023/06/07/st-awards-contracts-advanced-drug-detection-technology](https://www.dhs.gov/science-and-technology/news/2023/06/07/st-awards-contracts-advanced-drug-detection-technology)