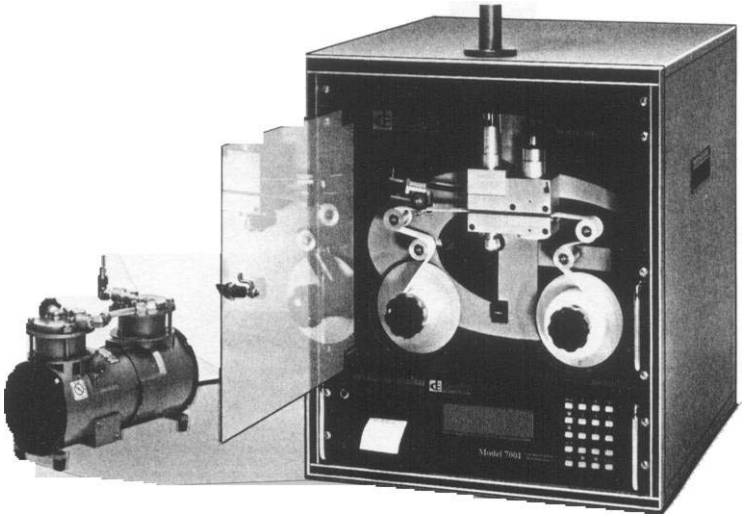
NASA-UDT
Bacterial Spore Monitor

universal detection technology

Date Revised: 16 DEC 03

VENDOR DESCRIPTION

UDT's device being developed in collaboration with NASA's Jet Propulsion Laboratory essentially functions as an anthrax "smoke detector." The device continuously monitors the air for anthrax spores; it then uses a microwave to "pop" the spores, thus releasing a chemical from inside the spores called dipicolinic acid, which is unique to bacterial spores. This dipicolinic acid instantaneously reacts with the chemical sensor in the solution. The sensor triggers an intense green luminescence when viewed under ultraviolet light. The intensity of the luminescence corresponds to the concentration of bacterial spores in the sample.



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PM RUS Robotic & Unmanned Sensors

Business Category: Small Business

BAD

Hardware	
Power: V 220/240, 50 Hz, 249 Watts	Operating Altitude: Operates everywhere with ambient air flow
Weight: 29.5 kg	Operating Speed: 0 to 20 liters per minute
Dimensions: 610mm x 510mm x 610mm	Operating Temp.: -20°C to +80°C
Internal Volume: 0.19 m^3	Storage Temp.: -20°C to +80°C
Electric powered	Interface: Graphic User Interface (GUI)
Sensor Type: Terbium/DPA luminescence	Bandwidth Required: N/A
Sensor Field of View: 360°	TCDL Compatibility: N/A
Internal Permanent Archive on Information: Yes	MTBOMF: N/A
Sensitivity: 50 spores per liter	MTTR: N/A
	Maintainability: N/A

Performance
Expected to complete 99% of the Missions it states w/out experiencing a mission abort
Sensor hardened to mitigate damaging effect from EMP: Yes
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Capability to detect bacillus and clostridium species including anthrax