

Threat Trace Detector MS-120



► Introduction

The MS-120, developed by Weimu, is a compact, field-ready trace detector built on miniaturized mass spectrometry (MS)—the gold standard in chemical identification.

Designed for the rapid detection of explosives, narcotics, synthetic opioids, new psychoactive substances (NPS) and other controlled substances, the MS-120 combines a non-radioactive ionization source with tandem MS (MS/MS) for enhanced verification and minimal false positives.

Compared to IMS, MS technology provides molecular-level identification, allowing for precise differentiation of structurally similar compounds, including isomers and complex mixtures—critical in high-risk scenarios.

The system features an extensive, customizable threat library, covering a broad range of substances from homemade explosives to emerging synthetic drugs.

Ideal for aviation security, customs, border control, and law enforcement, the MS-120 delivers fast, confident results via an intuitive 10.1" touchscreen, supporting real-time decisions in mission-critical environments.

► Features

- **MS Technology:** The gold standard in chemical analysis
- **Comprehensive Library:** Pre-loaded with hundreds of substances, with customizable options available.
- **Tandem MS:** Enhanced verification performance for more accurate analysis of complex samples.
- **High Sensitivity & Selectivity:** Detects trace amounts with precision, minimizing false positives.
- **Rapid Detection:** Provides results in seconds, supporting fast decision-making.
- **Auto-Calibration & Auto-Cleaning:** Ensures consistent performance with automatic calibration and cleaning.
- **Audio & Visual Alarms:** Dual alerts for immediate response to potential threats.
- **User-Friendly Interface:** 10.1-inch capacitive touchscreen for intuitive and efficient operation.
- **Expandable Storage:** Unlimited storage expansion.
- **Remote Diagnostics & Software Updates:** Enables remote troubleshooting and automatic software updates.



► Application



Law Enforcement



Customs & Border



Checkpoint

► Technical Specification

Item	Index
Explosive Library	Most homemade, commercial and military explosives, such as TNT, RDX, BP, NG, PETN, TATP, AN and etc.
Narcotic Library	Wide Range of narcotics, precursor chemicals and spirit drugs, including meth, heroin, cocaine, THC, NPS, fentanyl, JWH-018, butanone, ephedrine and etc.
Substance State	Powder, crystal, opioid, liquid, vapor and etc.
Sampling Mode	Swab or sniffing without pretreatment
Detection Time	In seconds
False Positive	< 0.1%
Sensitivity	Picogram level (10^{-12} g)
MS/MS Tandem Detection	Yes
Operation System	Linux
Display Screen	10.1-inch capacitive touch display
Data Interface	WiFi / USB / HMDI
Storage	500G memory storage and expandable
Data Output	Text / Built-in printer (Optional)
Power Output	150W (On Average)
Working Temperature	0°C to 40°C
Weight	11kg

