# mass spec™
## PROVING WHAT MATTERS

# NXT-Detect

A high-throughput, mass spectrometer-based trace detection system designed for precision and portability.

Detect explosives, drugs, and other compounds in seconds. Low-nanogram sensitivity. Near-zero error rates.

**Clear results, fast.**

Guided workflows enable non-expert operation with true walk-up simplicity. Remote expert review and flexible library updates keep the system ready for evolving threats. Compact and deployable anywhere.

## Applications:

From frontline security to advanced research:

- **Secure:** Detect explosives and chemical threats
- **Enforce:** Analyse drugs, evidence, and contraband
- **Safeguard:** Verify food safety and quality
- **Optimise:** Monitor production for trace impurities
- **Protect:** Track environmental pollutants
- **Explore:** Enable scientific discovery and learning

## Features:

- Rapid identification of explosives, drugs, and other compounds
- Ambient thermal source for high-throughput analysis
- Results in seconds
- Low-nanogram detection sensitivity
- Near-zero error rates
- Compact, desktop-sized system
- Expandable compound libraries
- Scentinel™ II software for simple, guided operation

**Contact MSA to learn more:**
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# NXT-Detect
## Technical Specifications

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## Technology

| | |
|---|---|
| Instrument (Waters™ RADIAN™): | Dedicated, direct analysis single quadrupole mass detector with an integrated Thermal Extraction Ion Source (TEIS) |
| Mass Analyser: | Single quadrupole analyser with pre-filter maximizes resolution and transmission of ions while preventing contamination of the mass analyser. Automated mass calibration and resolution verification for consistent data quality. |
| Mass Range: | 30 - 1,250 Da. Scan speed: 1 - 20Hz |
| MSA TEIS Source Temp Range: | Ambient to 300°C (572°F) |

## Packaging

| | |
|---|---|
| Stand-alone System Dimensions: | Width: 58.5 cm (23 inches), Height: 158 cm (62.25 inches), Depth: 92.5 cm (36.4 inches) |
| System Weight: | 185kg (including bench, Nitrogen Generator, Instrument and vacuum pumps) |
| Power supply: | 100 - 240 Vac 50/60 Hz |
| Operational Temperature Range: | +15°C to +28°C (+59°F to +82.4°F) |
| Storage Temperature range: | -20°C to +60°C (-4°F to +140°F) |
| Operational Humidity: | 5% to 80% non-condensing |
| Operating altitude: | 2,000m |
| Regulatory: | CE, CB, NRTL {CAN/US}, ACM |

## Compound Detection

| | |
|---|---|
| Explosives Detected: | Nitrates (AN/UN), HMX, EGDN, NG, DNT/TNT, PETN, RDX, TATP, HMTD, Tetryl, Taggants and others |
| Illicit Drugs Detected: | Cocaine, Heroin, Cannabis, Amphetamine-Based Drugs, PCP, Fentanyl, MDMA, MMB-Fubinaca, Ketamine and others |
| Environmental contaminants: (pesticides) | Ametryn, Atrazine, Prometon, Prometryn, Propazine, Simazine, Terbutryn and others |
| Lower Detectable Points: | Picogram/nanogram level |
| Analysis cycle: | 15 - 20 seconds |
| Alarm notification: | Visual - audible |

## Software

| | |
|---|---|
| Instrument control: | NXT Detect™ supports Waters MassLynx™. Automated mass calibration and mass resolution control and verification. Automated diagnostics, checks and alerts. |
| Real time sample recognition: | MSA Scentinel™ II for NXT Detect enables fully automatic sample analysis. Results from its dedicated end-user software require minimal interpretation, allowing operators to concentrate on sample acquisition. It is enabled by SpectralWorks' RemoteAnalyzer® software and can be configured to be standalone or operate as part of a multiple instrument networked deployment. |
| Advanced compound analysis: | NXT Detect uses SpectralWorks' AnalyzerPro® XD for qualitative and quantitative processing and visualisation. It is a sophisticated desktop software solution tailored for Direct MS data. AnalyzerPro XD provides comprehensive post-acquisition processing and statistical tools for sample-to-sample comparison, target component analysis, and library searching. |