RMI
ANALYTICAL & TESTING INSTRUMENTS

SafetyNews

CBRNe News

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40

Invitations to technical events and webinars

TeamLeader integration into a single operating platform

Video: New trends in NPS



NEW CheMSense Protect

Software upgrade: MX908 (version 3.6.0.2)



Safety News 40

From this issue:

1. Invitations to professional events and webinars
2. **Video: New Trends in NPS** – **The Rise of Semi-Synthetic Substances** (The lecture was presented at the **Current Trends in Seized Drug Analysis Symposium 2026)**
3. **TeamLeader** – when mobile detection technology is integrated into a single operational platform
4. ***NEW* CheMSense Protect** – continuous monitoring of chemical threats, a new technology replacing older IMS-based detectors. It utilizes **a miniaturized mass spectrometer** (Linear Ion Trap) **and multidimensional MS/MS analysis.** This significantly expands the range of monitored substances (CW, TIC, ...) and reduces the risk of false alarms. Applications – critical infrastructure protection, continuous environmental monitoring for reconnaissance vehicles and mobile laboratories.
5. Information on available software upgrades for instruments supplied by RMI

1. Invitations to professional events and webinars

Webinar: 908 devices - Trace to Bulk: Smarter Chemical Screening at the Border



When: Thursday, March 19, 2026, starting at 4:00 PM

Register HERE

About the webinar

Customs and border authorities face increasing pressure to **detect illicit drugs and ensure compliance with trade regulations in real time**. From detecting **trace drug residues** in vehicles, mail, and cargo to **verifying bulk chemical shipments** that may be intentionally mislabeled to circumvent VAT, customs duties, or controlled precursor inspections—operational demands at border crossings are becoming increasingly complex and growing.

This webinar focuses on **the intersection of two workflows** that are increasingly common at modern border crossings:
detection of trace amounts of prohibited substances and verification of chemicals in larger volumes.

The webinar will present **a multi-layered screening strategy** that combines the detection of narcotics in trace amounts with rapid verification of chemical substances in shipments. Participants will learn how an integrated workflow can:

- improve results in detecting illegal substances,
- accelerate decision-making during inspections,
- strengthen documentation for subsequent law enforcement and compliance audits.

A former user and current MX908 instructor will share his experience, demonstrating how trace detection and field identification help teams uncover hidden drugs in real-world operational conditions, enabling faster targeting of inspections, safer handling of substances, and more efficient submission of samples for confirmatory laboratory analysis.

The webinar will also feature **a presentation of VipIR technology** and its **Smart Spectral Processing (SSP)** system—a next-generation algorithm that combines data from Raman and FTIR spectroscopy to enable fast and reliable identification of chemicals in larger volumes, including materials that have been intentionally mislabeled.

The webinar will also discuss how verifying chemicals in larger volumes can assist with:

- identifying precursors,
- reducing the risk of misclassification of substances,
- improving processes related to customs, VAT, and trade regulation compliance by verifying the true identity of declared chemicals.

These tools help **support decision-making during interventions and inspections**, particularly in cases where shipments are misdeclared, substituted with other substances, or contain dual-use substances.

The webinar is primarily intended for **customs officers, border security personnel, and trade compliance experts**. It will demonstrate how technology-enabled workflows can help organizations transition from reactive inspections to **proactive, intelligence-driven screening** without slowing down traffic at border crossings.

FLIR Webinars - Radiation:



Did you miss the series of free webinars on Teledyne FLIR radiation technology in November 2025?

No problem—you can watch the recordings of these webinars via the links below:

identiFINDER R225

identiFINDER R425 (UW)

identiFINDER R700

Each webinar lasts approximately **40–60 minutes** and features **a multimedia presentation** with product information, examples, demonstrations, maintenance tips, and practical advice.

Among other things, the following features and new developments were showcased during the webinars:

- Exceptional **sensitivity to gamma and neutron radiation**,
- **Simple and intuitive operation**,
- Various **reachback (triage)** methods,
- New options for **viewing and controlling up to four R700 devices** from a single mobile device,
- **Radiation Field Guide**, which can assist **emergency responders in evaluating measurements**,
- **System Health Checks** for maximum device uptime and minimized maintenance costs,
- ...and much more!

FLIR Webinar – Fido X4:



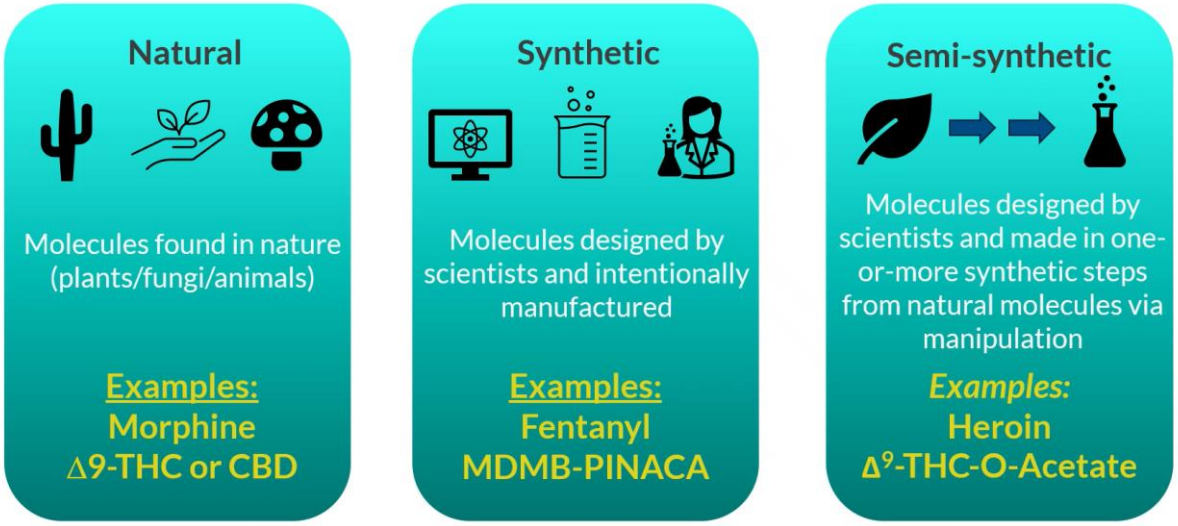
Did you miss the free webinar on the Fido X4 trace explosive detector in November 2025?

No problem, you can watch the recording of this webinar via the following link:

Fido X4

This webinar offers **a practical demonstration of detecting TNT and HMTD explosives using the Fido X4**. It also includes **an overview and demonstration of basic device maintenance**. You will also see **how to perform a verification test on the device** and learn about **the latest firmware update**. The conclusion is dedicated to describing **how the Fido X4's explosive detection algorithm works**. The webinar combines **a live presentation with video content** and lasts less than **25 minutes**.

2. Video: New Trends in NPS – The Rise of Semi-Synthetic Substances



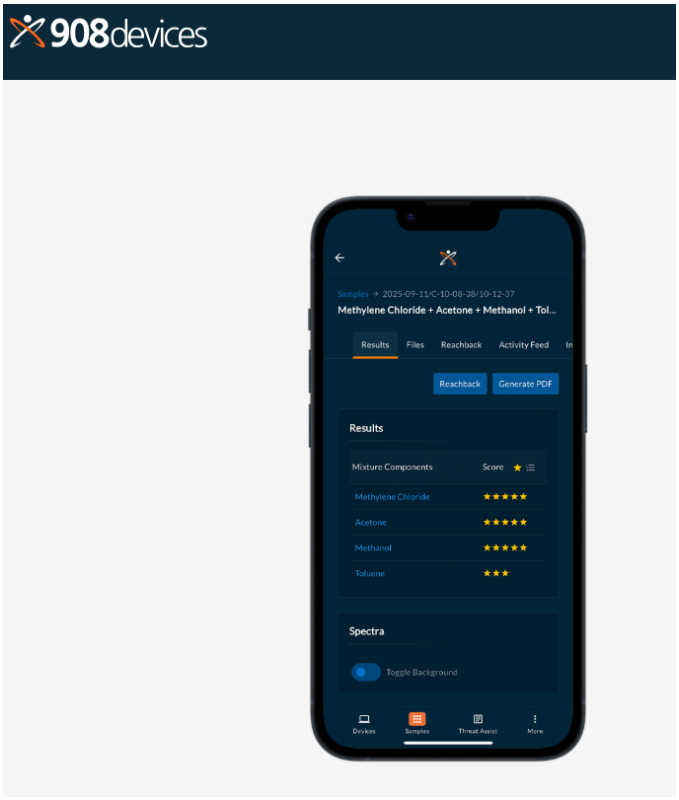
Watch the video HERE

New psychoactive substances (**NPS**) pose an ever-greater challenge for forensic chemists, toxicologists, and law enforcement agencies. Recently, alongside well-known synthetic drugs, a **new generation** of **semi-synthetic compounds** has emerged, found for example in tablets, e-cigarette cartridges (vape cartridges), or other consumer products.

In this lecture, expert Donna Iula summarizes **the most important current trends in the field of NPS**—from **synthetic opioids and benzodiazepines to stimulants and synthetic cannabinoids**. Special attention is given to **the rapidly growing group of highly potent semi-synthetic opioids derived from kratom**, which pose a new risk to healthcare professionals and law enforcement agencies.

The lecture was presented as part of **the Current Trends in Seized Drug Analysis Symposium 2026**, organized by the Center for Forensic Science Research and Education, which focuses on current developments in the field of seized drug analysis. The video offers an overview of the latest trends that **forensic laboratories, police, customs authorities, and HAZMAT teams** working with unknown substances in the field should be aware of.

3. TeamLeader – when mobile detection technology is integrated into a single operational platform





Today, modern law enforcement agencies use increasingly advanced analytical instruments in the field—ranging from detectors of trace amounts of drugs and explosives to analyzers capable of identifying unknown chemical substances within seconds. However, as the number of these devices grows, a new challenge arises: **how to effectively manage multiple devices simultaneously and how to share measurement results in real time among individual team members and command**.

In response to this need, 908 Devices has developed the **TeamLeader** digital platform, which enables centralized management of portable analytical instruments and the sharing of their data across the entire organization.

Detection technology as part of a digital ecosystem

The TeamLeader platform connects individual detectors (currently FTIR) into **a unified digital environment** where **operators and commanders** can **monitor measurement results, analyze data, and coordinate decision-making during operations**. The system is designed primarily for 908 Devices' portable devices, such as **ThreatID, ProtectIR, XplorIR, VipIR**, and later **MX908,** which are used to identify drugs, toxic industrial chemicals, or potential CBRNe threats. Data from these devices can be **automatically transmitted via a mobile app to a cloud platform**, where it is available to other team members or an analysis center.

Key features of the platform

Centralized device management

One of TeamLeader's key features is **the management of an entire fleet of detection devices from a single interface**. Administrators can monitor **the status of individual devices, check their configuration, or update the software**. This is particularly important for organizations that operate **a large number of devices across different units or regions**—such as police, customs, or HAZMAT teams.

Real-time result sharing

During an operation, **an operator** can **analyze a sample, and the result is immediately displayed in the TeamLeader app** for other authorized users. The incident commander can thus **monitor the results without having to enter the contaminated zone**, which significantly increases safety and speeds up decision-making.

Advanced work with analytical data

TeamLeader not only displays the substance identification itself but also allows for **more detailed work with analytical data**. For example, users can:

- view spectral data
- compare individual measurements
- export data for further analysis
- archive results for later documentation

This allows the data to be used not only during an incident response but also in **forensic analysis or internal incident evaluation**.

Access to an extensive database of chemical substances

The platform also includes a **database** of **tens of thousands of chemical compounds**, containing information on the properties of substances, their risks, and typical uses. Organizations can also **create their own substance libraries**, for example focused on:

- drugs and their mixtures in a given location
- industrial toxic chemicals
- hazardous substances relevant to a specific region or type of operations.

Support for expert reachback

When identifying an unknown substance, it is sometimes necessary to consult an expert or a laboratory. TeamLeader allows **measurement results to be shared remotely**, so analysts can assess the data off-site.

This can significantly speed up decision-making, for example, in situations where it is necessary to determine:

- whether it is an industrial chemical
- whether it could be a drug precursor
- or whether there is a risk of a CBRN threat.

Significance for modern security operations

The digitization of detection technologies represents one of the major trends in CBRNe security. Whereas in the past each detector functioned as a standalone device, today **the concept of interconnected detection systems that share data in real time is gaining ground**.

Platforms like TeamLeader thus help organizations:

- increase situational awareness during operations
- accelerate decision-making processes
- improve incident documentation
- effectively manage a larger number of devices.

For HAZMAT teams, police, or customs authorities, this primarily means **better coordination of field operations and faster access to analytical information** that can be **critical for safely resolving an incident**.

The Future of Connected Detection Systems

The development of such platforms points to the direction in which the field of chemical detection is likely to move. Portable analyzers are gradually becoming part of a broader digital infrastructure that may in the future include, for example:

- robotic reconnaissance platforms
- autonomous sensors
- analytical laboratories providing remote support.

In such an environment, it will no longer be just the device itself that matters, but also **the ability to quickly share and interpret the acquired data**. It is precisely in this area that platforms like **TeamLeader** represent **an important step toward modern, networked security operations**.

If you'd like to take full **advantage of the TeamLeader app, don't hesitate to contact us**, and we**'ll help** you **register your current and future devices!** (sale@rmi.cz)

4. New Product: CheMSense Protect (TELEDYNE FLIR)



TELEDYNE FLIR introduces a new generation of autonomous chemical threat monitoring: **CheMSense Protect**

Modern protection of critical infrastructure, transportation hubs, or industrial sites requires reliable and continuous monitoring of chemical substances in the air. One of the new technological solutions in this area is the **CheMSense Protect** system, an autonomous air monitor designed for continuous detection of chemical threats.

Continuous detection of chemical substances

The device is **designed for 24/7 continuous air monitoring** in environments where **hazardous chemical substances** may be released or used. The system can detect potential chemical **warfare agents (CWAs) as well as toxic industrial chemicals (TICs)** and **alert** to their presence **in less than 20 seconds**.

Such a rapid response time is **critical, for example, in protecting**:

- critical infrastructure
- industrial facilities
- transport terminals
- underground systems (e.g., subways)
- mobile security platforms

The detection system also enables **precise identification of potential chemical substances**, which significantly **facilitates the subsequent response by security forces**.

Mass spectrometry in a compact design

At the heart of the device is **a miniaturized mass spectrometer** utilizing **Stepped Linear Trap (SLT)** technology **and multidimensional MS/MS analysis**. This technology enables **high sensitivity and selectivity** in the analysis of chemical substances in the air.

The system uses dual ionization:

- APCI (Atmospheric Pressure Chemical Ionization)
- PEII (Photoelectron Impact Ionization)

The combination of these methods expands the range of detectable substances while significantly reducing the risk of false alarms.

Minimal Consumables

One of the system's key practical benefits is its **low maintenance requirements**. The device **does not use replaceable membranes or filters and does not require manual calibration**.

The system **includes automatic diagnostics and internal calibration**, with **a** recommended **service interval of only once a year**.

This **significantly reduces operating costs** while **simplifying the deployment of the device in long-term monitoring systems**.

Integration into Security Systems

CheMSense Protect is designed as **a modular solution** that **can be integrated into existing security systems**. The device **supports standard communication interfaces**, including Ethernet and API interfaces for remote control and monitoring.

An alarm can be signaled:

- an optical indicator on the device
- via a relay output
- a digital interface for host systems

This **flexibility** allows it to be used **in both stationary installations and mobile platforms**.

Critical Infrastructure Protection Technology

With growing security risks and an increasing need for rapid detection of chemical threats, autonomous monitoring systems are becoming an important part of modern security infrastructure. The combination **of rapid detection**, **mass spectrometric analysis, and low operational demands** represents a significant step toward **more effective protection** of **critical facilities and public spaces**.

Specifications	
Chemical Threats	CWAs and TICs (customizable)
Operating Temperature	0°C to 40°C
Operating Humidity	Up to 95% non-condensing
Dimensions	12"x13.5"x8" (30.5cm x 34.3cm x 20.3cm)
Weight	21 lbs. (9.5 kg)
Power supply	Input voltage of 100–120/220–240 VAC, 50/60 Hz, and 5 A
Sample Introduction	Continuous vapor sampling via dual-stage vacuum system
Consumables	None
Connectivity	Ethernet, USB-C, HDMI
Communications	Griffin Application Programming Interface (GAPI), Thin Client/Monitor
Alarm Notification	LED indicator, 24V alarm relay, API
Calibration	Built-in automated tuning, no user calibration required
Training	Operator and support training available.
Service interval	Routine maintenance annually with simple user serviceability
Indicator panel	Located on front of instrument to show power, standby/ready, active, detection alarm, and diagnostics
Compliance	CE, FCC, MilStd 810
Mass Spectrometer	
Analyzer / MS^n	Stepped Linear Trap (SLT) with highly efficient MS/MS
DDA	Data Dependent analysis
Scan Range	40 to 500 amu, with 0.7 mass resolution
Ionization type	Dual, non-radiation, ionization (APCI and PEII)
Detector	Electron Multiplier
Vacuum System	Self-Contained
Accessories	
Confidence Checker	Simple, safe reference standard
PM and Service Toolkit	User-capable annual maintenance
Shock/vibration Mount	Designed for vehicle and shipboard applications



Vessel



Subway

Want to learn more? **Don't hesitate to contact us** atsale@rmi.cz .

5. New firmware and software for your devices

New firmware and libraries for the MX908 device – TIC mode

908 devices has released an important software and library update for the **MX908** spectrometer (**version 3.6.0.2**).

What's new in version 3.6

The main new features include:

1. **TIC Hunter mode replaces Hazard Survey mode**
2. 5 new substances in Drug Hunter mode

TIC Hunter replaces Hazard Survey mode

The TIC Hunter mode in version 3.6 replaces the Hazard Survey mode and **focuses exclusively** on identifying hazardous volatile toxic industrial chemicals (**TICs**) and **chemical warfare agents**. This change **is based on user feedback** and efforts **to improve performance** in this operating mode. TIC Hunter now includes targets focused on toxic industrial chemicals and volatile chemical warfare agents. **Substances that appear in other modes** (e.g., Drug Hunter or Explosives Hunter) **are now displayed only in those respective modes**. The introduction of **TIC Hunter** mode **improves overall detection performance** in this mode.

New target substances in Drug Hunter mode:

1. **Bromazolam** – benzodiazepine
2. **Medetomidine** – sedative
3. **ADB-PINACA** – synthetic cannabinoid
4. **MDMB-BINACA** (also known as MDMB-BUTINACA) – synthetic cannabinoid
5. **N-isopropylbutylone** – synthetic cathinone

New list of substances in the MX908 library for **software version 3.6.0.2 available** upon request from RMI

We will also send **the latest** English-language **manual** for the MX908 upon request

Your **RMI, s.r.o.** team – we're here for you 😊. RMI, s.r.o. Horka 221, 533 41 Lázně Bohdaneč, Tel.: 466 921 885, 466 921 404, e-mail: sale@rmi.cz

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