

ADVANCING FIELDWORK AROUND THE WORLD

On-site Narcotics Analysis in Seconds.

A scientifically validated handheld solution that empowers law enforcement to make faster, safer decisions in the field.



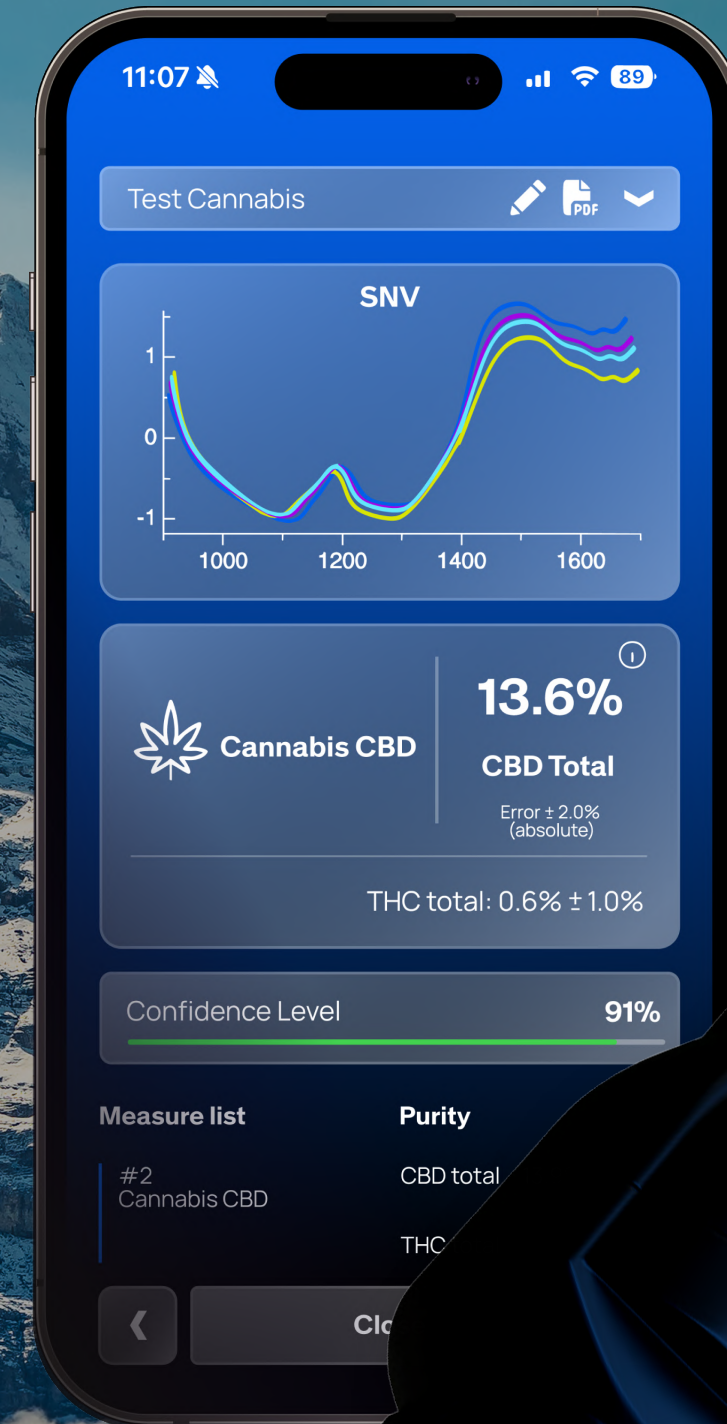


NIRLAB SA is a **Swiss company**, founded in 2018 as a spin-off from the **Forensic Institute** of Lausanne.

We equip law enforcement agencies with a **handheld NIR device** for **rapid identification and quantification** of illicit substances. Connected to a **secure cloud platform**, NIRLAB transforms field data into **actionable intelligence** for drug enforcement operations.

«We bring high precision labs to the field, enabling rapid, informed decision based on reliable data.»

Prof. Pierre Esseiva,
Director of the Faculty of Forensic Science & Co-Founder NIRLAB AG

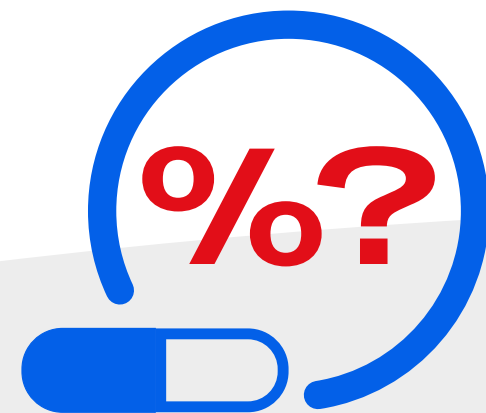


PROBLEM

Traditional Drug Testing Create Delays, Inefficiencies and Risks



Lab testing take days, delaying critical decisions on-site.



Field tests can't measure purity and often fail with mixed or fluorescent samples.
(e.g. cannabis, heroin, MDMA, ...)



Many tools are difficult to use and expose officers to contact risk.



Data remains siloed, with no real-time or centralized insight.



Slow to adapt to new and emerging drugs.

NIRLAB'S SOLUTION

Instant Narcotics Analysis in the Field

Trusted by **law enforcement agencies in over 30 countries** across all continents, NIRLAB's handheld near-infrared spectroscopy (NIR) solution enables fast, on-the-spot analyses of illicit substances.

- + Intuitive, point-and-click operation.
- + Lab-grade results delivered in under 5 seconds.
- + Identifies and quantifies over 400 substances.
- + Detects up to 3 substances in a single mixture.
- + No sample preparation needed. Non-destructive testing.
- + Real-time reporting and monitoring via secure cloud platform.



BENEFITS FOR LAW ENFORCEMENT

Safer, Faster, Smarter Drug Enforcement in the Field

NIRLAB empowers law enforcement to instantly identify and quantify illicit substances in the field. With real-time data sharing and centralized tracking, it **improves officer safety**, **accelerates decision-making**, and enhances **substance monitoring across locations**.

- + Make faster, informed decisions directly in the field.
- + Reduce reliance on forensic labs and eliminate backlog delays.
- + Protect officers through safe, non-contact analysis.
- + Generate real-time data to drive intelligence-led policing.



HOW IT WORKS

A Point-And-Click Analysis Solution

A seamless ecosystem of tools for fast, field-ready results – including a narcotics database, handheld scanner, mobile app, and cloud platform.



NIR Database

A continuously expanding database of chemical fingerprints and reference data for illicit substances.



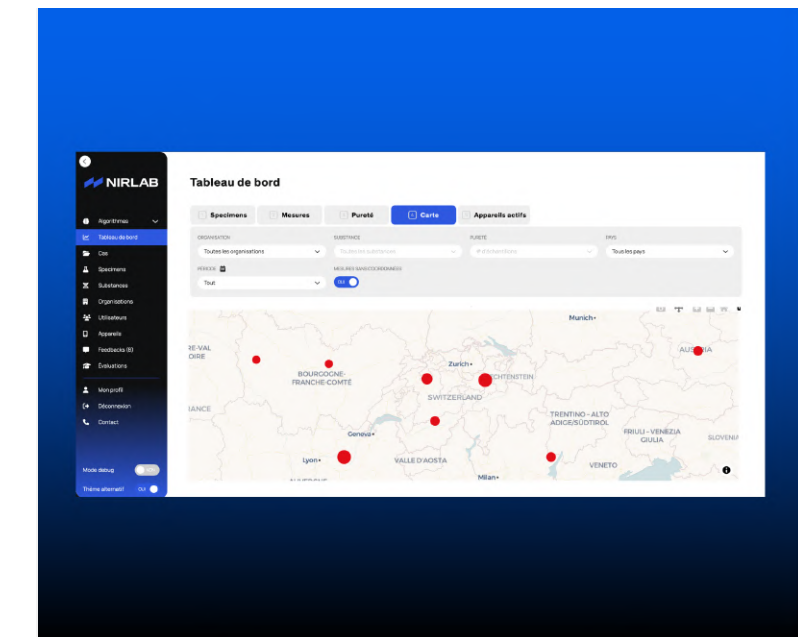
NIRLight

A handheld NIR scanner for rapid, high-precision substance analysis in seconds, anywhere.



NIRApp

A mobile app that delivers real-time analysis, enabling instant decision-making in the field.



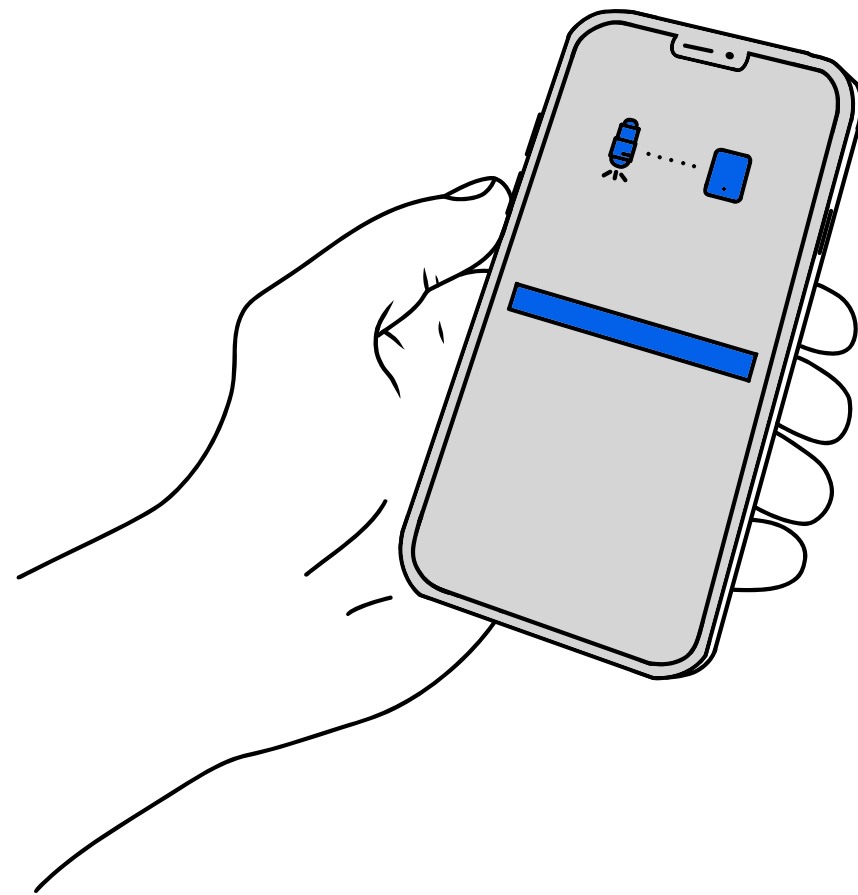
NIRWeb

A cloud-based web platform for secure data management, processing, and real-time intelligence.

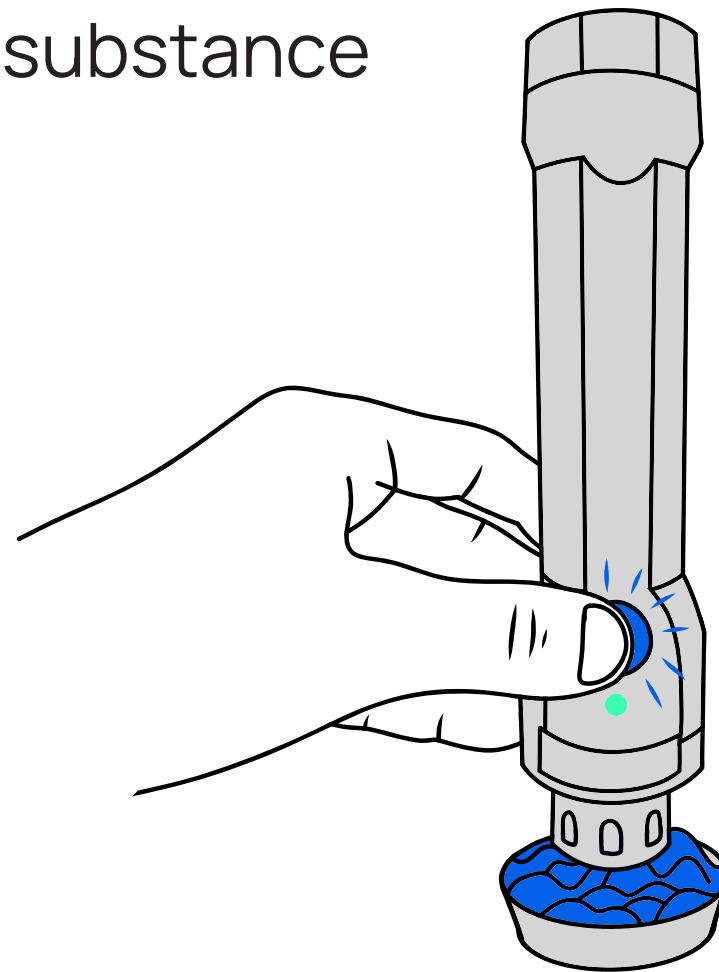
SIMPLICITY OF USE

3 Easy Steps to Reliable Results in Seconds

1. Connect the device



2. Scan the substance



3. Read result on app in seconds



WHO IS IT FOR

Empowering Law Enforcement From Street to Command Center

- + Field officers and patrol units
- + Narcotics and drug enforcement teams
- + Special operations and tactical response units
- + Forensic science laboratories
- + Command, intelligence, and crime analysis divisions
- + Customs and border control agencies
- + Correctional facilities and prison services

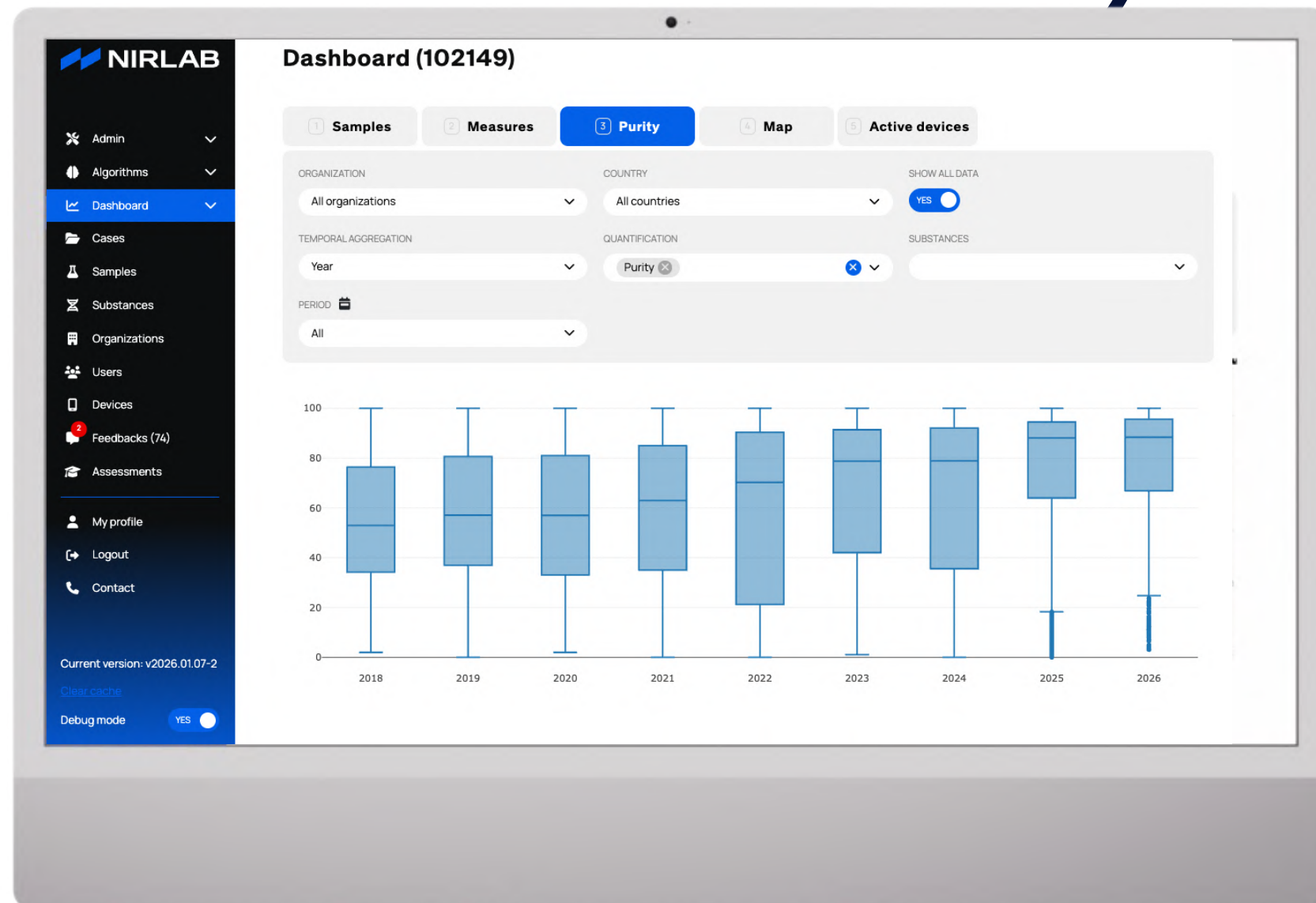


CLOUD CAPABILITIES

One Cloud. Global Insights.

By decentralizing field analysis and centralizing cloud data, we help agencies uncover trends across locations, users, and time.

- Narcotics
 - Cocaine
 - Fentanyl
 - Cannabis



SCIENTIFIC VALIDATION

Scientifically Validated. Forensically Trusted.

NIRLAB's narcotics solution is backed by rigorous scientific validation and trusted by forensic institutions worldwide.

- + ISO 17025-compatible protocols.
Designed to meet the highest standards in forensic drug analysis, ensuring reproducibility, reliability, and credibility in operational settings.
- + Peer-reviewed publications
Validated through multiple scientific studies, including research published in *Forensic Science International*.
- + Benchmark performance
Regularly participation in international proficiency tests, demonstrating matching accuracy with conventional lab methods such as GC-MS, HPLC, and UHPLC.



What You Get with NIRLAB

A complete solution for fast, safe, and reliable narcotics analysis in the field.



THE HARDWARE

NIRLight

- + **Wireless, compact, rugged and ergonomic**
Designed for both field and lab use.
- + **IP67 rated**
Made for wet, dusty and harsh environments.
- + **Non-destructive analysis**
Requires little to no sample preparation.
No special training needed.
- + **Zero maintenance**
No regular maintenance is required.
Glass and lamp are replaceable if broken.
- + **Long battery life**
Up to 10 hours of continuous use (5,000+ scans). USB rechargeable.
- + **Bluetooth and USB**
Fast and simple pairing with smartphone, tablet or PC.



THE SOFTWARE

NIRLAB Mobile App

- + **User-friendly interface**
Easy-to-use app and with clean interface and straightforward on-screen results.
- + **Instant reporting**
Scanning results are shown on screen within seconds.
- + **Wireless usage**
Pairs with NIRLight via Bluetooth and syncs with servers via Wi-Fi or mobile networks.
- + **Easy and fast download**
Available for iOS and Android on the App Store and Google Play.
- + **Secure cloud**
A complete ecosystem that communicates with a secure cloud to manage results in real-time.



THE SOFTWARE

What Can be Measured

- + **Identify and quantify more than 400 substances**
Scan results are shown on mobile app within seconds.
- + **Analyze substances in various forms**
Powders (e.g. Cocaine), pills (e.g. MDMA), crystals (e.g. Methamphetamine) or plant-based material (e.g. Cannabis).
- + **Identify cutting agents and precursors**
Analyze up to 3 substances in a mixture.

The result in the NIRLAB app shows:

1. The measured spectrum of analyzed substance
2. Substance Identification
3. Quantification (e.g. purity in %)
4. Cutting agent (if present)
5. Confidence level



NARCOTICS LIBRARY

400+ Substances, Updated Weekly via the Cloud

Identification

- + **Cannabinoids:** THC, CBD, spice/synthetics, ...
- + **Opiates & Opioids:** Heroin (base and salt form), ...
- + **Stimulants:** Cocaine, MDMA, Methamphetamine, ...
- + **Dissociatives:** Ketamine, MXE, ...
- + **Depressants:** Benzodiazepines, Barbiturates, ...
- + **Hallucinogens:** DMT, 2C-B, ...
- + **New Psychoactive Substances:** Synthetic cathinones, ...
- + **Explosives:** TATP, TNT, ...
- + **Precursor Chemicals:** Ephedrine, PMK, ...
- + **Cutting agents / Adulterants:** Levamisole, Benzocaine, ...
- + **Medicines:** Xanax, Oxycodone, ...

Quantification in Mixtures

- + Cocaine (salt & base)
- + Heroin (salt & base)
- + MDMA (Ecstasy/Molly)
- + Amphetamine
- + Methamphetamine
- + Ketamine
- + Cannabis compounds (THC, CBD, CBN, ...)
- + and more

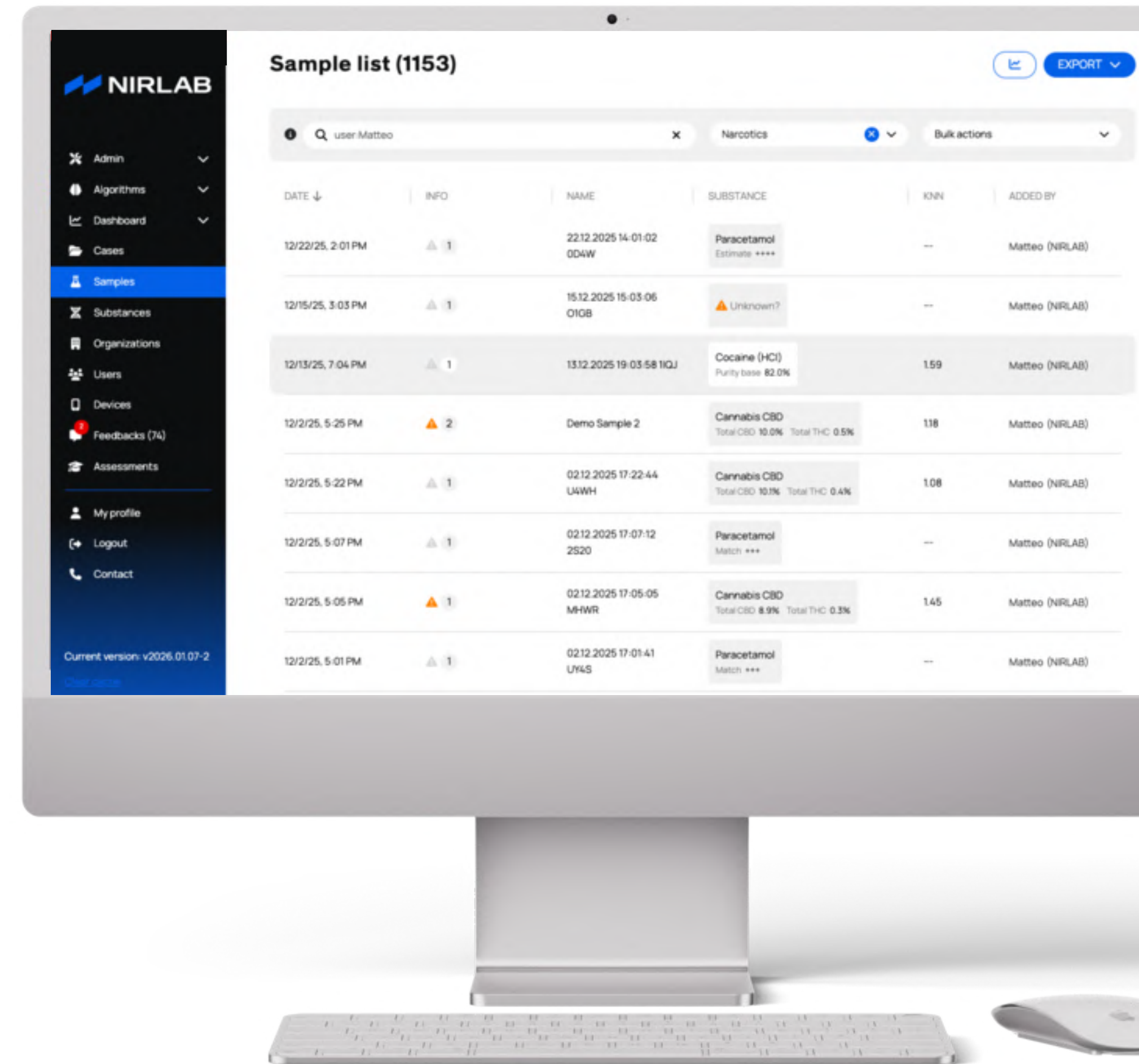
Scanning works through direct contact or transparent packaging.
Supports various sample forms including powders, plant-based materials, tablets, pills, and semi-solids.

THE SOFTWARE

NIRLAB Web App

Desktop app- and browser-accessible platform for data management.

- + **Report history**
Centralized tracking and comparison of scans.
- + **Simple data management**
Modify or clean up analysis records.
- + **Export of data**
Easily export data to Excel.
- + **Save as PDF**
Generate downloadable reports.
- + **User Management**
Admin tools for organizations and users.

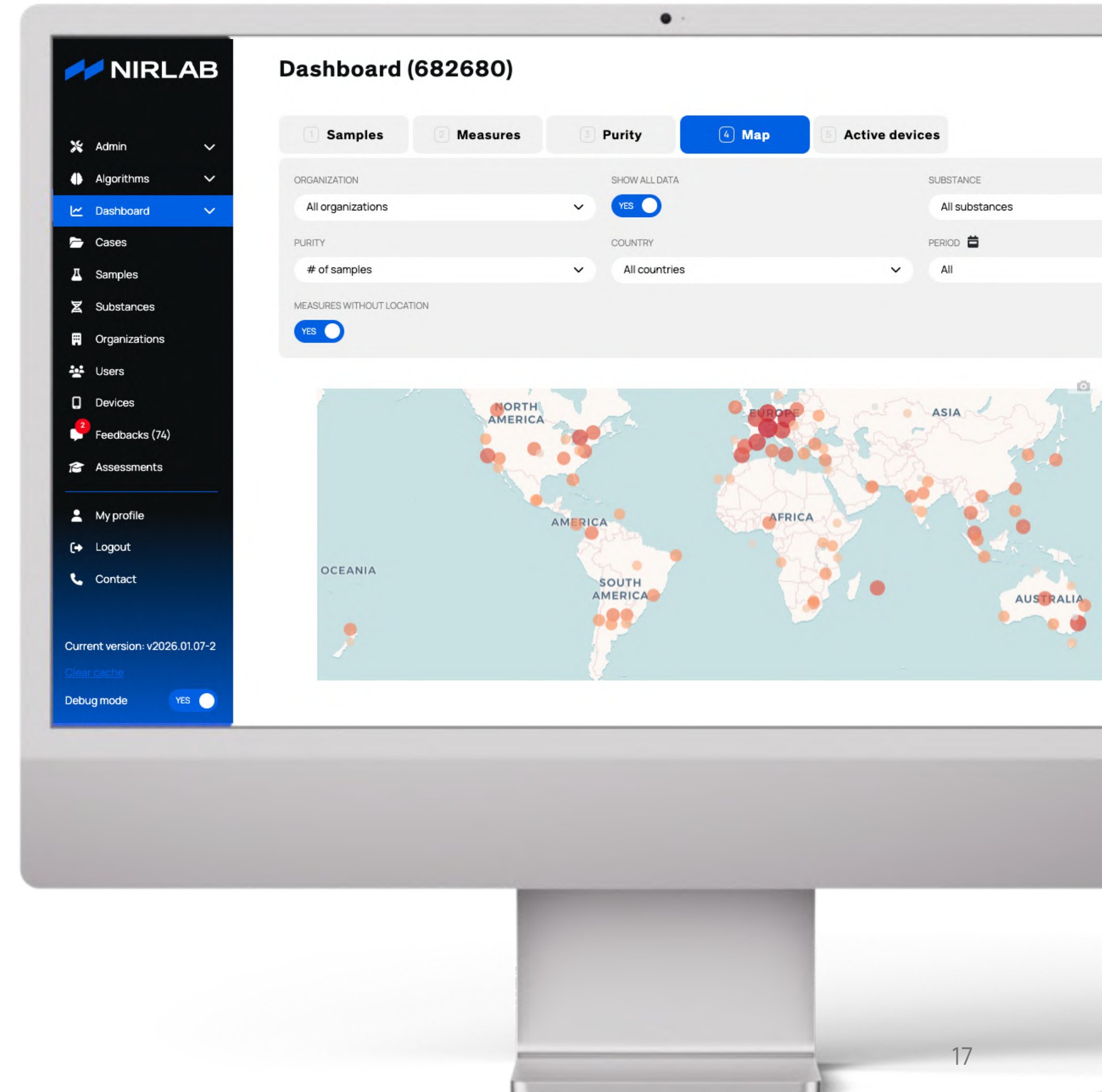


THE SOFTWARE

Web App Dashboard

Various dashboards enable valuable insights of all scans across all devices.

- + **Purity evolution**
Track the development of substance purity over time.
- + **Geo-spatial mapping**
Visualize scans across locations.
- + **Number of sample scans by region**
Monitor device usage across time and region.
- + **Custom reporting**
Export raw data as .csv for further analysis.

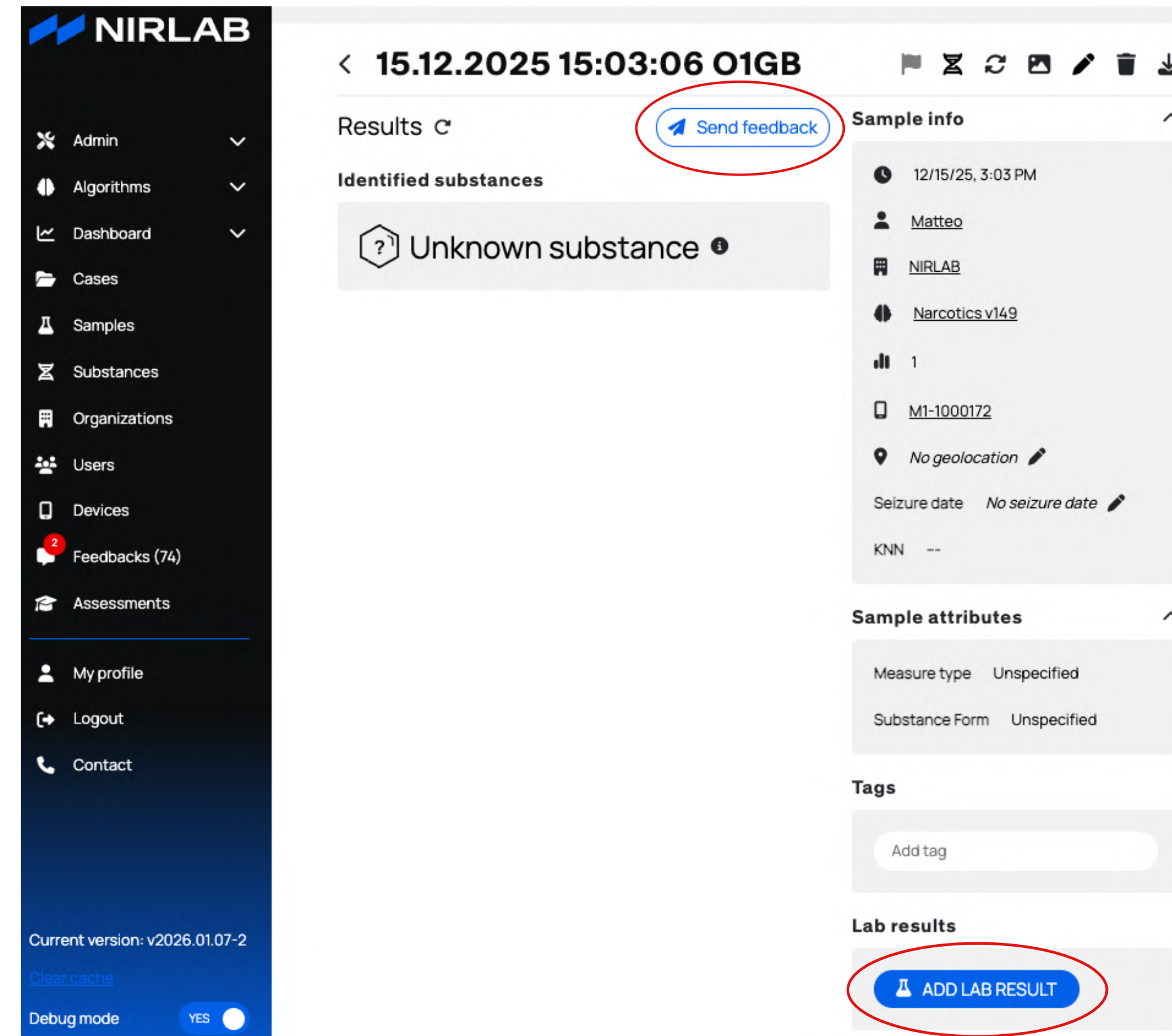


BENEFITS OF CLOUD SOLUTION

Staying Up-to-Date with Drug Market

Ongoing Substance Library Updates

- + **As the drug market evolves**, so does our library.
- + **Substance library is updated weekly** to ensure up-to-date detection capabilities.
- + Automated synchronization **eliminates manual updates, streamlining device management** for operators.
- + **Rapid adaptation** to local drug trends ensures relevance and boosts user support.

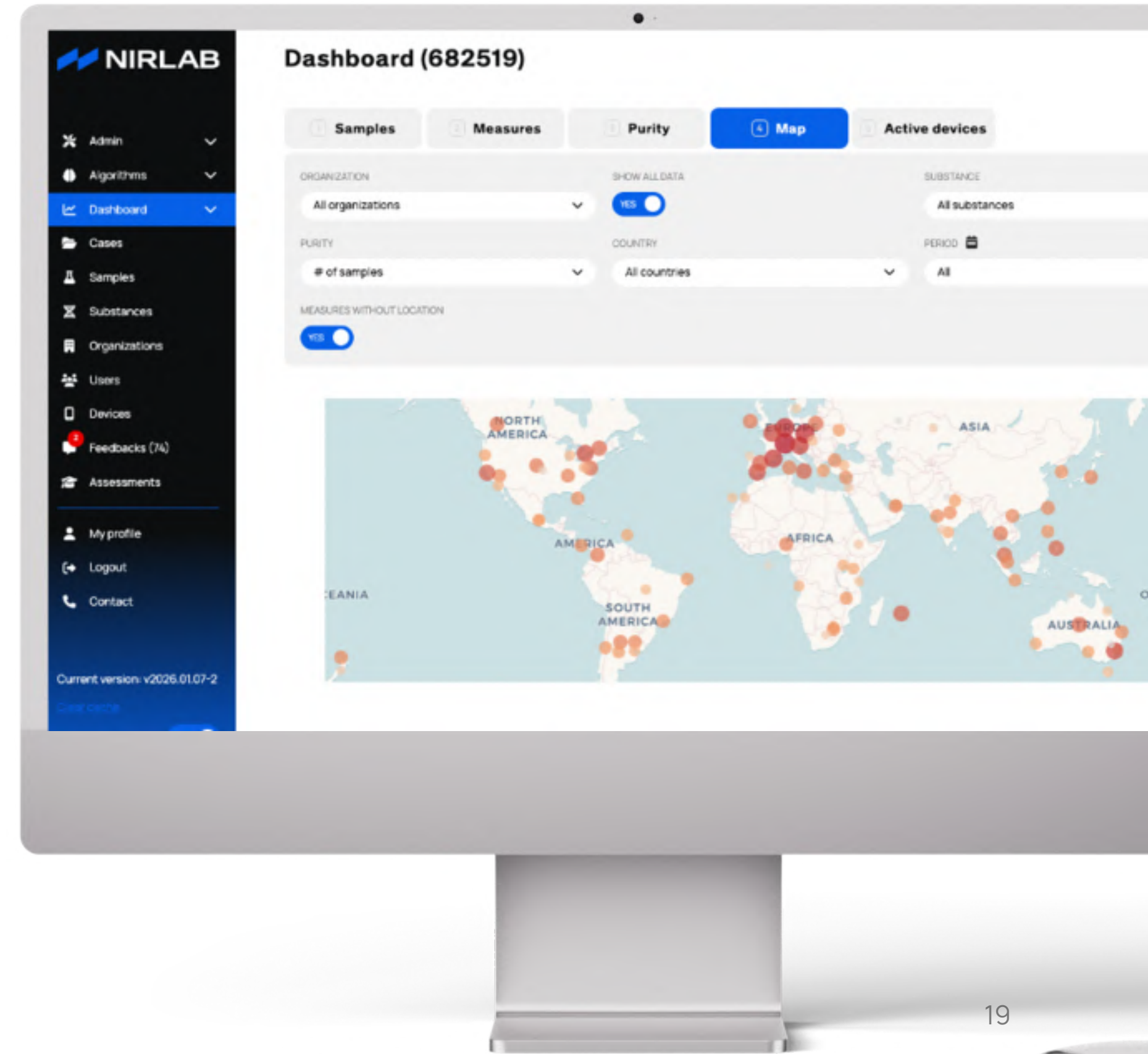


BENEFITS OF CLOUD SOLUTION

Immediate Access and Real-Time Intelligence

Real-Time Monitoring & Centralization of Data

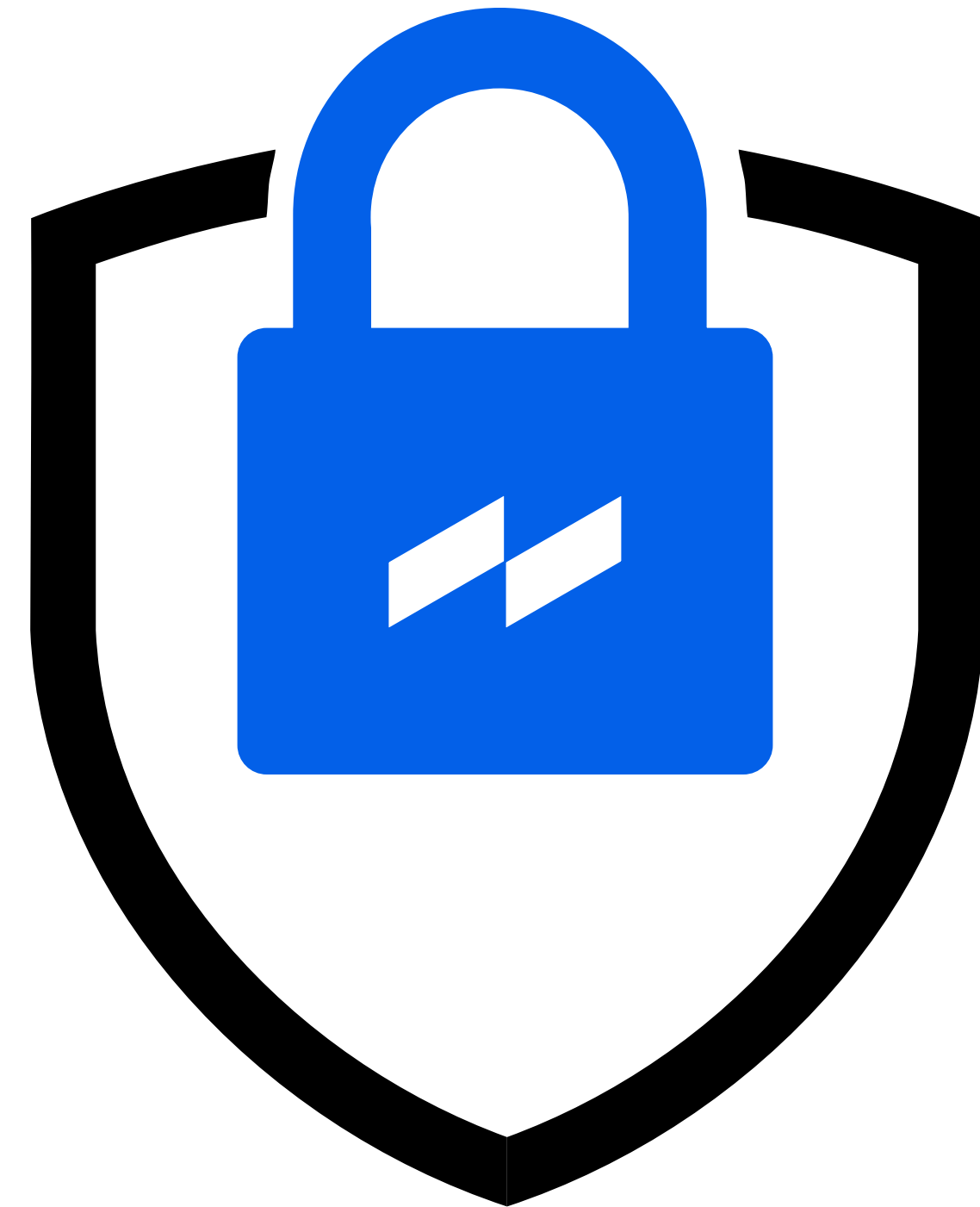
- + **Immediate availability of analysis** results across all authorized operators of an organization.
- + Centralized data management and **real-time monitoring** allows trend analysis, geo-spatial mapping, profiling, and reporting across locations.
- + Early detection and trend monitoring empower **proactive** and **timely operations**.



PRIVACY

Robust Data Security & Privacy Protection

- + **PEN-tested and data is never shared**
Regular penetration tests ensure system integrity.
No third-party organization has access to your data.
- + **Secure data center (Switzerland)**
Cloud infrastructure is hosted in a secure environment at the Forensic Institute in Switzerland.
- + **Encryption (TLS 1.2/1.3)**
Encrypted communication between mobile app and server.
- + **User-controlled data and geolocation**
Users have full control over shared data.
Geotagging can be enabled or disabled as needed.
- + **No personal or sensitive data stored**
No suspect-related data is collected. Sample names are coded to ensure anonymity.



THE COMPARISON

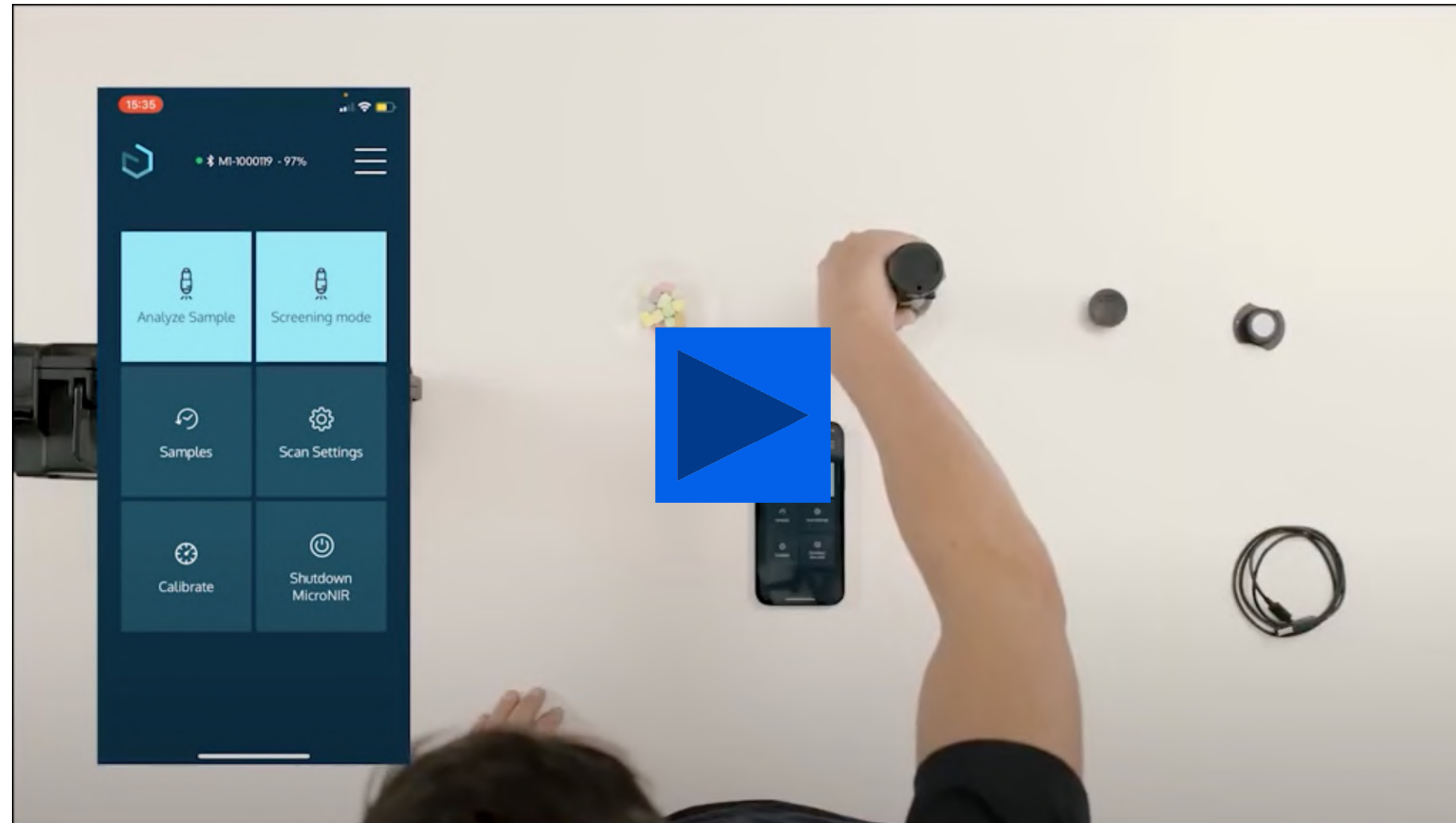
Advantages of NIRLAB's Solution

	NIRLAB	RAMAN SPECTROSCOPY & OTHER SOLUTIONS
QUANTIFICATION OF PURITY	Yes	Not possible
AFFECTED BY FLUORESCENCE	Little (capable to quantify heroin, THC/CBD, MDMA)	Significantly (limitation on identifying heroin, THC/CBD, MDMA pills)
COMPLEXITY OF INSTRUMENT AND SOFTWARE	Extremely simple usage	Generally, more complex usage
HAZARDOUS AND SAFETY	No risk for operator or sample (due to low energy radiation)	Potential safety risks or risk of sample damage (might ignite explosives due to high power lasers)
SUBSTANCE LIBRARY UPDATES	Continually refined for improved detection (ongoing updates thanks to cloud solution)	Library may not be regularly updated
ANALYSIS TIME	3 - 5 seconds	1 minute
INTELLIGENCE, PROFILING, ANALYTICS	Available (online dashboards and analytics)	Not available
CUSTOMIZATION	Tailored solutions are possible	Not available

DEMO

Product Demo

Watch here....



<https://www.youtube.com/watch?v=eMlzH3ltd14>

Get in touch!

**THE
FUTURE
IS NIR**



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