

POLYMER SOLUTION

The Revolution of Instant Polymer Analysis

A handheld screening device designed to identify and quantify polymer substances onsite within seconds.



ABOUT NIRLAB

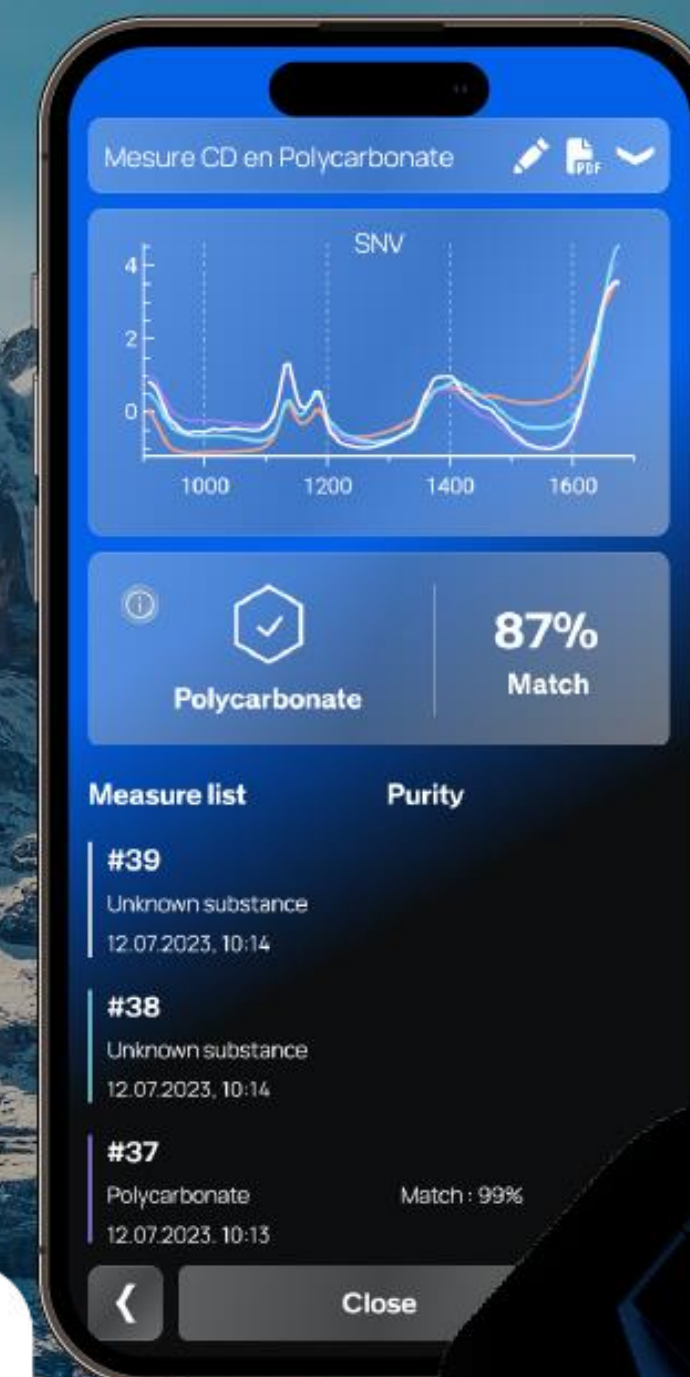


NIRLAB SA is a **Swiss company**, founded in 2018 as a spin-off from the **University** of Lausanne.

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

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

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

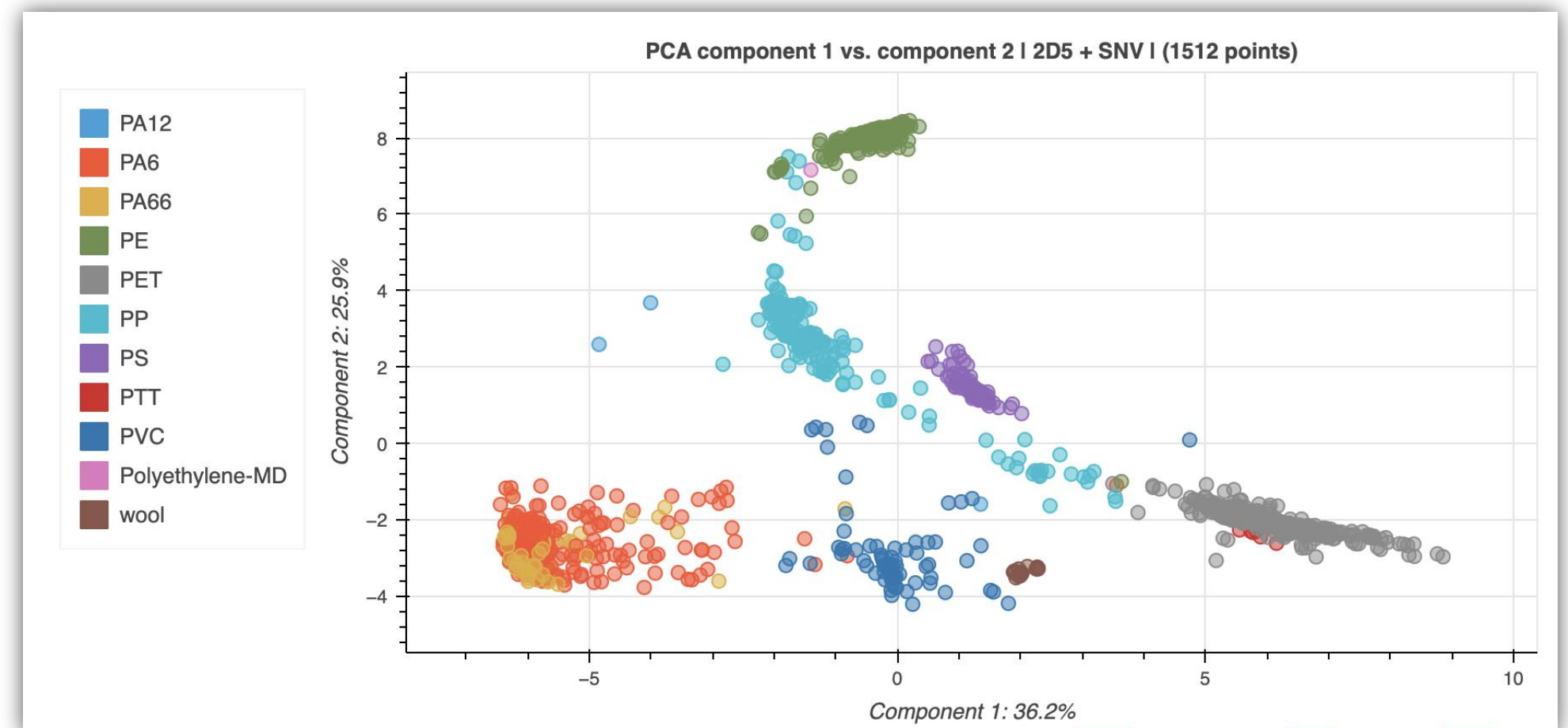


THE SOLUTION

NIRLAB Polymers

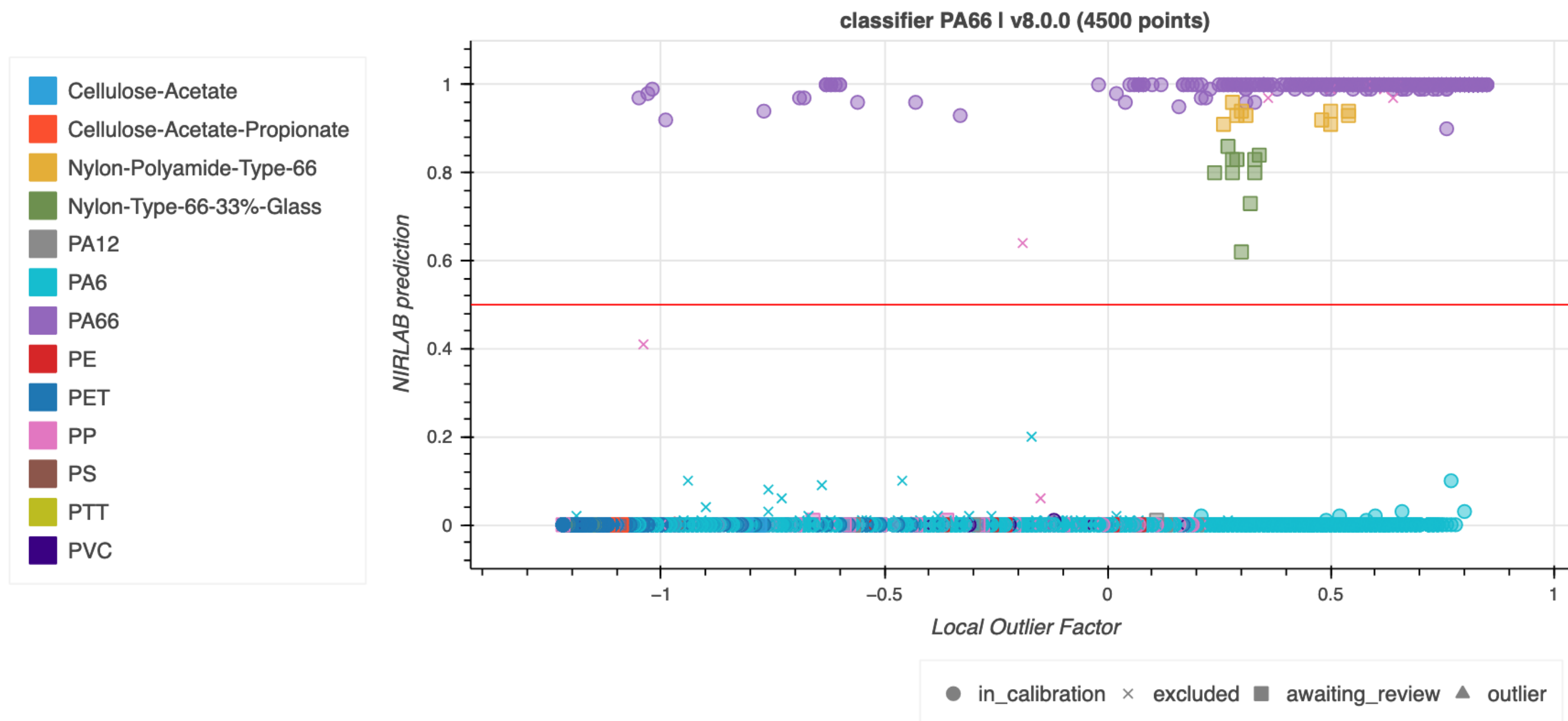
NIRLAB provides recycling organizations worldwide with a **portable NIR device** that can swiftly and accurately identify and quantify all common polymers.

- + Library of 10'000 spectra.
- + Identification of more than 100 polymers (PP, PE, PET, PVC, ABS, POM, etc.).
- + Rapid classification of the major types.
- + Distinction PA6 / PA66.
- + Classification of sub-groups (HDPE, LDPE, MDPE).
- + No sample preparation needed.
Non-destructive testing.



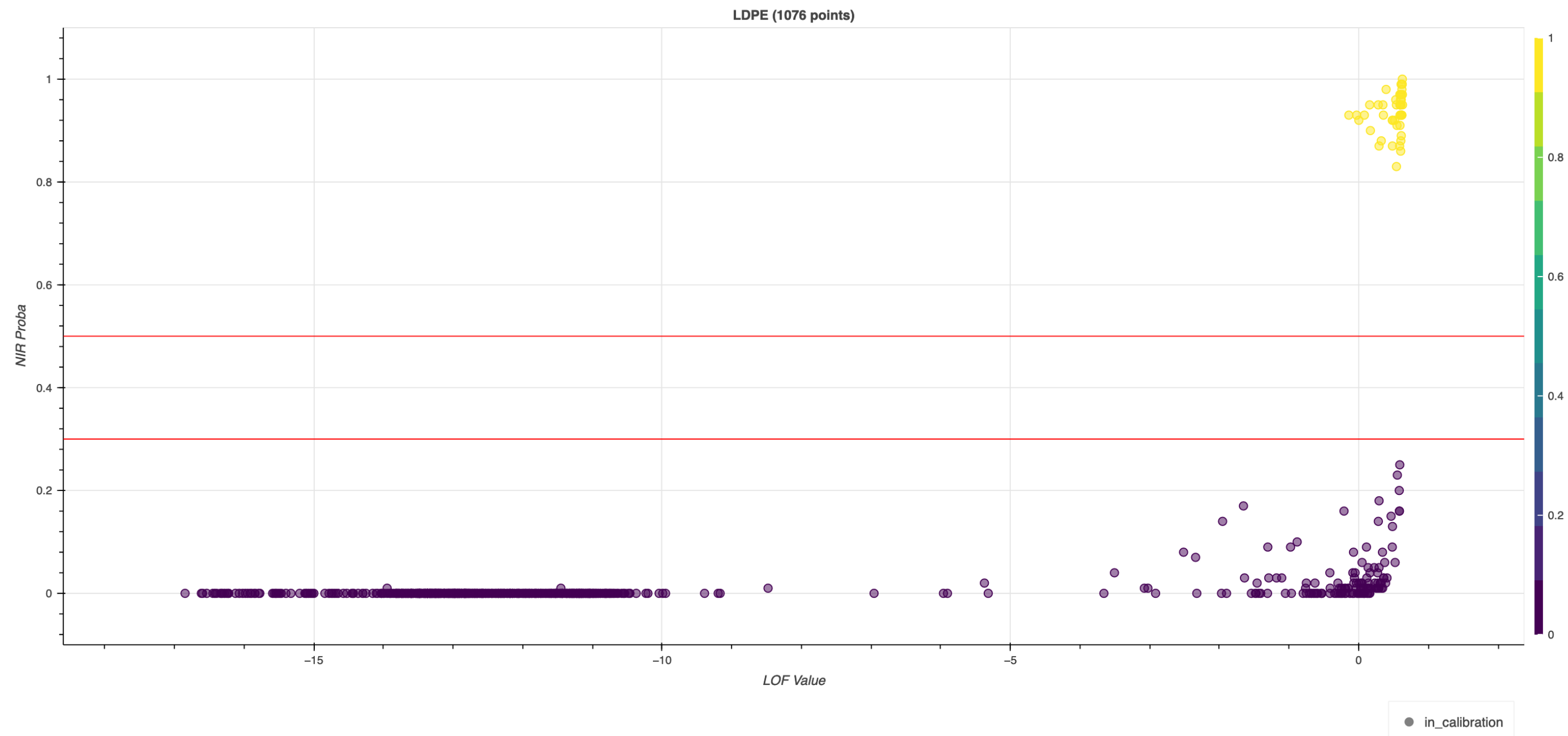
Application Example: PA6 vs. PA66

Near-infrared spectral analysis clearly distinguishes PA6 from PA66 despite their very similar chemistry, **enabling accurate sorting in recycling streams.**



Application Example: LDPE vs. HDPE

The NIR spectral signature of low-density and high-density polyethylene, **allowing precise classification of sub-groups within a single polymer family.**



What we offer

A complete ecosystem for fast, reliable polymer identification and quantification.



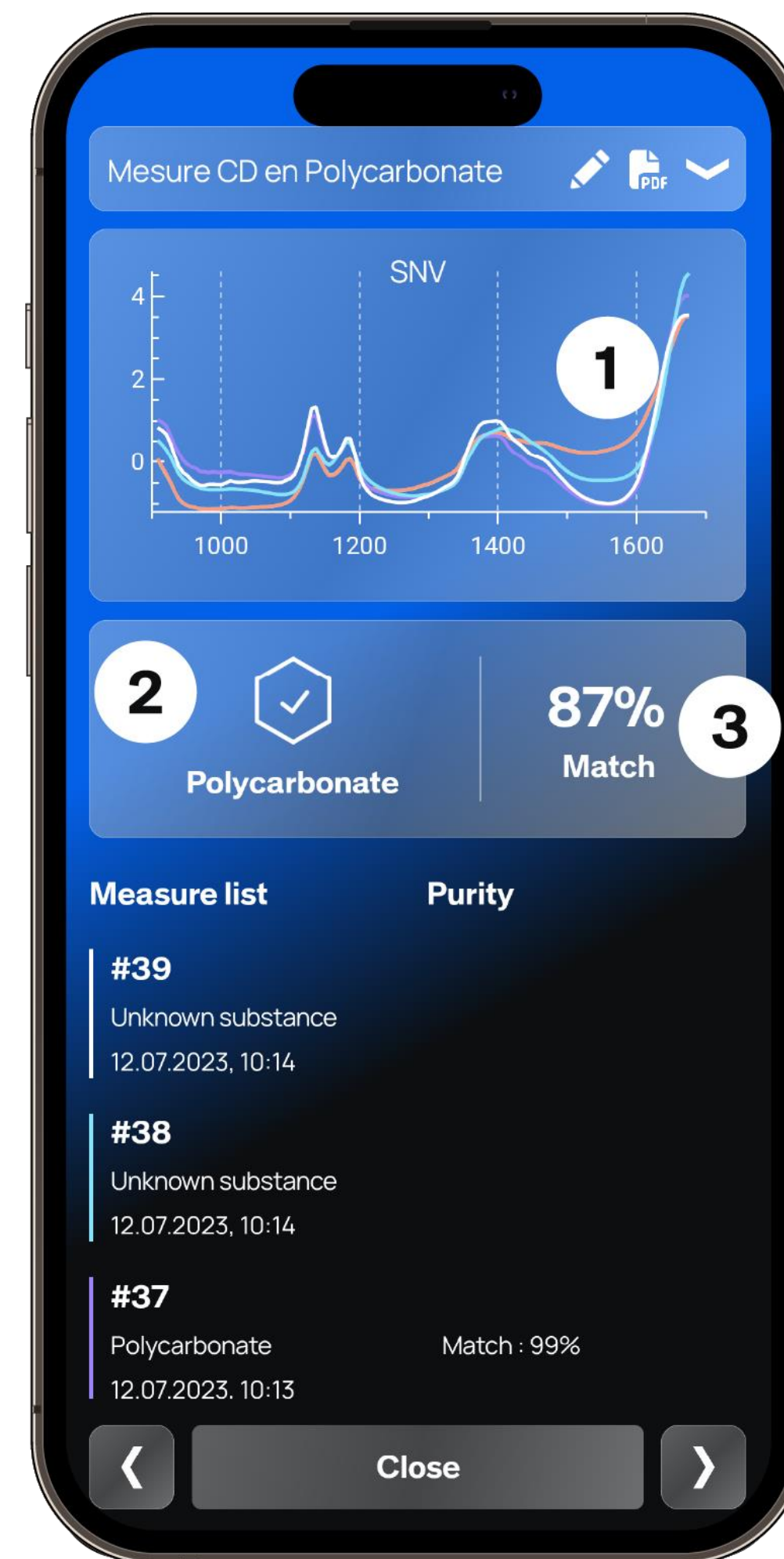
THE SOFTWARE

What Can be Measured

- + **Identify and quantify more than 40 materials**
Scan results are shown on mobile app within seconds.
- + **Analyze substances in various forms**
Pellets, granulates, flakes, powders, plastics in all their common recycling forms.
- + **Works through direct contact or thin plastic**
No sample preparation needed.

The result in the NIRLAB app shows:

1. The measured spectrum of the questioned substance
2. Identification of the substance
3. Quantification of match



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.

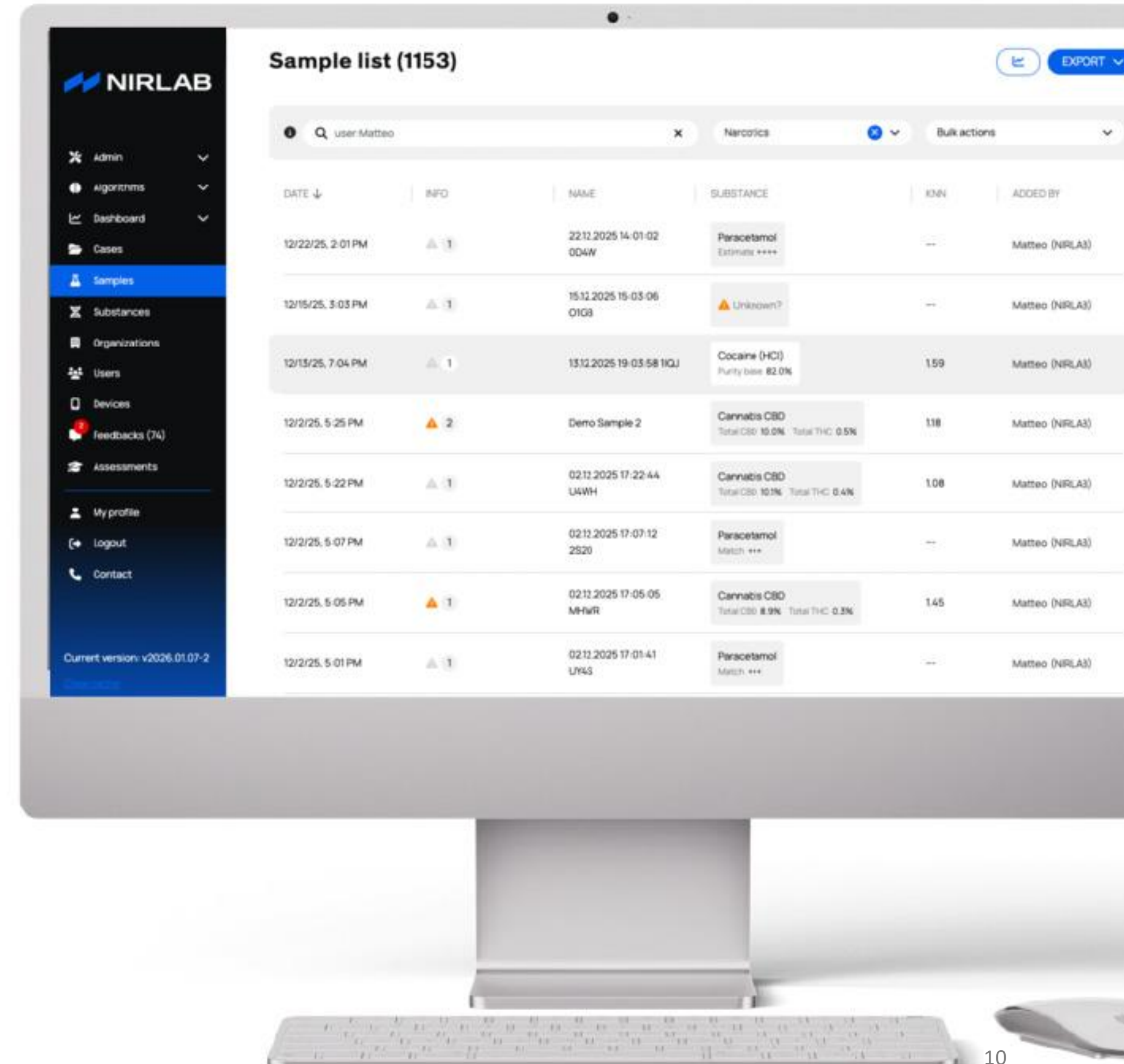


THE SOFTWARE

NIRLAB Web App

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

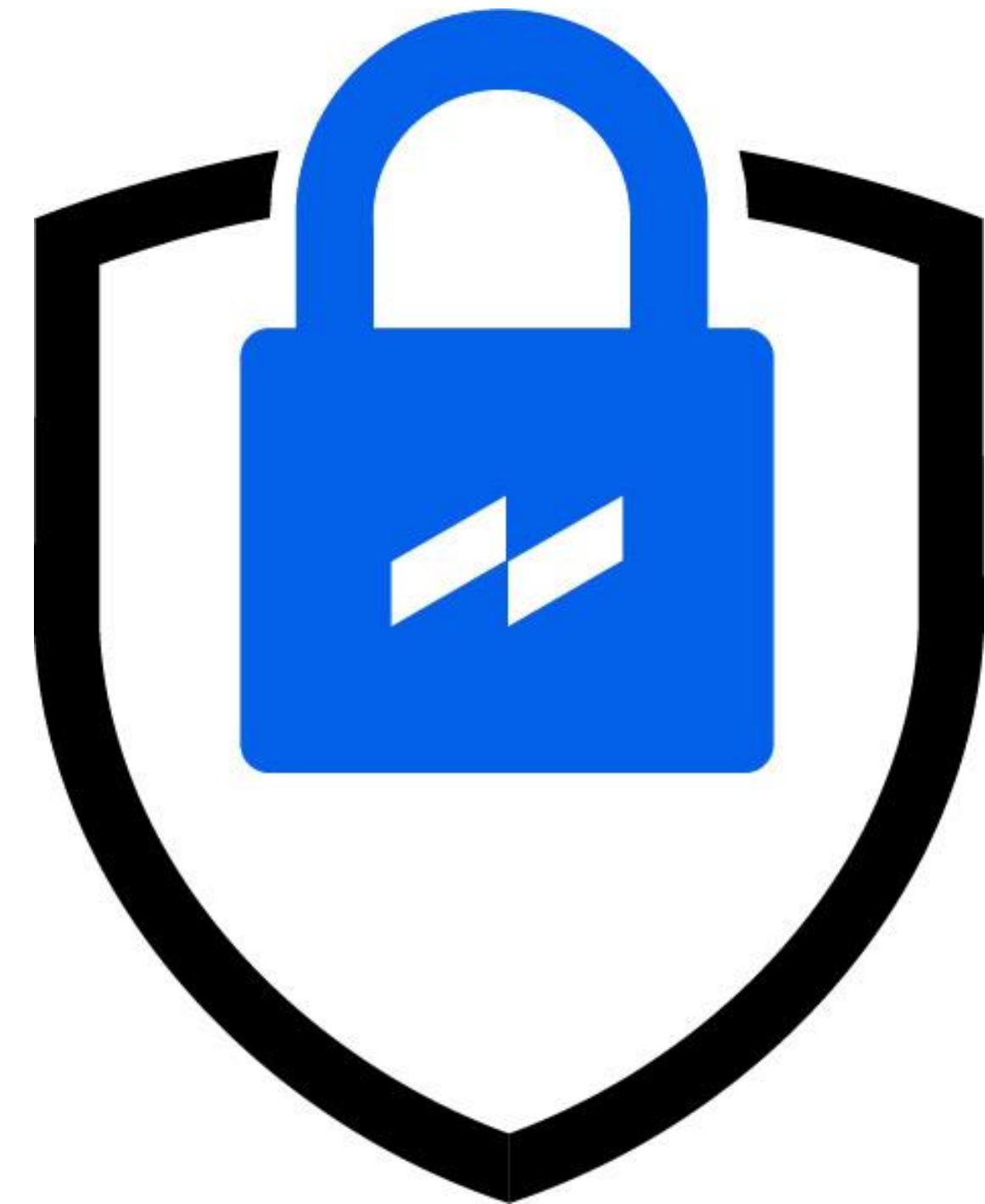
- + **Report history**
Centralized tracking and comparison of scans.
- + **Simple data management**
Modify or clean up analysis records.
- + **Export of data**
Easily export data to Excel.
- + **Save as PDF**
Generate downloadable reports.
- + **User Management**
Admin tools for organizations and users.



PRIVACY

Data Security

- + **Secured data center**
Cloud developed by top-level IT group from the School of Computer Sciences in EPFL, Lausanne.
Hosted on the university campus secured data center.
- + **Encrypted**
Full control of the information shared in the cloud.
- + **Full control**
Encrypted communication between mobile app and server.
- + **Geolocation**
Geolocation of measurements can be turned on or off.
- + **Encoded measures**
Sample names are encoded, and no sensitive data is shared in the cloud.



How it works

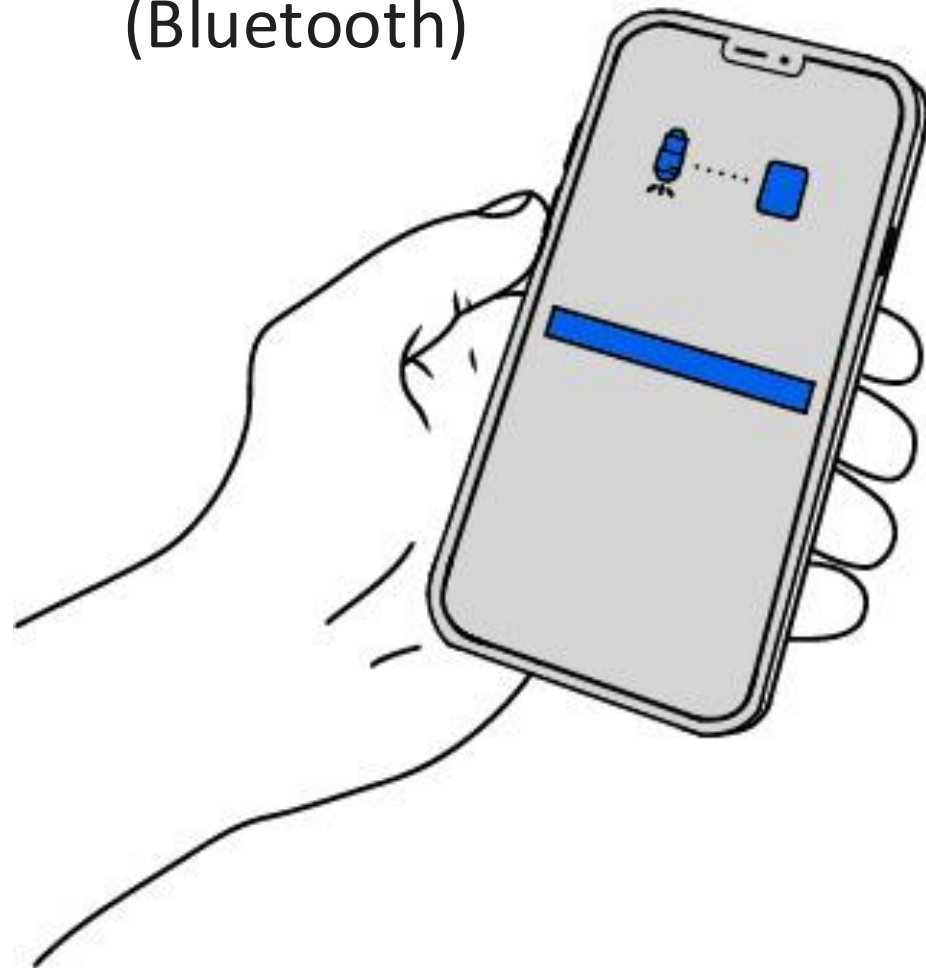
From pairing to scanning: three simple steps to reliable results.



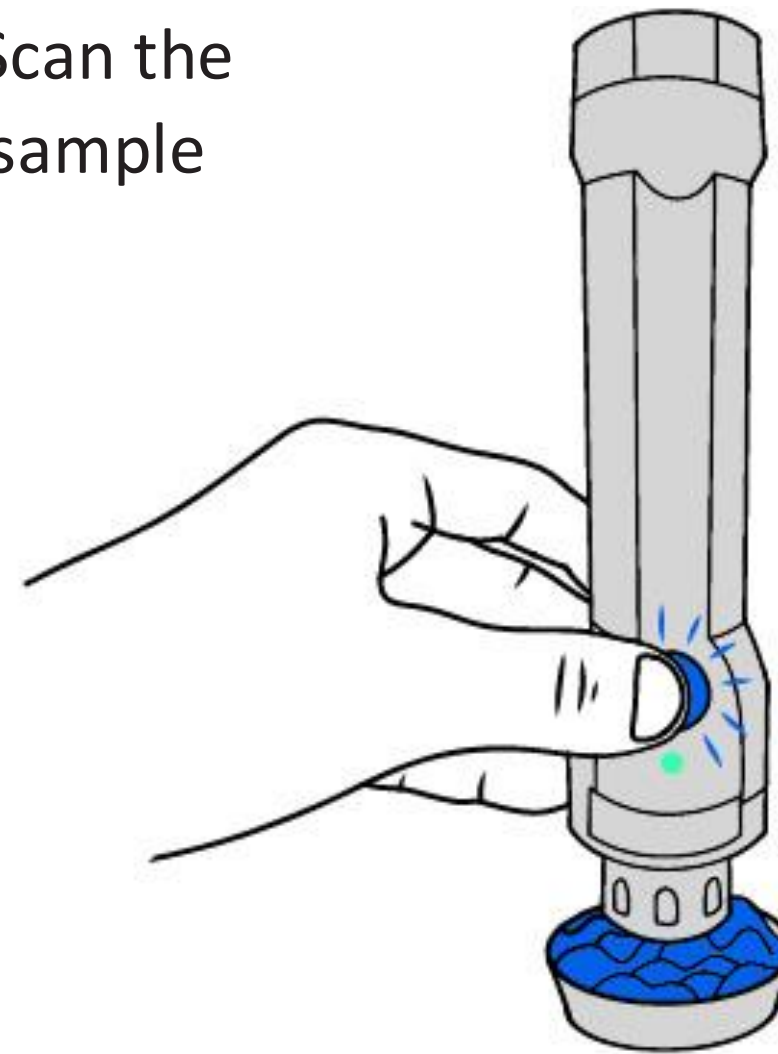
THE APP

How it works

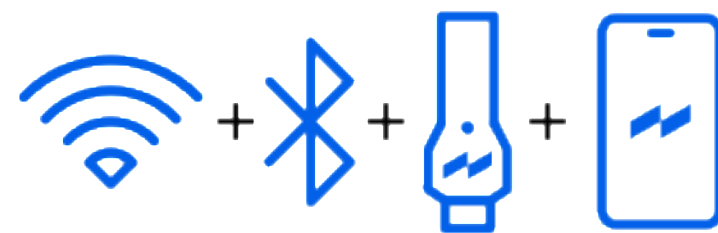
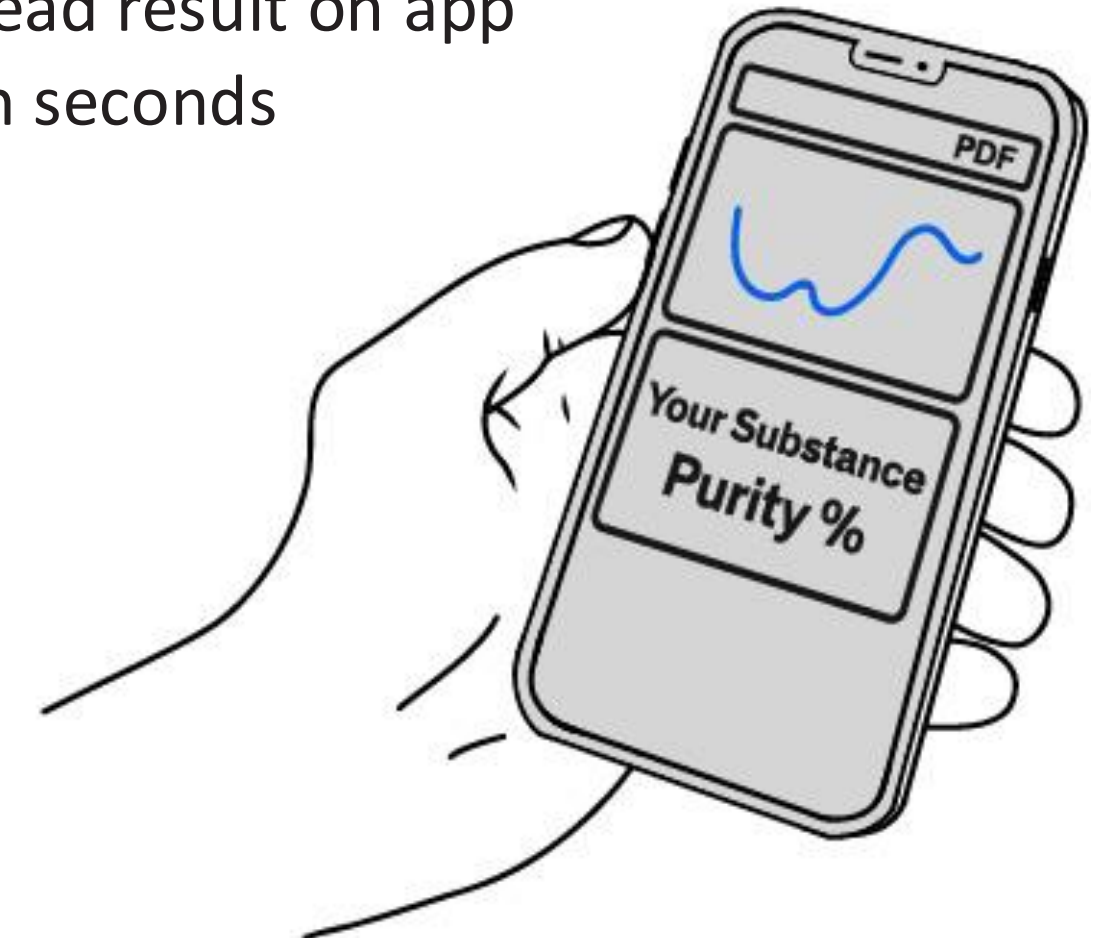
1. Connect
(Bluetooth)



2. Scan the
sample



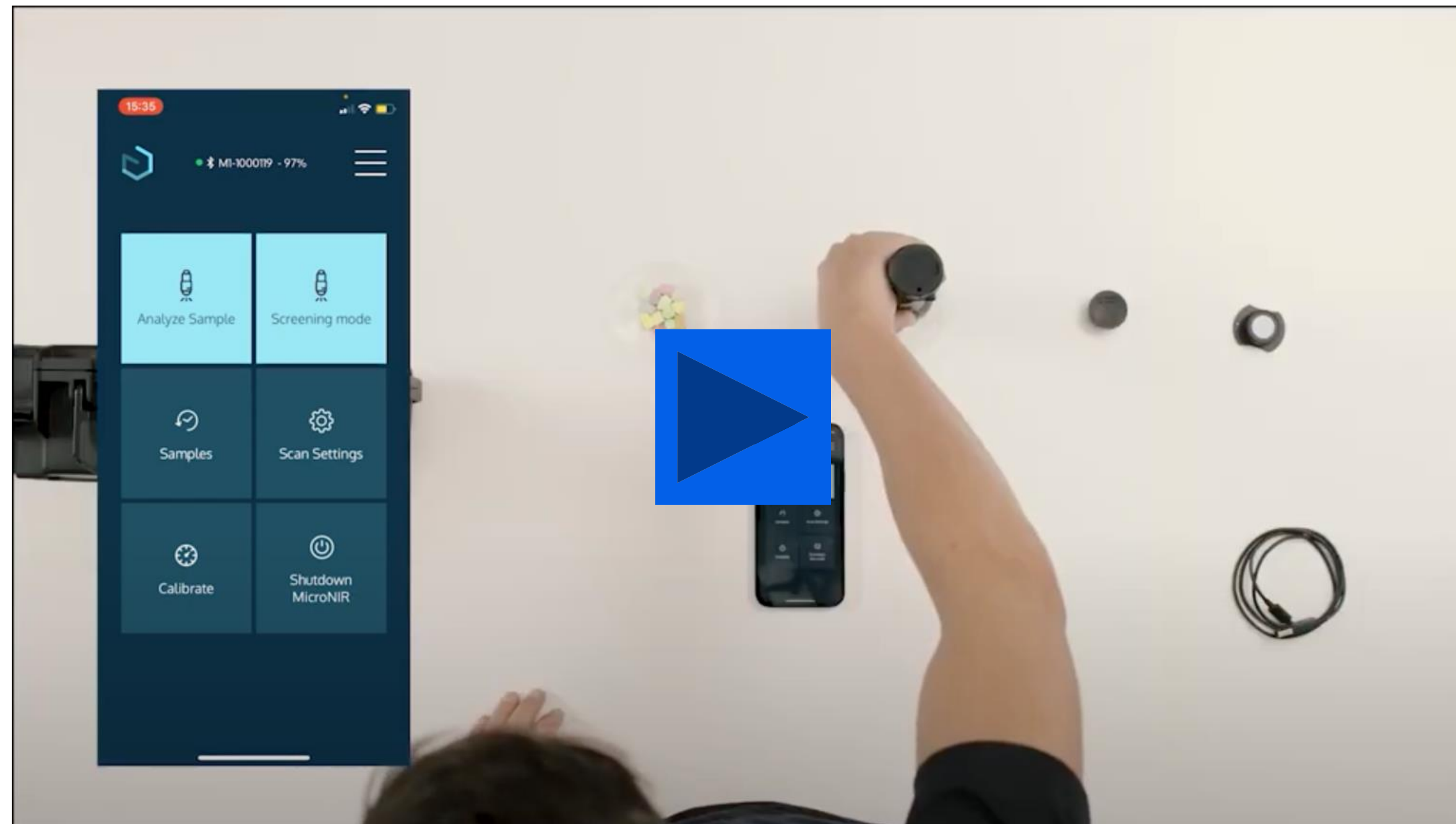
3. Read result on app
in seconds



TUTORIAL

Watch the tutorial video

www.nirlab.com — click here



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

Get in touch!

THE FUTURE IS NIR



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