

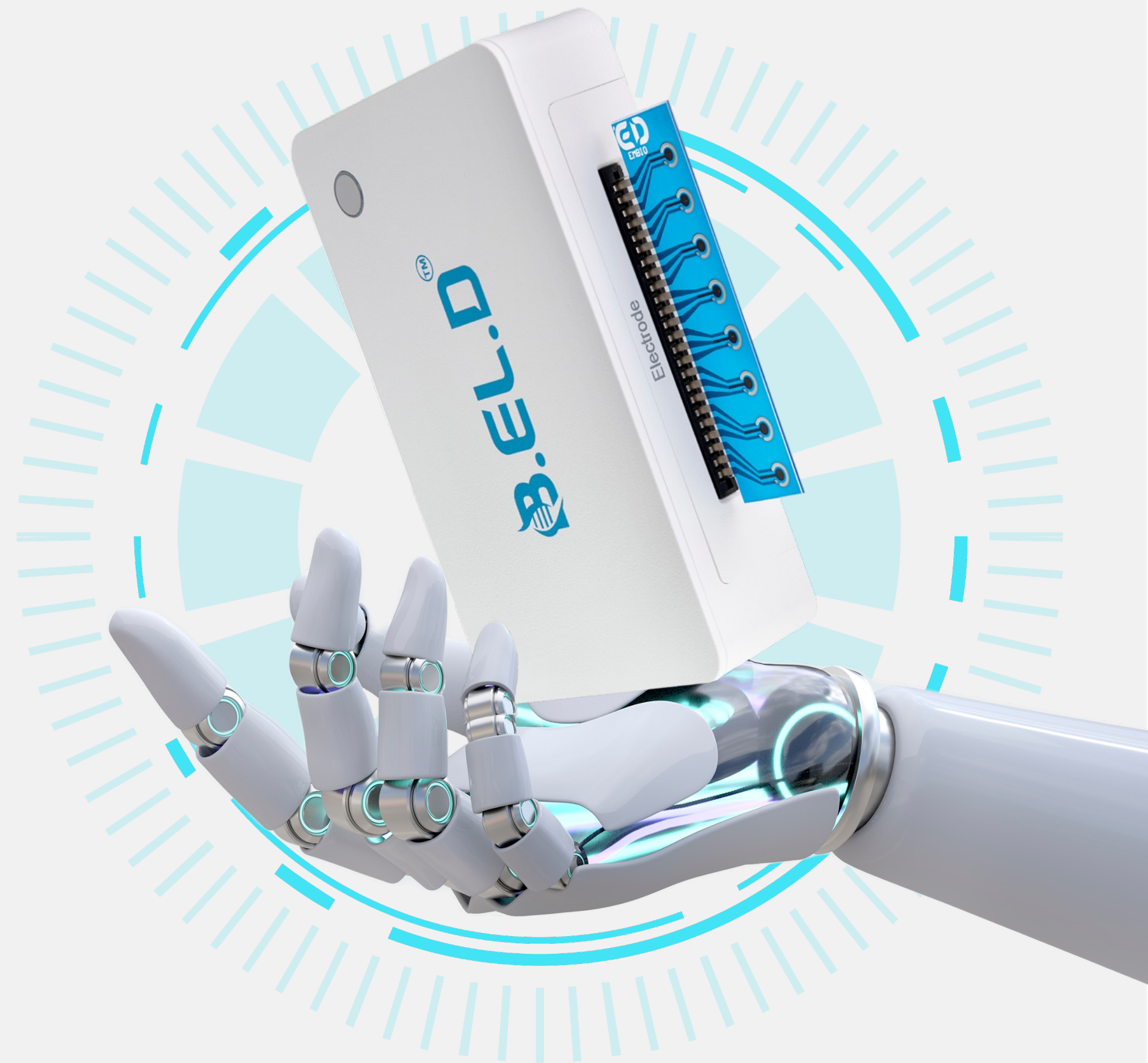


B.EL.D™: ONE DEVICE HUNDREDS OF APPLICATIONS

Activated Carbon Filters Efficiency Testing

Is your carbon filter ACTIVATED?

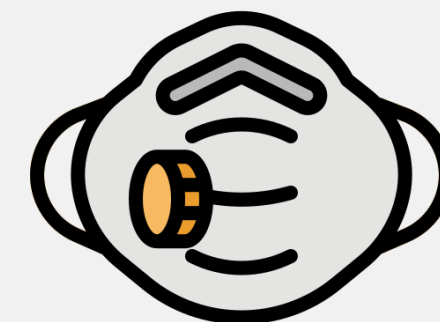
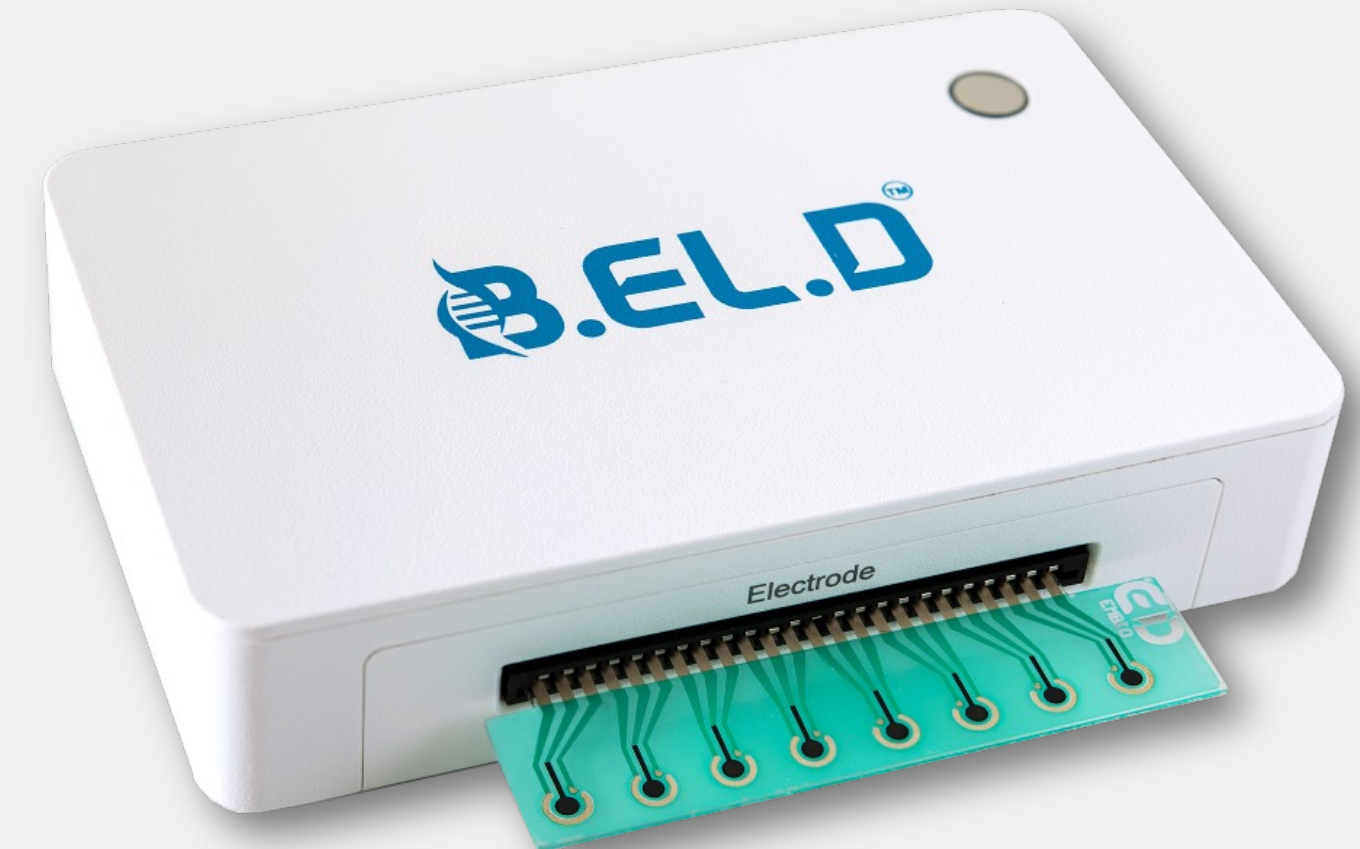
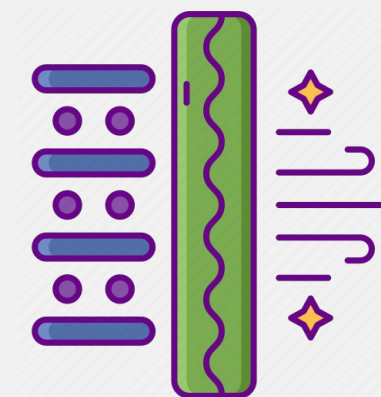
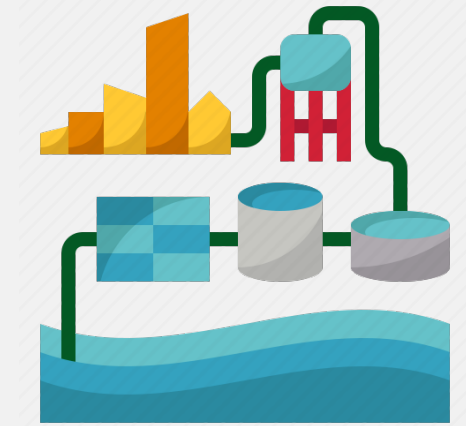
check in just 1 min with **B.EL.D.**TM



Fields of application

Activated carbon filters are used in a variety of applications:

- ✓ human consumption (drinking water)
- ✓ water treatment (sewage treatment plants)
- ✓ air purification
- ✓ distilled beverages purification
- ✓ medical, pharmacological, chemical application
- ✓ industrial applications





ONE DEVICE, HUNDREDS OF APPLICATIONS

B.EL.D™ [Bio Electric Diagnostics] device and its software is one of the very few **MULTI-PURPOSE** portable analyzer systems

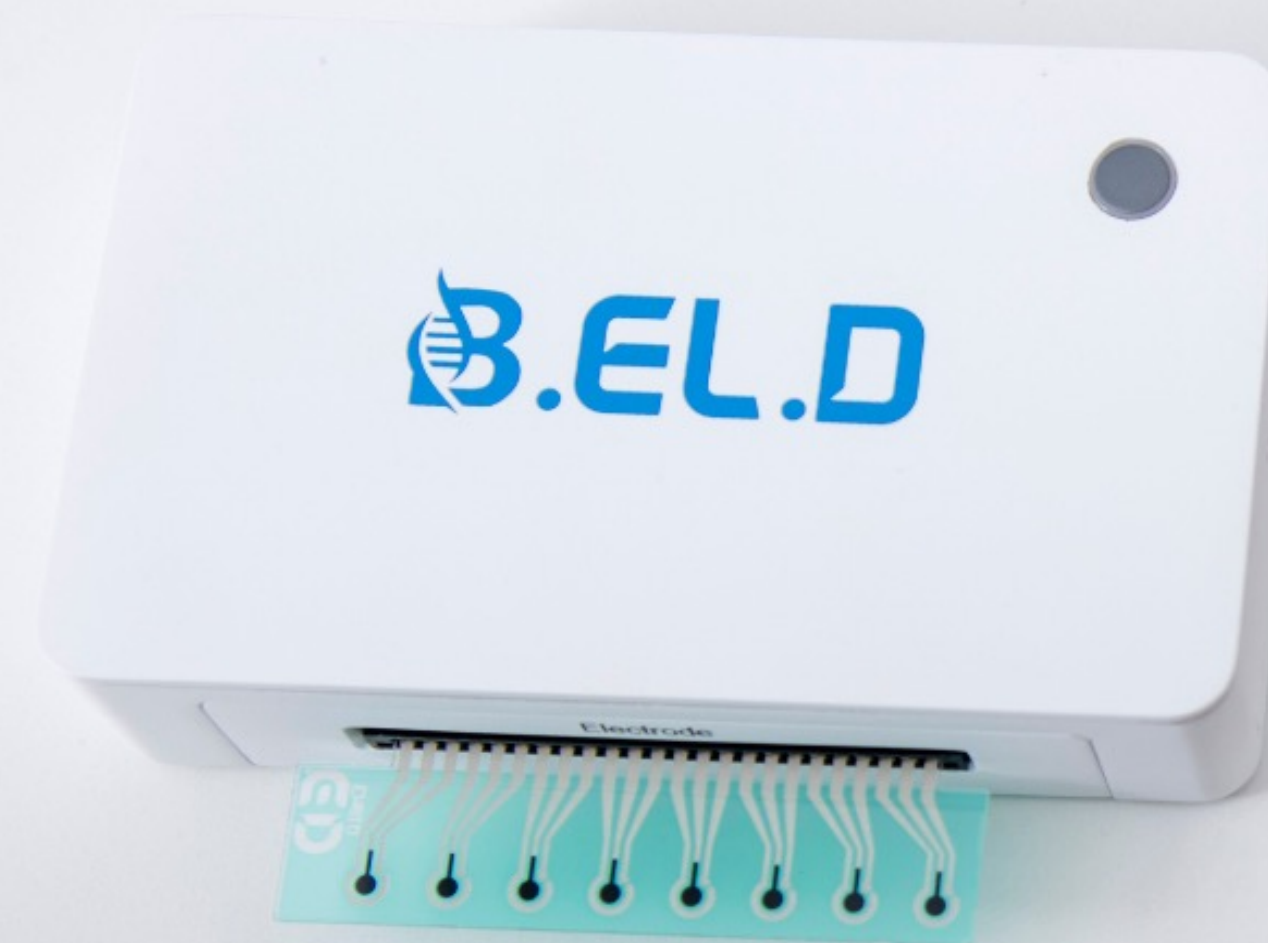
Benefits

- ✓ helps determine activated carbon filter efficiency
- ✓ detects general deviation on water standards
- ✓ helps solve water quality issues and reduce operating costs
- ✓ uses combined data with proprietary algorithm and machine learning to improve test results



Features

- ✓ wireless and portable
- ✓ results in 1 min in the app
- ✓ up to 99% accuracy
- ✓ 100+* tests per battery charge cycle
- ✓ up to 8 hours use on single charge
- ✓ usable at any location
- ✓ affordable consumables



ISO 9001:2015



ISO 13485:2016



Machine Learning Algorithm

By using machine learning, B.EL.D™ data analysis algorithms continuously improve their accuracy

01

Data Set:

Data from analysis are obtained as a time-series of potentiometric measurements.

02

Training / Testing Dataset:

The training dataset is used to determine the algorithm thresholds and the testing dataset is used for the algorithm evaluation.

03

Processing / Feature extraction:

Two-step procedure:
i) clean and calibrate data
ii) extract feature vectors for algorithm development

04

Algorithm:

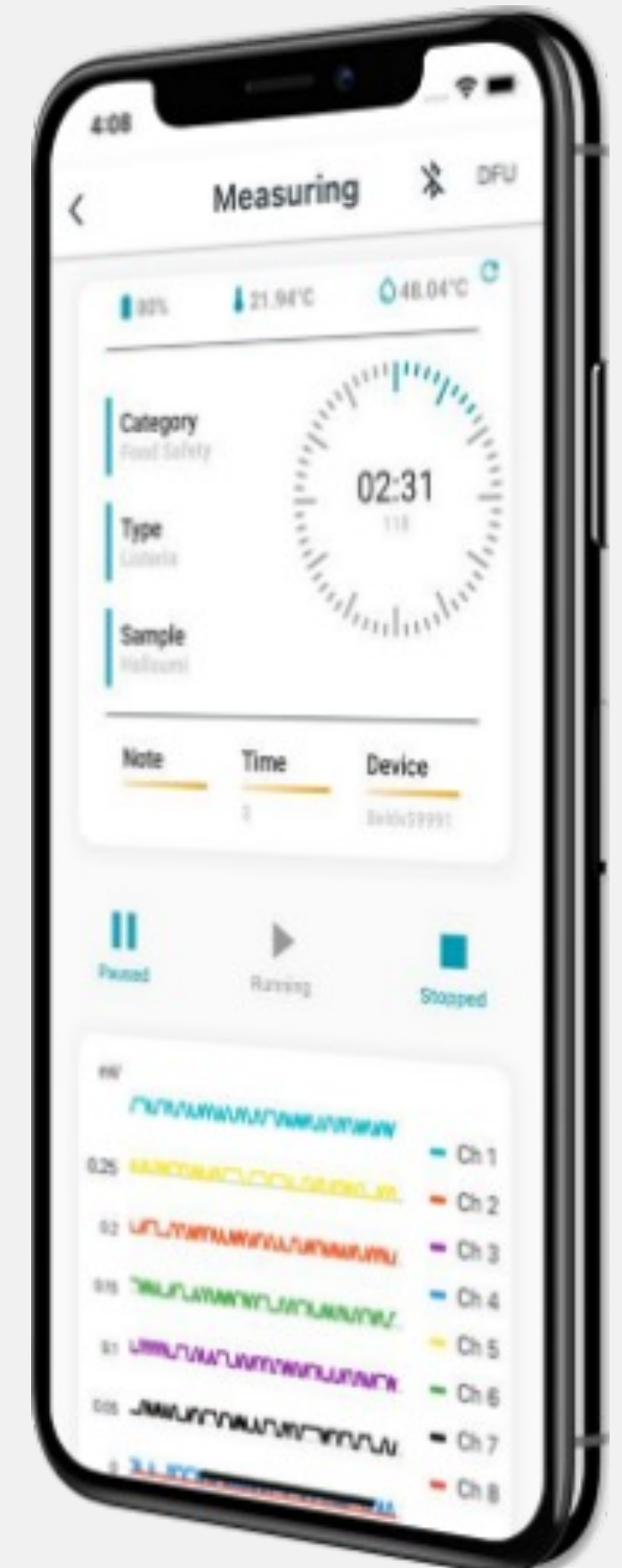
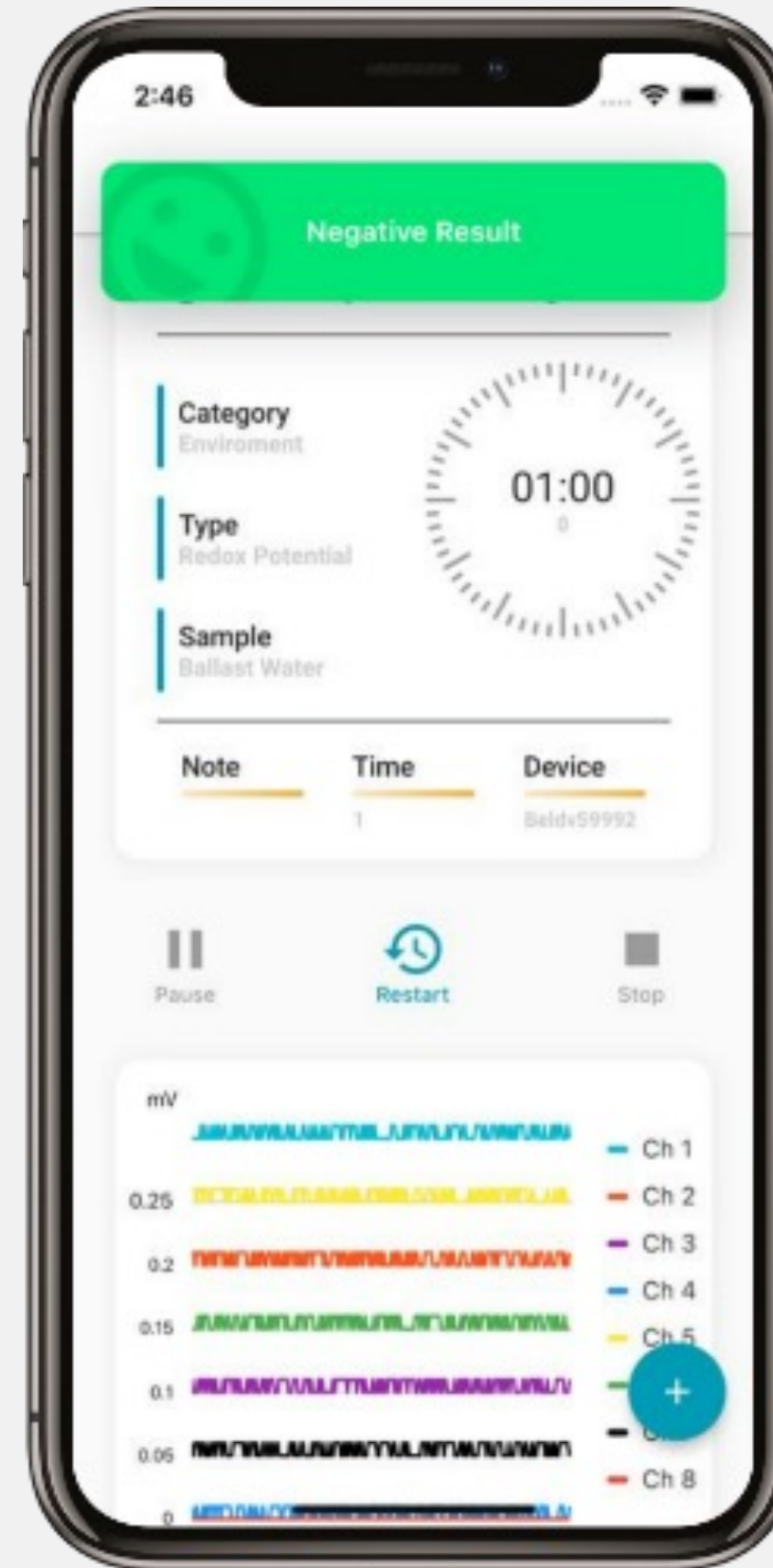
The algorithm uses the feature vectors as input to produce/calculate the final results by setting thresholds.

Sample Evaluation



Mobile App

- connect B.EL.D™ to your phone or tablet
- get results in the App in 1'
- share results with your team
- store data on the cloud



Download B.EL.D™ mobile application



Dashboard

- Store data
- Share data with your team
- Generate reports
- Overview statistics
- Collaborate on the same platform with EMBIO scientific team to develop new or adapt our algorithms according to your needs



Dashboard

<input type="text" value="Search..."/> Download Selected Get Report						
<input type="checkbox"/>	Sample	Category	Sample Type	Result	Created At	Details
<input type="checkbox"/>	Salmonella	Food Safety	Salmonella	Negative	2022-05-10 02:41:04	
<input type="checkbox"/>	Salmonella	Food Safety	Salmonella	Positive	2022-05-10 03:39:54	
<input type="checkbox"/>	Total Viable Count (TVC)	Environment	Total Viable Count (TVC)	Positive	2022-05-10 09:07:31	
<input type="checkbox"/>	Redox Potential	Environment	Redox Potential	Positive	2022-05-10 09:26:22	
<input type="checkbox"/>	Total Viable Count (TVC)	Environment	Total Viable Count (TVC)	Positive	2022-05-10 09:53:25	
<input type="checkbox"/>	Total Viable Count (TVC)	Environment	Total Viable Count (TVC)	Positive	2022-05-10 10:12:30	
<input type="checkbox"/>	Salmonella	Food Safety	Salmonella	Negative	2022-05-10 13:56:58	

Selected Measurement Details ?

Result Message: Select a Sample from the Grid

Room Temperature

Room Humidity

Note: Select a Sample from the Grid
Measuring Time: Select a Sample from the Grid

Devices List ?

Name	Serial Nu...	Hardware ...	Firmware ...
beldv100	3717882	FbOR-73059385	84300158...

Technical Specifications

Package content	BELD device, Power adapter, Cable USB-C, Screen-printed carbon electrodes (SPE) 10pcs, Quick Start Guide, Warranty Card
Functions	The B.EL.D Kit is an all-inclusive ultra-high, ultra-selective screening system, used to analyze any substance according to the potentiometry principle
Electrode	8-channel Carbon screen printed electrodes
Device power input	5VDC USB-C. Max. charging current 0.5A
Casing	White PC Makrolon® 2858, UV Stable (medical grade)
Wireless interface	Bluetooth® 5.2 with BLE, NFC-A
Power adapter	Input: 100-240VAC50/60Hz. Output:5VDC, max2A USB-A.
Device life duration	Warranty: 2 years, Battery warranty: 1 year
Dimensions	130 x 80,3 x 29,9 mm
Battery	1000mAh Li-polymer

Pricing



1x BELD device

400€*

Activated Carbon 10 tests Kit

- Pasteur Pipettes
- Falcon Tubes (50ml)
- Electrodes
- Filter paper cycles 240mm
- Sterilized sample container (60ml)

Activated Carbon 10 tests Kit

120 €*

Trusted By

Cyprus Water Development Department

Monitoring and evaluating the efficiency of the active carbon filters installed in dam rapid-refineries



The Challenge

Determine the effectiveness of carbon filters.
Provide onsite rapid test on demand.
Reduce operating costs.

The Solution

We are developing a multivariable model for assessing the condition and efficiency of carbon filters by developing a model based on cross-boundaries on random measurements as well as redox-boundary measurements.

This model, together with the B.EL.D™ device, was included into an integrated decision support system for water management and wastewater facilities.

Trusted By

**DEYA PYLAIAS (Municipal water supply),
Greece**

Developing an internal quality policy as well as an early warning system for water supply and wastewater management companies

The Challenge

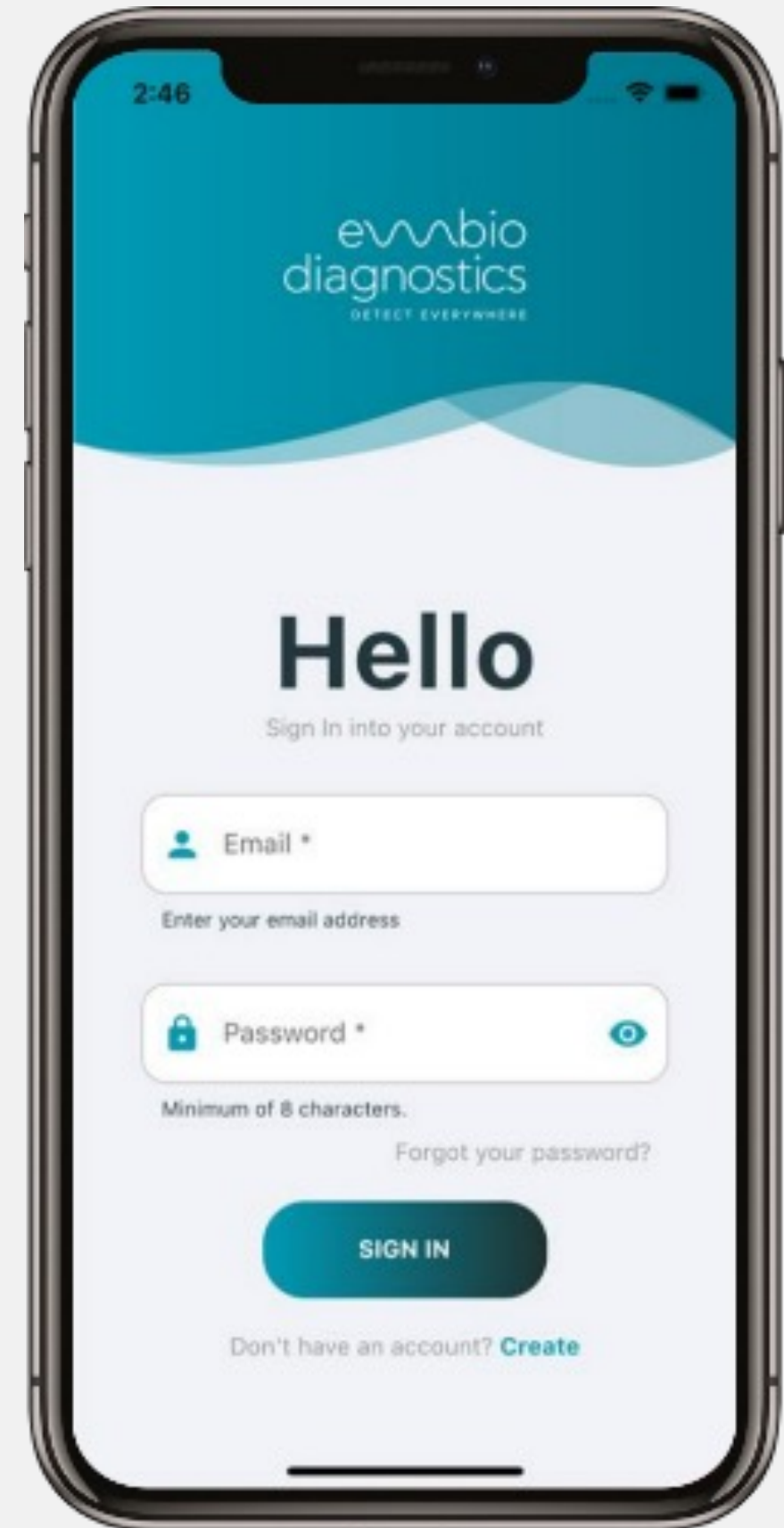
Modify and improve the current quality management process for the carbon filtering system.

The Solution

By creating a cross-reference database based on traditional measurements as well as redox measurements using B.EL.D™, we are building a multivariable model to assess the occurrence of abnormal deviations from the corresponding standard. This model, along with B.EL.D™ will make part of an integrated decision support tool of the water and wastewater management protocol



Download B.EL.D™ App





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