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**MOBILE  
PERFORMANCE DIAGNOSTICS  
WITH ELECSA®**

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In cooperation with



### Targeted workout

The ELECSA® (electrolyte sweat analyzer) ion-selective sweat sensor, developed in cooperation with Fraunhofer IISB, detects physical overload during sport activities and helps to adjust training sessions to your performance, to optimize your workout and to indicate the ideal training range.

As a mobile, non-invasive alternative for measuring blood lactate, the ELECSA® prototype helps you to manage your workout sessions.

### Early warning system app

ELECSA® determines ammonia (aq) levels, while the corresponding app analyzes the collected data using a three-stage warning system.

The data can be analyzed in real-time, as well as stored for future evaluation, such as in consultation with a physician or personal trainer.

### More than sweat

ELECSA® reliably detects ammonia (aq) in the sweat in order to draw conclusions on your fitness status. Higher concentrations of ammonia (aq) cause you to reach your personal exertion limits faster, leading to inevitable performance declines.

### Your benefits

- Non-invasive method
- Runs on any mobile device
- Wireless (Bluetooth) transmission of the data in real-time
- Intuitive app interface
- Cost-effective screen printing manufacturing process
- Measures ions and electrolytes in liquids and body fluids

### Technical details

- Thin-film sensor with ion-selective membrane manufactured with screen printing (developed and tested by Fraunhofer IISB)
- Bluetooth low energy module (BLE) for wireless transmission
- CR2030 battery
- Microprocessor
- App for analyzing and storing the sensor data on mobile Android devices

### One sensor, many applications

- Sports performance diagnostics
- Medical applications
- Agriculture sector
- Water industry

1 *Ion-selective biosensor (Fraunhofer IISB)*

2 *All-in-one mobile app (Kurt Fuchs/Fraunhofer IIS)*