Newsletter

September 15th 2025
Castricum, The Netherlands
Newsletter 2025-Q3

Dear readers,

With this newsletter we like to inform you about our day to day business, current projects, performance characteristics of our products and new product development. Enjoy reading!

Day to day business

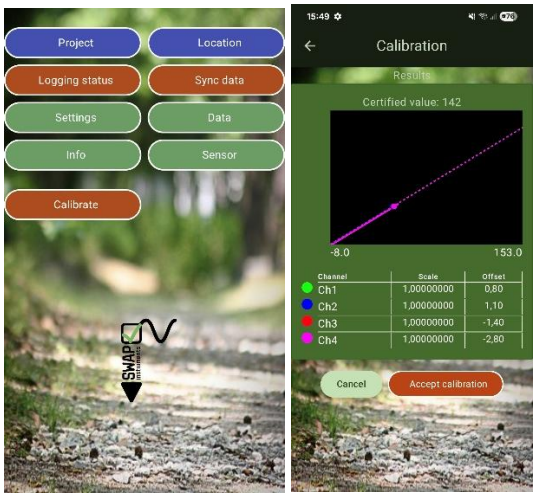
Please contact us at info@swapinstruments.com, if you are interested in our products.

The year is already half way gone. Time to give you an update on the latest developments. We are very proud to inform you that we have launched the following new products:

- ✓ **Unified SWAP Android app:** including a calibration function for our digital (SDI-12) soil Redox probes
- ✓ **SWAP long-lasting reference electrode**: reduced maintenance frequency
- ✓ **Analog to SDI-12 soil Redox probe convertor (CON-4A-D)**: connects 4 Redox (ORP) electrodes, 1 reference electrodes and 1 temperature (NTC) sensor, DIN rail mountable, low power consumption.

Let us help you supporting and improving your ORP (Redox) research!

New Android app for our SWAP Wireless Interface (SWI) and our SWAP logger (SWAPlog-1)



We are very pleased to inform you that we have just launched a **new app** for the SWAP Wireless Interface (SWI: handheld Redox (ORP) meter)) and the SWAP data logger (SWAPlog-1).

Our new app replaces the former SWI and SWAPlog-1 apps. **One app for both the SWI and SWAPlog-1**. In addition, we added some **new features**. It is now possible to **save your data locally** on your cell phone. And at many requests it is now possible **to calibrate** our soil Redox probes using the SWAP app. It offers the possibility to calibrate our SDI-12 soil Redox probes with a **one, two or three point calibration**.

The quick start guides of our SWI and SWAPlog-1 with the new app can be downloaded here: Documentation – SWAP instruments

SWI

SWAPlog-1

Feel free to contact us at info@swapinstruments.com if you are interested in the new app and/or our other products.

Improved reference electrode

REF-12-0-A

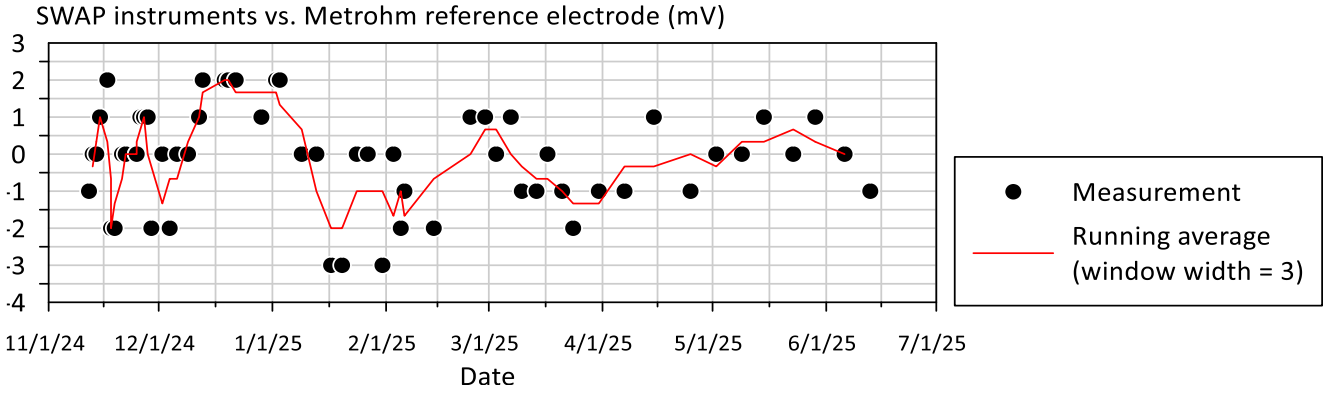
Electrolyte-100sat

The accuracy of Redox measurements depends, amongst others, on the **stability of the reference electrode**. We offer integrated reference electrodes in our soil Redox probes, and also a standalone version (photo).

Reference electrodes contain an **electrolyte**. In most cases this is a potassium chloride solution or gel (KCl). As part of the **maintenance** of reference electrodes, this solution/gel must be **replaced** (**refilled**) periodically. Recently, we switched from a 3 M KCl gel as electrolyte to a 4.76 M KCl (@ 25°C) solution, also called **supersaturated KCl** (photo). The transition to supersaturated KCl resulted in a **reduced maintenance frequency**, which is favorable when performing Redox measurement in remote or poorly accessible research areas.

Feel free to contact us at info@swapinstruments.com if you are interested in our improved reference electrode and/or our other products.

The stability of our improved reference electrode is tested for a period of 7 months in a sandy soil under laboratory conditions. The figure below shows that the **variation** is within **± 3 mV**. This is very stable. In this test variation depends on soil water content and temperature.



New product: CON-4A-D

(soon available)

At the request of our customers we have developed the **CON-4A-D**. This is a convertor, that **converts analog signals** of our analog soil Redox probes **to digital SDI-12**. This makes it, for example, possible to connect our analog soil Redox probes to a data logger with an SDI-12 input. It has the following specifications:

- ✓ Converts analog signals to digital SDI-12
- ✓ Connects 4 Redox (ORP) electrodes, 1 reference electrode and 1 temperature (NTC) sensor
- ✓ DIN rail mountable
- ✓ Housing IP-20 (mount in waterproof enclosure for outdoor use)
- ✓ Dimensions: 75 x 45 x 50 mm (l x w x h). Weight: 75 g
- ✓ Power supply : 12 V DC. Power consumption: 5 mA

If you are interested in our products or if you would like to receive some additional information, please contact us at info@swapinstruments.com or visit our website www.swapinstruments.com.

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