

TRUEscience DO

Dissolved Oxygen



TRUEscience SMART Cap for Dissolved Oxygen

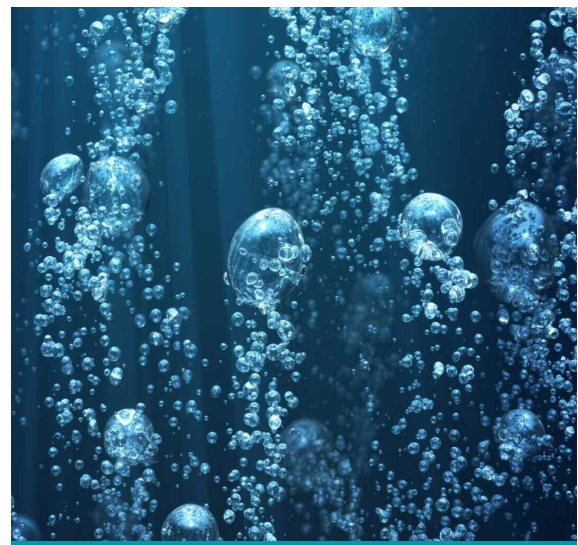
The TRUEscience SMART DO Cap utilises the same technology that can be found in the SMART pH Cap. TRUEscience have developed a range of electrodes that are interchangeable on the TRUEscience platform which includes the SMART Cap and the TRUEscience App which is Android based. The App works on both Android tablet and smart phone that are bluetooth enabled. The TRUEscience Galvanic Dissolved Oxygen electrode offers a fast response and rugged construction ensuring that calibration and measurement are both rapid and consistent.

How does it work?

Polarographic cells are notoriously awkward to set up with the need to constantly change membranes and internal solutions. As a result calibration is laborious and membrane performance can be variable. The Galvanic DO cell is very simple in its operation and basically works as a battery which generates a voltage. This voltage is directly proportional to the Oxygen concentration which permeates through the membrane into the galvanic cell.

The cell comes complete and ready for operation without the need for awkward membrane installation and manual filling with hazardous solution. Bubble removal from the membrane/cell interface is not required which allows calibration to be performed quickly and easily by any operator regardless of experience.

The cell is constructed with a wire coil cathode wrapped around a lead anode. A salt filling solution makes contact between both and fills the void in the electrode body which is constructed of a rigid polymer. The sensing end of the cell has an inert permeable membrane stretched over the internal half cells. When the electrode is placed onto the sample solution Oxygen will diffuse through the pre-installed membrane and the thin layer of filling solution to the cathode. The oxygen is reduced at the cathode which is held at a strongly negative potential. The Lead anode is oxidised (consumed) simultaneously as current flows. This yields a sensitive electrode which, when connected to the high impedance TRUEscience cap, can detect the smallest change measured in fractions of millivolts.



Features

- TRUEscience SMART Cap
- Utilises android tablet processing power
- Measure DO(Dissolved Oxygen) anywhere
- Maintenance Free
- Accurate results
- Long life galvanic electrode

Applications

- Aquaculture
- Aquariums & ponds
- Wastewater treatment testing
- Water quality
- Brewing
- Wine making



Specification

TECHNICAL SPECIFICATION – DISSOLVED OXYGEN

Measuring Range (mg/l)	0.02-30.0 mg/l, ppm
Accuracy (mg/l, ppm)	+/- 1%
DO saturation (%O2)	0-100% Oxygen
Accuracy (%O2)	+/- 1%
Calibration points	up to 2 points
Standard Recognition	Pre-Loaded Air 100% and 0%
Automatic temperature compensation	0°C - 40.0°C
Probe (where included)	Plastic body Galvanic DO probe, maintenance free-disposable
Temperature accuracy	+/- 0.5°C
Store values	10,000 measurements/log
Battery Life	1 year normal use
Battery Type	1/2 AA Lithium Thionyl Chloride, 3.6V, 1200mA
Tablet and App requirements	See below or specified list of tested models on our website
Dimensions of Cap	L218 x W48 x D24 mm including temperature probe
Temperature probe length	130mm long
Weight	91.5 g
Operating/Storage Temperature	0-55°C (cap only)
Calibration Certainty	Yes, App indicates calibration status, time and date
Colour keyed battery covers	Yes
Multiple Cap Measurements	Yes, up to 6 simultaneously, multiple parameter possible
Consumables ordering online	Yes
Interval logging	Yes

Note: Launch Specifications subject to change. Please see website for latest details.

Ordering Information

TRUEscience SMART Cap* (available in White or Grey)

WHITE SMART CAP Order Code 1201689



GREY SMART CAP Order Code 1201821



This SMART Cap is suitable for:
pH, DO, REDOX & ION

Item No	Description
1205232	Galvanic Dissolved oxygen Electrode S7 no cable
1201708	TRUEscience Android Tablet - Bluetooth enabled
1208674	Zero oxygen solution 500ml
1201564	Replacement Lithium Battery for TRUEscience SMARTCap
1201710	TRUEscience spare battery covers (red, teal, grey, white)
1201695	TRUEscience Storage stand complete
1201562	TRUEscience Charging Tablet Stand including USB cable
1201563	Multi-angle desktop tablet stand for TRUEscience Tablet - stainless finish
1205281	TRUEscience Lenovo Tablet case



Made in the UK



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