

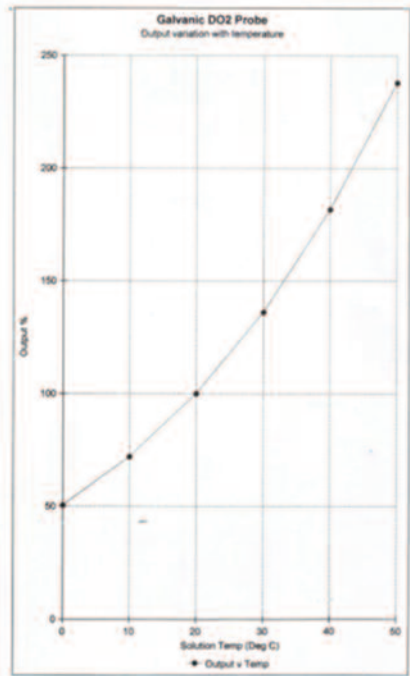
Some More Hints

Using a magnetic stirrer for laboratory analysis is recommended but not essential. It is however important to ensure the solution is homogeneous and a stirrer will help to achieve this.

NOTE: You must CONTINUE STIRRING during measurements as Oxygen is consumed at the membrane surface.

Prior to sample measurement ensure that the electrode is thoroughly rinsed with deionised water. It is worth performing this rinse twice given the possibility of carryover being greatest in high concentration solutions. Before reading sample values it is a good idea to rinse with sample in a separate beaker.

The probe output does vary with temperature so ensure your meter measures temperature or allow for it in your calculation of results.



Output approx 45mV at 20°C with 5K resistor

Specifications

Overall length	155 mm
Body Diameter	12 mm
Cap Diameter	16mm
Connector	S7
Linearity	This is a straight Line
Range	0-200% Air
Max Operating Pressure	1 bar
Output	+/- 3 mV in sodium sulphate 33-55mV in air
Temperature range	0 to 40°C
Operating pressure	1 bar
Lifetime	2 years under normal usage
Unit Material	PVC



S7 Connector can be connected directly to TRUEscience cap or used with an adapter cable for other meters. See our website for details..



The TRUEscience cap is ideal for multiple measuring up to six different parameters at the same time. It simply clips onto your beaker and can measure pH, Redox, Dissolved Oxygen or specific ions simultaneously on an Android Tablet



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1205232 - DO Probe
Instruction Manual

Dissolved Oxygen Probe

The TRUEscience Dissolved Oxygen probe is a galvanic sensor with a fixed membrane cap.

This galvanic probe provides good performance without the problem of membrane replacement associated with polarographic electrodes.

It offers good sensitivity and response but the sample must be stirred during readings. Take care not to introduce oxygen into the sample when reading due to over stirring.

Installation

The DO probe kit consists of the probe with a fixed membrane fitted with a soaker bottle. Preparation for use is as follows:

- 1 Unscrew the soaker bottle from the white cap.
- 2 Remove from the probe. **WARNING** - do not pull the soaker bottle off without undoing the white cap to release pressure.
- 3 Lift the white cap up to expose the black o-ring.
- 4 Carefully remove the o-ring from the probe by sliding/rolling it over the end of the probe and then remove the white cap.
- 5 Remove the shorting cap from the top of the probe by unscrewing.

Connect the DO probe directly to the TRUEscience SMART cap or to a DO meter using an appropriate adapter cable.

The TRUEscience DO Probe is designed to be used with the TRUEscience SMART Cap but can be used with other compatible DO meters. You may require an adapter cable with an S7 female to the connector type for your meter. This is usually BNC or DIN and these cables are available from your TRUEscience distributor.

Storage and Maintenance

After use rinse with deionised water, wipe clean with a tissue or lint free cloth. For short term storage simply re-attach the soaker bottle in reverse order of removal. Ensure the soaker bottle has sufficient DI water in it.

For longer term storage you should also re-attach the shorting plug.

Cleaning and Maintenance

This galvanic oxygen electrode has no customer serviceable parts. Cleaning is important however, and the electrodes should be rinsed thoroughly in deionised water between and after measurements are made, never allow the sample to dry on the electrode.

If dirt or sample do dry onto the membrane the tip of the electrode can be immersed in DI water and ultrasonically cleaned for 30 seconds.

Required Solutions

Distilled or deionised water will be required to prepare Standards, for storage and to rinse the electrode between measurements.

Zero Oxygen Solution. Used as a calibration zero point. This will need to be made fresh as they will absorb oxygen.

Operation

- 1 Connect the probe to the meter being used for analysis.
- 2 Allow the probe to stabilise for approximately 5 minutes
- 3 If your meter has adjustment for air pressure and salinity make sure these are set correctly. If you cannot set these, ensure you adjust for them if required.
- 4 Calibration will depend on your requirements. For a 2 part calibration using a zero solution and air use steps 5 and 6. For a single calibration using air skip step 6.
- 5 Rinse the probe with deionised water and blot dry with a lint free cloth and allow the probe to stabilise in air. Take the reading.
- 6 Rinse the probe with deionised water and blot dry with a lint free cloth and place in the zero solution standard. You can buy a zero solution or prepare your own by making a saturated solution of Sodium Sulphate. When the reading is stable record the value.

NOTE: Ensure your Standard is stirred during reading

- 7 Calibrate your meter using the obtained values. Rinse the probe in deionised water and blot dry. Place the electrode in the sample and record the reading once stable. **NOTE:** Ensure your sample is stirred at the same speed as your sample during reading.

Read the meter in % Oxygen, % Air or mg/l according to your meter.

NOTE: The TRUEscience app creates a calibration curve 7 using your readings 5 6. This curve will then be used to calculate your sample readings taking salinity, atmospheric pressure and temperature into account. The app also retains a copy of your calibration information.