Dissolved Oxygen

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SM600

Portable Dissolved Oxygen Meter for Education

ATC
Points 2
CE

The SM600 is a Portable Dissolved Oxygen meter ideal for use in school laboratories. Dissolved Oxygen measurements are also very important in fish farms and ponds, where Oxygen levels are continuously monitored to obtain optimal reproduction.

The SM600 calibrates easily in 2 points (at 100% saturated air and in 0 Oxygen solution) and has Automatic Temperature Compensation which guarantees the highest accuracy.
The low battery warning, easy to replace screw on cap membranes make this meter very simple to operate.
Rugged Carrying Case (Optional) provides handy on-site meter calibration and measurements.

SM600 is supplied complete with a MA840 D.O. polarographic probe with 3 m cable, calibration screwdriver, 2 spare membranes, MA7040 (20 mL) electrolyte solution, battery and instructions.

Specifications		SM600
Range	O_2	0.0 to 19.9 mg/L
Resolution	O_2	0.1 mg/L
Accuracy (@25°C)	O_2	±1.5% Full Scale
Calibration		manual on 2 points (zero and slope)
Temperature Compensation		automatic from 0 to 30°C
Probe		MA840 (included)
Environment		0 to 50°C / 32 to 122°F; max RH 95%
Battery Type		9V alkaline (included)
Battery Life		approximately 70 hours of use
Dimensions		145 x 80 x 40 mm
Weight		220 g (with battery)

ALTITUDE & SALINITY COMPENSATION:

If the sample contains salts or if you are performing the measurements at altitude different from sea level, the readout values must be corrected, taking into account the lower degree of oxygen solubility.

Altitude Compensation: all the readouts are referred to sea level, thus the displayed measurements are higher than the actual values. In fact, altitude affects D.O. concentration by decreasing its value.
The table on the left reports the oxygen solubility at various temperatures and altitudes, based on sea level barometric pressure of 760 mmHg.
This gives an idea of the error that can be introduced at different altitudes and allows to calculate the quantity to be subtracted to correct the reading.

Salinity Compensation: the table below shows the influence of salt concentration in the measurement of oxygen.
In SM600 all the readouts are referred to 0 g/L of salinity value. In fact, salinity affects D.O. concentration by decreasing its value. The table below reports the oxygen solubility at various temperatures and salinity.
From the table it is possible to calculate the quantity to be subtracted to correct the reading.

Altitude, Meters above Sea Level								
°C	0 m	300 m	600 m	900 m	1200 m	1500 m	1800 m	°F
0	14.6	14.1	13.6	13.2	12.7	12.3	11.8	32.0
2	13.8	13.3	12.9	12.4	12.0	11.6	11.2	35.6
4	13.1	12.7	12.2	11.9	11.4	11.0	10.6	39.2
6	12.4	12.0	11.6	11.2	10.8	10.4	10.1	42.8
8	11.8	11.4	11.0	10.6	10.3	9.9	9.6	46.4
10	11.3	10.9	10.5	10.2	9.8	9.5	9.2	50.0
12	10.8	10.4	10.1	9.7	9.4	9.1	8.8	53.6
14	10.3	9.9	9.6	9.3	9.0	8.7	8.3	57.2
16	9.9	9.7	9.2	8.9	8.6	8.3	8.0	60.8
18	9.5	9.2	8.7	8.6	8.3	8.0	7.7	64.4
20	9.1	8.8	8.5	8.2	7.9	7.7	7.4	68.0
22	8.7	8.4	8.1	7.8	7.7	7.3	7.1	71.6
24	8.4	8.1	7.8	7.5	7.3	7.1	6.8	75.2
26	8.1	7.8	7.5	7.3	7.0	6.8	6.6	78.8
28	7.8	7.5	7.3	7.0	6.8	6.6	6.3	82.4
30	7.5	7.2	7.0	6.8	6.5	6.3	6.1	86.0
32	7.3	7.1	6.8	6.6	6.4	6.1	5.9	89.6
34	7.1	6.9	6.6	6.4	6.2	6.0	5.8	93.2
36	6.8	6.6	6.3	6.1	5.9	5.7	5.5	96.8
38	6.6	6.4	6.2	5.9	5.7	5.6	5.4	100.4
40	6.4	6.2	6.0	5.8	5.6	5.4	5.2	104.4

Salinity (g/L) at Sea Level						
°C	0 g/L	10 g/L	20 g/L	30 g/L	35 g/L	°F
10	11.3	10.6	9.9	9.3	9.0	50.0
12	10.8	10.1	9.5	8.9	8.6	53.6
14	10.3	9.7	9.1	8.6	8.3	57.2
16	9.9	9.3	8.7	8.2	8.0	60.8
18	9.5	8.9	8.4	7.9	7.6	64.4
20	9.1	8.5	8.0	7.6	7.4	68.0
22	8.7	8.2	7.8	7.3	7.1	71.6
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28	7.8	7.4	7.0	6.6	6.4	82.4

Accessories

MA9070 Zero Oxygen calibration solution, 230 mL bottle
MA9071 Refilling Electrolyte solution, 230 mL bottle
MA840 D.O. Probe
MA841 Spare membrane (5 pcs)

Ordering Information

SM600 is supplied complete with MA840 probe, 2 spare membranes, 20 mL bottle of electrolyte solution, calibration screwdriver, 9V battery and instructions.

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