SevenExcellence™ DO/BOD
Professional and Precise

The SevenExcellence S900 benchtop instrument provides customers a premium benchtop solution to measure dissolved oxygen (DO) in aqueous media. Whether you measure DO using the traditional polarographic or the new digital optical dissolved oxygen technology (OptiOx), the S900 guarantees precise and highly reproducible results.

The SevenExcellence DO meter can be combined with one of the following two high-performance sensors:

InLab® OptiOx ISM
- Optical oxygen sensor based on RDO technology
- Easy-to-replace OptiOx sensor caps
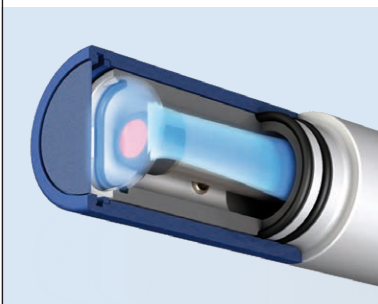- Short time-to-measure period

InLab® 605 ISM
- Traditional polarographic measuring technology
- Ideal for turbid, challenging samples
- Robust design

METTLER TOLEDO

Optical Precision with SevenExcellence
Fast and Reliable Oxygen Measurement

Optical oxygen measurement is superior to conventional technologies, including polarographic and galvanic measuring systems. Thanks to our optical dissolved oxygen sensors (OptiOx), measuring dissolved oxygen is easier and more reliable than ever.

Save time: Easy handling, zero maintenance

The principle of optical measurement requires no membranes or electrolyte solutions. A used cap can be replaced by simply removing it and fitting a new one. A new cap lasts a whole year and the device informs you in good time when the next cap change is due.

Be versatile: Suitable for an immense range of applications

Thanks to the robust design and the customized accessories, the InLab® OptiOx is a true allrounder. Thus, it's ideally equipped for use in the laboratory, e.g. in quality monitoring, or, when fitted with the OptiOx protective guard, in harsh environments.

Determine BOD: Suitable for all BOD applications

The biochemical oxygen demand (BOD) of any effluent can be readily checked with the InLab® OptiOx sensors. With the special BOD adapter, the sensors can be fitted to all current types of BOD bottles. According to the EPA (Environmental Protection Agency, USA), stirring is not necessary when using our OptiOx sensors.

Find out more about our optical DO technology OptiOx and how you can use it with your brand new SevenExcellence instrument at:
▶ **www.mt.com/OptiOx**

Specifications for SevenExcellence™ DO/BOD

Parameter		InLab® OptiOx – optical	InLab® 605-ISM – polarographic
Dissolved oxygen	Measuring range	0.000 ... 50 mg/L (ppm)	0.00 ... 99 mg/L (ppm)
	Display resolution	0.001/0.01/0.1	0.001/0.01/0.1
	Accuracy	± 0.1 mg/L from 0 ... 8 ± 0.2 mg/L from 8 ... 20 ± 10% from 20 ... 50	± 0.5%
	Units	mg/L, ppm, %	mg/L, ppm, %
DO saturation	Measuring range / Resolution	0.0 ... 500% / 0.1	0.0 ... 600% / 0.1
Temperature	Measuring range	0.0 … 50 °C	0.0 … 60 °C
	Resolution	0.1 °C	0.1 °C
	Accuracy	± 0.1 °C	± 0.1 °C
Pressure	Measuring range	500 ... 1100 mbar	500 ... 1100 mbar
	Resolution / Accuracy	1 / ± 2%	1 / ± 2%
	Barometric pressure units	mbar, hPa, mmHg, Atm	mbar, hPa, mmHg, Atm
General	Calibration points	2	2
	Sensor input	Mini-LTW (IP67)	BNC
	Pressure compensation	automatic / manual	automatic / manual

Calibration	Calibration points Calibration standards Temperature capture Barometric pressure capture Calibration reminder	2 2 pre-defined and 1 user-defined Automatic (internal* and external**) and manual Automatic and manual Yes: usable life for each sensor configurable
Measurement	Choice of endpoint formats Choice of stability criteria Temperature capture Choice of reference temperature Choice of temperature compensation Measurement type Interval measurements Methods Series	Automatic, manual, timed Fast, standard, strict, user-defined Automatic (internal and external) and manual 20 °C or 25 °C Linear, non-linear, off Direct measurements and methods Yes: time interval, user-configurable 17 pre-defined and 50 user-defined Max. 9 samples
System and GLP	Menu guidance Time and date PIN protection User management Measurement limits ID input ID input automation	10 languages 2 time formats, 4 date formats Yes: login (password or fingerprint reader) 4 groups: operator, technician, expert, administrator Yes: user-defined Yes: user ID, sample ID, sensor ID, sensor SN Barcode reader (USB)
Data processing	Data storage Print formats Printing Data Export	At least 20 000 data points, 250 analyses Summary and user-defined US-P25, RS232 and network printer, memory stick (pdf) USB-stick, EasyDirect™ pH PC software
General connectors	DO Inputs – digital DO Inputs – polarographic Internal temperature sensor input External temperature sensor input Communication interfaces Stirrer connector	Mini-LTW BNC Integrated in digital and polarographic inputs Cinch/RCA (NTC 30 kΩ or Pt1000) RS232, USB-A, USB-B, LAN Mini-DIN
General specifications	Power requirements Size/weight instrument Module weight Display	DC 12V–10W 235 x 188 x 75 mm, 1120 g 111–130 g TFT
Ambient conditions	Temperature Relative humidity Installation category Pollution degree Altitude	5 … 40 °C 5 … 80% (non-condensing) II 2 Up to 2000 m above sea level
Materials	Housing instrument Housing expansion units Touch panel	ABS/PC reinforced ABS/PC reinforced Tempered glass

 * All DO sensors provided by METTLER TOLEDO have an integrated temperature probe.
** The DO/BOD expansion unit has an RCA/Cinch connection to which a seperate temperature sensor can be connected.

Order Information

Description and order information for SevenExcellence™ DO/BOD

Order info	Description and sensors	Order no.
S900-Basic	Includes instrument, DO/BOD expansion unit, 2 blank expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, EasyDirect™ pH PC software, declaration of conformity and test certificate.	30092984
S900-Kit	As S900-Basic, but with InLab® OptiOx, guide to DO measurement and zero oxygen tablets.	30092986
S900-BOD	As S900-Kit, also including BOD adapter.	30092987
S600-Kit	As S900-Kit, but with InLab® 605-ISM instead of InLab® OptiOx.	30092985
Triple channel instrument with pH/mV, conductivity and DO/BOD expansion units		
S479-Kit	Includes instrument, pH/mV, conductivity and DO/BOD expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, EasyDirect™ pH PC software, declaration of conformity and test certificate. Kit includes the following sensors: InLab® Expert Pro-ISM, InLab® 731-ISM and InLab® OptiOx.	30092988
Triple channel instrument with pH/Ion, conductivity and DO/BOD expansion units		
S975-uMix (Kit)	Includes instrument, pH/Ion, conductivity and DO/BOD expansion units, uPlace™ electrode holder, semi-transparent cover, operating instructions, installation and quick guide, EasyDirect™ pH PC software, declaration of conformity and test certificate. Also includes the uMix® magnetic stirrer. Kit includes the following sensors: InLab® Expert Pro-ISM, InLab® 731-ISM, and InLab® OptiOx.	30092989

Accessories for SevenExcellence™

Modules	Order no.
pH/mV expansion unit	30034472
Conductivity expansion unit	30034473
DO/BOD expansion unit	30034474
pH/Ion expansion unit	30034471
Blank expansion unit	30034475

General accessories	
uPlace™: electrode holder (included in standard delivery)	30019823
Semi-transparent cover (included in standard delivery)	30041154
Protective film for display (2 pcs)	30041155
Main adapter 12V (included in standard delivery)	11120270
uMix™ magnetic stirrer	30040000
LogStraigh™ fingerprint reader	51192107
Barcode reader	30417466
Rondolino sample changer, complete for SevenExcellence™	51302888

Dissolved Oxygen

Digital dissolved oxygen sensors (RDO technology, includes ISM® technology)	Order no.
InLab® OptiOx, 1.8 m fixed cable, ATC	51344621
InLab® OptiOx, 5 m fixed cable, ATC	51344622
InLab® OptiOx, 10 m fixed cable, ATC	51344623

Polarographic dissolved oxygen sensors	
InLab® 605-ISM, 1.8 m fixed cable, ATC	51344611
InLab® 605-ISM, 5 m fixed cable, ATC	51344612
InLab® 605-ISM, 10 m fixed cable, ATC	51344613

Dissolved oxygen accessories	
Zero Oxygen Tablets (20 pcs); used for calibration	51300140

www.mt.com/pH

For more information