



Advanced  
Digital  
Water  
Analysis

# PRODUCT CATALOG



Consistency, Reliability, Durability and Performance

PROFESSIONAL  
INSTRUMENTS  
& LAB ANALYSIS

**pH**  
**ISE**  
**ORP**  
**EC**  
**TDS**  
**DO**  
**TEMP**

PROFESSIONAL  
INSTRUMENTS FOR WATER  
& LAB ANALYSIS

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## Adwa Instruments

Founded in 1998, Adwa Instruments is one of the leading manufacturers of instrumentation to measure pH, Conductivity, ORP, Dissolved Oxygen and Temperature for Research and Industry. Headquartered in Szeged, Hungary and with a manufacturing plant in Romania, Europe, Adwa Instruments is dedicated through a worldwide distributor network, to provide top class instrumentation and service.

Thanks to the customers' feedback, we have developed a line of user-friendly products which are durable, reliable and accurate, with an excellent cost-performance ratio. All of our instruments are supplied complete with the necessary electrodes, probes, calibration solutions and are ready for use. Some units combine two or more parameters, providing added versatility and excellent value for money. From basic hand-held units to high-performance benchtop type laboratory instruments, Adwa Instruments has a reputation for reliability and accuracy.

Total quality and customer satisfaction is the guiding principle of Adwa Instruments. We try to anticipate, to understand and go beyond the expectations of our customers. Total quality demands continuous improvement in all our processes, products and services.

As a result, our corporate philosophy is focused on total customer satisfaction.



The Headquarter of Adwa Instruments is located in Szeged, Hungary:

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# Waterproof Pocket Testers

## AD11-AD12

### Professional Waterproof pH-Temperature Pocket Testers with replaceable probe

AD11 and AD12 are the most advanced micro-processor based Waterproof pH/Temp pocket testers in the market.

These fast, stable and precise pocket testers are for users who require the greatest accuracy. The modular design allows replacing the electrode in a fast and simple way. Features such as stability indicator, automatic calibration, and automatic temperature compensation make these waterproof pocket testers a must-have in a variety of industries.



AD11P - Replaceable combination probe for AD11 and AD12  
• pH/Temperature



## AD14

### Professional Waterproof pH-ORP-Temperature Pocket Tester with replaceable probe

AD14 is designed for simultaneous pH, ORP and Temperature measurements. The large 2 row display (LCD) also has graphic symbols to guide you through the operations. Calibration is performed automatically in 1 or 2 points.



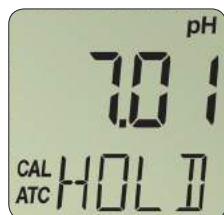
AD14P - Replaceable combination probe for AD14

- pH/ORP/Temperature



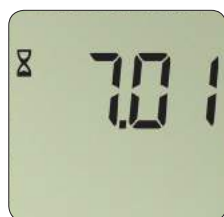
### Automatic temperature compensation (ATC)

- All pH readings are automatically temperature compensated. The encapsulated sensor allows fast and accurate temperature measurement and compensation.
- Temperature values can be displayed in °C or °F units.



### HOLD function

Freezes the display for easy and accurate recording.



### Stability indicator

The meter displays an hourglass symbol that will disappear when the measurement has achieved stability, and the reading should be taken.



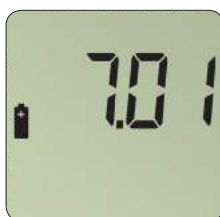
### Replaceable probe

Simple user-replaceable probe: just unscrew the plastic ring on the top of the electrode and replace the probe with a new one!



### Calibrate directly in buffer solution sachets

Calibration can be performed right in buffer solution sachets for the most accurate readings.



### Low battery indicator

When the batteries become weak, the battery symbol on the LCD lights up to indicate a low battery condition.

### 1 or 2 point automatic calibration

The meter can be calibrated at one or two points for pH with auto-buffer recognition and against 3 memorized buffer values

## Accessories

- AD11P - pH/Temperature probe [AD11, AD12]
- AD14P - pH/ORP/Temperature probe [AD14]
- AD70004P - pH 4.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70007P - pH 7.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70010P - pH 10.01 calibration solution (20 ml sachet, 25 pcs.)
- AD70000P - Rinse solution (20 ml sachet, 25 pcs.)
- AD70300 - Electrode storage solution (230 ml bottle)
- AD7061 - Electrode cleaning solution (230 ml bottle)
- AD7020 - ORP test solution, 200/275 mV (230 ml bottle) [AD14]

	AD11	AD12	AD14
Range	pH	-2.0 to 16.0 pH	-2.00 to 16.00 pH
	ORP	-	±1000 mV
	Temp.	-5.0 to 60.0°C 23.0 to 140.0°F	-5.0 to 60.0°C 23.0 to 140.0°F
Resolution	pH	0.1 pH	0.01 pH
	ORP	-	1 mV
	Temp.	0.1°C / 0.1°F	0.1°C / 0.1°F
Accuracy (at 25°C/77°F)	pH	±0.1 pH	±0.01 pH
	ORP	-	±2 mV
	Temp.	±0.5°C / ±1°F	±0.5°C / ±1°F
Calibration	pH	Automatic, 1 or 2 point with 2 sets of memorized buffers (pH 4.01/7.01/10.01 or 4.01/6.86/9.18)	
	ORP	-	Factory calibrated
Temp. Compensation	Automatic for pH readings		
Probe (Included)	AD11P - pH/Temp probe	AD11P - pH/Temp. probe	AD14P - pH/ORP/Temp. probe
Battery Type / Life	4 x 1.5V Button type / Approx. 300 hours of use		
Dimensions / Weight	175.5 x 39 x 23 mm / 100 g		

### AD11 and AD12 are supplied with

AD11P - pH/Temperature probe; AD70004 - pH4 calibration solutions in sachet (20 ml); AD70007 - pH7 calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

### AD14 is supplied with

AD14P - pH/ORP/Temperature probe; AD70004 - pH4 calibration solution in sachet (20 ml); AD70007 - pH7 calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

Electrodes, Probes and other Accessories see on page 18;  
Calibration, Rinse and other solutions see on page 20

## AD31-AD32

### Professional Waterproof Conductivity-TDS-Temperature Pocket Testers with replaceable probe

AD31 and AD32 are waterproof Conductivity, TDS and temperature testers. The housing has been completely sealed against humidity. All Conductivity and TDS readings are automatically temperature compensated (ATC), and temperature values can be displayed in °C or °F units. The Conductivity/TDS conversion factor (CONV) can be selected by the user, as well as the coefficient  $\beta$  (BETA) for temperature compensation. The instruments can be calibrated at one point. Measurements are highly accurate with a unique stability indicator right on the LCD. The models are also provided with a low battery symbol which warns the user to replace the batteries.



AD32P - Replaceable combination probe for AD31 and AD32

The AD32P probe supplied with the meters, is interchangeable and can be easily replaced by the user. The encapsulated temperature sensor allows fast and accurate temperature measurement and compensation

## AD33-AD35

### Professional Waterproof Conductivity-Temperature Pocket Testers with replaceable probe

AD33 and AD35 are waterproof Conductivity testers, that also measure and display temperature. The housing has been completely sealed against humidity. All Conductivity readings are automatically temperature compensated, and temperature values can be displayed in °C or °F units.

Conductivity calibration is automatic at one point, while temperature is factory calibrated and the user can perform an adjustment only. To prolong battery life, these models are provided with an auto-off feature that turns them off after 5 minutes of non-use.

Moreover, when batteries become too weak to ensure reliable readings the meter automatically turns off.



AD33P - Replaceable combination probe for AD33 and AD35

The AD33P probe supplied with the meters, is interchangeable and can be easily replaced by the user. The encapsulated temperature sensor allows fast and accurate temperature measurement and compensation



#### Battery percentage indicator [AD31, AD32]

After turn on the meter, all the used segments will be visible for one second (or as long as the button is pressed), followed by the percentage indication of the remaining battery life.



#### Automatic calibration

Simple and easy automatic 1 point calibration.

#### AD31 is supplied with

AD32P - EC/TDS/Temperature probe; AD70031 - 1413  $\mu\text{S}/\text{cm}$  calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

#### AD32 is supplied with

AD32P - EC/TDS/Temperature probe; AD70030 - 12.88  $\text{mS}/\text{cm}$  calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

#### AD33 is supplied with

AD33P - EC/Temperature probe, AD70031 - 1413  $\mu\text{S}/\text{cm}$  calibration solutions in sachet (20 ml); Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual

#### AD35 is supplied with

AD33P - EC/Temperature probe; Protective cap; Clip holder; Wrist strap; Batteries (4 x 1.5, button types); Instruction manual



#### Replaceable probe

Simple user-replaceable probe: just unscrew the plastic ring on the top of the electrode and replace the probe with a new one!

#### Accessories

- AD32P - Replaceable EC/TDS/Temperature probe [AD31, AD32]
- AD33P - Replaceable EC/Temperature probe [AD33, AD35]
- AD7033 - 84  $\mu\text{S}/\text{cm}$  calibration solution (230 ml bottle) [AD35]
- AD70030P - 12.88  $\text{mS}/\text{cm}$  EC standard solution (20 ml sachet, 25 pcs.) [AD32]
- AD70031P - 1413  $\mu\text{S}/\text{cm}$  EC standard solution (20 ml sachet, 25 pcs.) [AD31, AD33]
- AD70442P - 1500 ppm TDS standard solution (20 ml sachet, 25 pcs.)
- AD70000P - Rinse solution (20 ml sachet, 25 pcs.)
- AD7061 - Electrode cleaning solution (230 ml bottle)

	AD31	AD32	AD33	AD35
Range	EC	0 to 3999 $\mu\text{S}/\text{cm}$	0.00 to 20.00 $\text{mS}/\text{cm}$	0 to 1999 $\mu\text{S}/\text{cm}$
	TDS	0 to 2000 ppm	0.00 to 10.00 ppt	-
	Temp.	0.0 to 60.0°C / 32.0 to 140.0°F	0.0 to 60.0°C / 32.0 to 140.0°F	0.0 to 60.0°C / 32.0 to 140.0°F
Resolution	EC	1 $\mu\text{S}/\text{cm}$	0.01 $\text{mS}/\text{cm}$	1 $\mu\text{S}/\text{cm}$
	TDS	1 ppm	0.01 ppt	-
	Temp.	0.1°C / 0.1°F	0.1°C / 0.1°F	0.1°C / 0.1°F
Accuracy (at 25°C/77°F)	EC/TDS	$\pm 2\%$ f.s.	$\pm 2\%$ f.s.	$\pm 2\%$ f.s.
	Temp.	$\pm 0.5^\circ\text{C} / \pm 1^\circ\text{F}$	$\pm 0.5^\circ\text{C} / \pm 1^\circ\text{F}$	$\pm 0.5^\circ\text{C} / \pm 1^\circ\text{F}$
Calibration	EC/TDS	Automatic, 1 point		
Temp. Compensation	Automatic			
Probe (Included)	AD32P - EC/TDS/Temp. probe AD32P - EC/TDS/Temp. probe AD33P - EC/Temp. probe AD33P - EC/Temp. probe			
Battery Type	4 x 1.5V Button type			
	Approx. 100 hours of use	Approx. 100 hours of use	Approx. 150 hours of use	Approx. 150 hours of use
Dimensions / Weight	175.5 x 39 x 23 mm / 100 g			

Electrodes, Probes and other Accessories see on page 18; Calibration, Rinse and other solutions see on page 20

# Continuous Monitors

## ECO209

### Continuous pH Monitor

ECO209 is a continuous pH monitor suitable for constant monitoring of pH level of a given water or solution sample such as aquarium tank, ponds, hydroponics systems, among others. It is easy to use, with simple maintenance features, with 2 calibration points for better accuracy.

ECO209	
Range	pH 0.0 to 14.0 pH
Resolution	pH 0.1 pH
Accuracy (at 25°C/77°F)	pH ±0.2 pH
Calibration	Manual, 2 points through trimmer
Probe (Included)	AD1230B - epoxy body pH electrode with double junction, BNC connector
Environment	0 to 50°C, 95% RH max
Power Supply	External, 12 Vdc
Dimensions / Weight	120 x 134 x 54 mm / Approx. 250 g

ECO209 is supplied with

AD1230B - pH electrode with epoxy body, double junction, BNC connector; Stainless steel grounding probe; AD70004 - pH4 calibration solution in sachet (20 ml); AD70007 - pH7 calibration solution in sachet (20 ml); Screwdriver for calibration; 12 Vdc adapter; Instruction manual

Electrodes, Probes and other Accessories see on page 18;  
Calibration, Rinse and other solutions see on page 20



AD1230B - pH electrode  
The monitor utilizes a gel-filled interchangeable pH electrode and has been specially designed to address the needs of growers.

### Accessories

AD1230B - pH electrode  
AD1286 - pH electrode  
AD70004P - pH 4.01 calibration solution (20 ml sachet, 25 pcs.)  
AD70007P - pH 7.01 calibration solution (20 ml sachet, 25 pcs.)

AD70010P - pH 10.01 calibration solution (20 ml sachet, 25 pcs.)  
AD70000P - Rinse solution (20 ml sachet, 25 pcs.)  
AD70300 - Electrode storage solution (230 ml bottle)  
AD7061 - Electrode cleaning solution (230 ml bottle)

## ECO406-ECO407

### Continuous Conductivity [ECO406] and TDS [ECO407] Monitors

These continuous indicators are designed for easy maintenance, simple to read, accurate readings and cost effective purpose, to meet the general requirements of all range of users. They come with single point manual calibration and automatic temperature compensation that makes these monitors even more reliable.

The meters are supplied with an epoxy body (EC, TDS) probe for a more durable life-span, with calibration solutions and screwdriver for calibration purposes. The ideal tool to monitor your nutrient solution continuously without having to worry about dead batteries.



AD7632 - EC probe for ECO406

	ECO406	ECO407
Range	EC 0 to 9.99 mS/cm	-
	TDS -	0 to 1990 ppm
Resolution	EC 0.01 mS/cm	-
	TDS -	10 ppm
Accuracy (at 25°C/77°F)	±2% f.s.	±2% f.s.
TDS factor	-	Approx. 0.7
Calibration	Manual, single point, through trimmer	Manual, single point, through trimmer
Temp. Compensation	Automatic	Automatic
Probe (Included)	AD7632 - EC probe for ECO406	AD7634 - TDS probe for ECO407
Environment	0 to 50°C, 95% RH max	0 to 50°C, 95% RH max
Power Supply	External, 12 Vdc adapter	
Dimensions / Weight	120 x 134 x 54 mm / Approx. 300 g	

ECO406 is supplied with

AD7632 - EC probe for ECO406 with 2 m cable; AD70031 - 1413 µS/cm calibration solutions in sachet (20 ml); Screwdriver for calibration; 12 Vdc adapter, Instruction manual

ECO407 is supplied with

AD7634 - TDS probe for ECO407 with 2 m cable; AD70032 - 1382 ppm calibration solutions in sachet (20 ml); Screwdriver for calibration; 12 Vdc adapter; Instruction manual

### Accessories

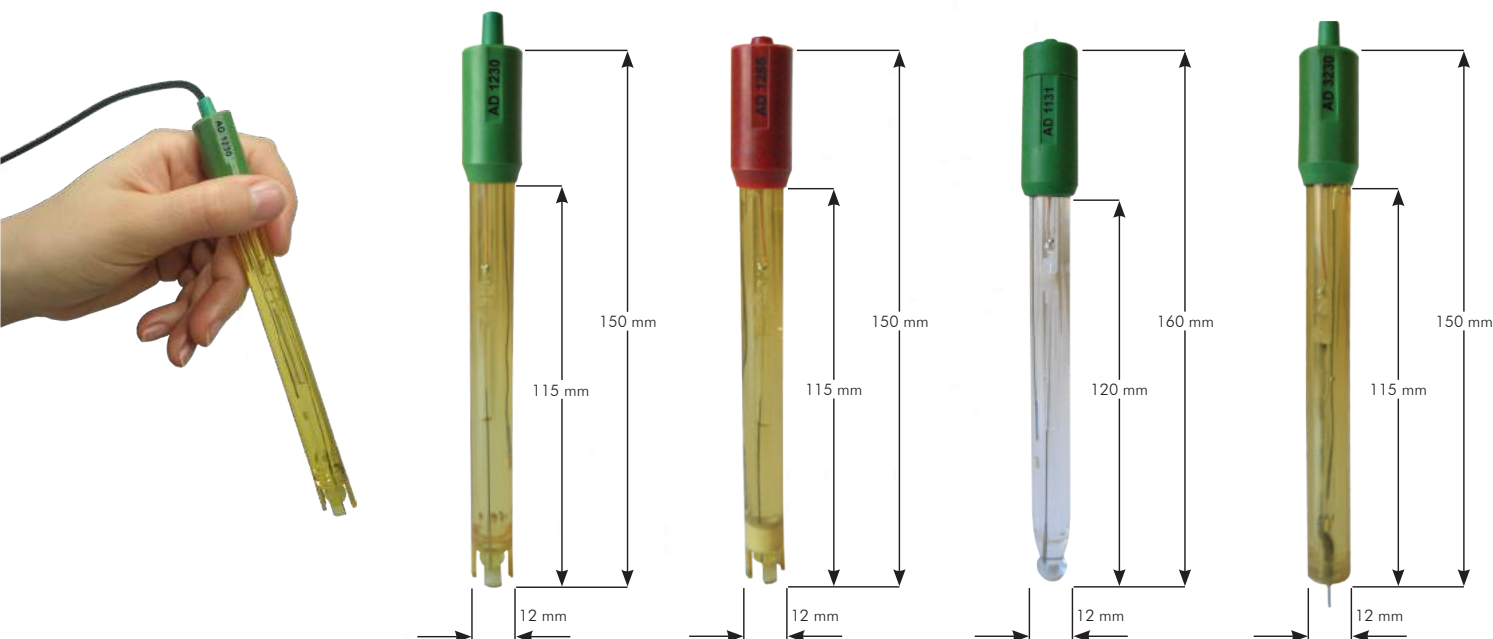
AD7632 - EC probe for ECO406 with 2 m cable  
AD7634 - TDS probe for ECO407 with 2 m cable  
AD70031P - 1413 µS/cm EC calibration solution (20 ml sachet, 25 pcs.) [ECO406]  
AD70032P - 1382 ppm calibration solution (20 ml sachet, 25 pcs.) [ECO407]  
AD70442P - 1500 ppm TDS standard solution (20 ml sachet, 25 pcs.) [ECO407]  
AD70000P - Rinse solution (20 ml sachet, 25 pcs.)  
AD7061 - Electrode cleaning solution (230 ml bottle)












AD7634 - TDS probe for ECO407

# ACCESSORIES

## Electrodes and Probes



	AD1230B	AD1286	AD1131B	AD3230B
<b>Description</b>	Combination pH electrode	pH electrode	Refillable, combination pH electrode	Gel filled, combination ORP electrode with platinum contact
<b>Reference</b>	Double, Ag/AgCl	Double Ag/AgCl	Double Ag/AgCl	Single Ag/AgCl
<b>Junction/Flow rate</b>	Ceramic, single / 15-20 $\mu$ L/H	PTFE	Ceramic, single / 15-20 $\mu$ L/H	Ceramic, single
<b>Electrolyte</b>	Gel	Polymer	KCl 3.5M	Gel
<b>Max. Pressure</b>	2 bar	3 bar	0.1 bar	2 bar
<b>Range</b>	pH: 0 to 13	pH: 0 to 13	pH: 0 to 13	ORP: $\pm$ 2000mV
<b>Recommended Operational Temperature</b>	0 to 70°C (32 to 158°F)	0 to 80°C (32 to 176°F)	0 to 100°C (32 to 212°F)	-5 to 70°C (23 to 158°F)
<b>Tip/Shape</b>	Spheric (dia: 7.5 mm)	Spheric (dia: 7.5 mm)	Spheric (dia: 9.5 mm)	Platinum pin
<b>Temperature Sensor</b>	No	No	No	No
<b>Body Material</b>	PEI	PEI	Glass	PEI
<b>Cable</b>	Coaxial: 1m (3.3')	Coaxial: 2m (6.6')	Coaxial: 1m (3.3')	Coaxial: 1m (3.3')
<b>Connector</b>	BNC	BNC	BNC	BNC

	AD76309	4 RING STAINLESS STEEL CONDUCTIVITY/TDS PROBE WITH INTERNAL TEMPERATURE SENSOR AND 1 METER LONG CABLE
	AD7632	CONDUCTIVITY PROBE WITH 2 METERS LONG CABLE FOR ECO406
	AD7634	TDS PROBE WITH 2 METERS LONG CABLE AND WITHOUT CONNECTOR FOR ECO407
	AD7662	STAINLESS STEEL TEMPERATURE PROBE WITH 1 METER LONG CABLE. SUPPLIED WITH BENCHTOP AND PORTABLE METERS
	AD8001/3	GALVANIC DO PROBE WITH BUILT-IN TEMPERATURE SENSOR, DIN CONNECTOR AND 3 METERS LONG CABLE FOR AD630
	AD11P	REPLACEABLE pH/TEMP ELECTRODE FOR AD11 AND AD12
	AD14P	REPLACEABLE pH/ORP/TEMPERATURE ELECTRODE FOR AD14
	AD32P	REPLACEABLE EC/TDS/TEMP ELECTRODE FOR AD31 & AD32
	AD33P	REPLACEABLE EC/TEMP ELECTRODE FOR AD33, AD34, AD35 & AD36

# CALIBRATION AND OTHER SOLUTIONS

Adwa's calibration solutions are made from established formulas. The pH calibration solutions are available in 230ml durable plastic bottles and are economical and convenient for laboratory use, or in 20 ml sachets for quick, accurate and convenient calibrations. All of our pH, Conductivity, TDS and ORP calibration solutions have a lot number and expiration date printed on them. Cleaning solutions and storage solutions are also available.



CODE	DESCRIPTION	CODE	DESCRIPTION
AD70000P	Electrode rinse solution, 20 ml sachet in box of 25 pcs.	AD7032	1382 ppm buffer solution in 230 ml
AD70004P	pH 4.01 buffer solution, 20 ml sachet in box of 25 pcs.	AD7033	84 µS/cm calibration solution in 230 ml bottle
AD70007P	pH 7.01 buffer solution, 20 ml sachet in box of 25 pcs.	AD7034	80000 µS/cm calibration solution in 230 ml bottle
AD7000	Electrode rinse solution in 230ml bottle	AD7035	111800 µS/cm calibration solution in 230 ml bottle
AD70010P	pH 10.01 buffer solution, 20 ml sachet in box of 25 pcs.	AD7039	5000 µS/cm calibration solution in 230 ml bottle
AD70030P	12.88 mS/cm calibration solution, 20 ml sachet in box of 25 pcs.	AD7040	Zero oxygen solution, supplied in carton box with dry chemical reagent, 12 g (AD7040-1) and solvent in bottle 500 ml (AD7040-2); CERTIFICATE included
AD70031P	1413 µS/cm calibration solution, 20 ml sachet in box of 25 pcs.	AD7442	1500 ppm TDS buffer solution in 230 ml bottle
AD70032P	1382 ppm calibration solution, 20 ml sachet in box of 25 pcs.	AD70442P	1500 ppm calibration solution, 20 ml sachet in box of 25 pcs.
AD7004	pH 4.01 buffer solution in 230 ml bottle	AD7061	Electrode cleaning solution in 230 ml bottle
AD7007	pH 7.01 buffer solution in 230 ml bottle	AD7071S	Electrode refillable solution 3.5 M KCL+ AgCl, 30ml
AD7010	pH 10.01 buffer solution in 230 ml bottle	AD7082S	Electrode refillable solution 3.5 M KCL 30ml
AD7020	ORP test solution (200/275 mV) , 230 ml bottle	AD7082	Electrode refillable solution 3.5 M KCL, 4 X 30ml
AD70300	Electrode storage solution in 230 ml bottle	AD9072S	Electrolyte solution for DO galvanic probe in 30 ml bottle
AD7030	12.88 mS/cm buffer solution in 230 ml bottle	AD9072	Electrolyte solution for DO galvanic probe, 4 X 30ml
AD7031	1413 µS/cm buffer solution in 230 ml bottle		

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