

GRScientific



E-Chem[®] Series
of pH / Conductivity
Meters and Electrodes

A Truly Economical Range
for all Applications and Industries

E-Chem Series®

Our E-Chem® range of pH/conductivity benchtop meters have been developed to provide a cost effective, robust and simple to use solutions for your application requirements. Producing rapid and reliable results that are accurate and reproducible are paramount in all field and laboratory environments. All products within the E-Chem® series cover a wide range of applications in areas including, food and beverage, water, environmental, power and petrochemical industries.

Features

These meters all meet the highest of international GLP standards. Features include automatic calibration, automatic temperature compensation, data storage, timed measurement, clock display, RS232 output, function setting and self-diagnosis as standard.

- Automatic recognition of 13 kinds of pH buffer solutions. User can choose any one from four series of standard buffer solutions: Europe & USA, NIST, Chinese and user-defined series.
- High purified water and ammonia added purified water pH measurement modes can be set up. These modes offer greater measuring accuracy and are especially suited for electric power and petrochemical industry applications.
- Redox potential mode for ORP value.
- Adopts advanced automatic frequency and voltage regulation technology to enlarge the measuring range of the conductivity electrode with only one-point calibration.
- Automatic switching of conductivity measuring range. The meter has non-linearity automatic temperature compensation for high purified water less than $10\mu\text{S}/\text{cm}$ which greatly improves measuring accuracy.
- Automatic recognition of 8 kinds of conductivity standard solution. User can choose from two series of standard buffer solutions: Europe & USA and Chinese.
- Innovative technology to improve meter's response speed and result accuracy.
- Dustproof and waterproof meter to IP54 standards. All sockets are protected by silica gel caps
- Electronic with Surface Mount Technology (SMT) film-covering to improve meter's reliability
- Selectable modes to measure resistivity, salinity and TDS.



UK Manufactured Electrodes



GR Scientific offers a range of combined pH, glass, epoxy tough and reference electrodes for every application and budget. All of our electrodes are manufactured in the UK so you are guaranteed uncompromised quality and fast delivery.

If you have a specific electrode specification we will do everything we can to meet your needs. Please contact our technical team to discuss your requirements.

For accurate pH and conductivity measurements, we offer certified standards traceable to NIST standard reference materials and are tested using ISO 17025 accredited method. Our conductivity standards have an accuracy of $\pm 1.0\%$ and their shelf life is valid regardless of when the bottle was first opened, provided good laboratory practice is adhered to. Our pH Buffers are manufactured to exacting specifications according to NIST with an extended shelf life. Temperature dependence data is printed on the labels as are lot numbers and expiry dates.



Application Areas

- Soil
- Sea Water
- Food
- Cosmetic
- Pharmaceutical
- Aquaculture
- Tropical Fish Aquariums
- Hydroponic gardening and farming
- Waste water
- Power and electrical industry
- Swimming Pools
- Printing Industry
- Winery / Brewery



E512 Research Level pH Meter

The E512 is a three decimal place pH meter that offers easy to use operating procedures with full GLP compliant features for monitoring system performance. It also offers mV and Redox measurement options. For worldwide application, it holds a number of buffer set values for routine calibration.

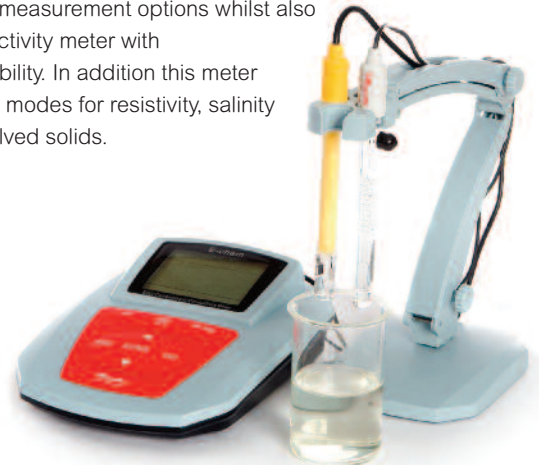
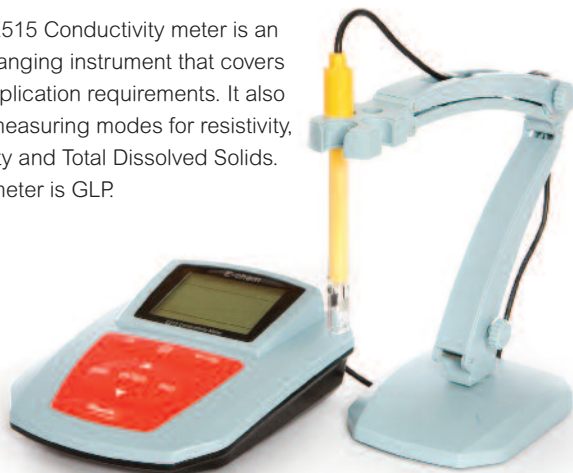


E522 Precision pH/Conductivity Meter

The E522 Combi meter offers you all of the features found on our E-512 and E-515 models in a robust, economical unit. Some of the features include a 3.d.p pH meter that allows mV and redox measurement options whilst also being a conductivity meter with auto-ranging ability. In addition this meter has measuring modes for resistivity, salinity and total dissolved solids.

E515 Autoranging Conductivity Meter

The E515 Conductivity meter is an autoranging instrument that covers all application requirements. It also has measuring modes for resistivity, salinity and Total Dissolved Solids. The meter is GLP.



Technical Specifications

		E512	E515	E522
Specification Parameters				
pH	-2000 to 19.999 pH	✓	-	✓
mV	±1999.9 mV	✓	-	✓
Conductivity	0 to 2000 mS/cm, (Six ranges)			
	1 to 20.0 µS/cm	-	✓	✓
	20.0 to 200.0 µS/cm	-	✓	✓
	200 to 2000 µS/cm	-	✓	✓
	2.00 to 20.00 mS/cm	-	✓	✓
	20.00 to 200.0 mS/cm	-	✓	✓
Resistivity	0 to 100 MΩ·cm	-	✓	✓
	0 to 100 g/L	-	✓	✓
TDS	0 to 100 g/L	-	✓	✓
Salinity	0 to 100 ppt	-	✓	✓
Temperature	-10 to 110°C	✓	✓	✓
Accuracy				
pH	±0.002 pH	✓	-	✓
mV	±0.03% full scale	✓	-	✓
Conductivity	±0.5% full scale	-	✓	✓
Temperature	±0.4°C	✓	✓	✓
Other Parameters				
Data storage	600 groups	✓	✓	✓
Communication	RS232	✓	✓	✓
Power	DC9V/300mA	✓	✓	✓
Dimensions	160x190x70 mm	✓	✓	✓
Weight	880 g	✓	✓	✓

About G.R. Scientific

Key personnel at G.R. Scientific are recognised experts in titration technology and electrochemistry. They have designed and manufactured titrators since the early 1980's and are widely regarded as some of the leading specialists in this technology.

For additional technical information, specifications, MSDS data, user manuals, and exhibition news, visit our website at:

www.grscientific.com

Ordering Information

Part No:	E-512 pH meter
Product:	Model E512 pH meter, temperature electrode, electrode holder, 9V power adapter, RS232 communication cable, results manager data download CD and operation manual.
Part No:	E-515 Conductivity meter
Product:	Model E515 conductivity meter, electrode holder and operation manual 9V power adapter, RS232 communication cable, results manager data download CD and operation manual.
Part No:	E-522 Combined pH/conductivity meter
Product:	Model E522 pH/Conductivity meter, temperature electrode, electrode holder, 9v power adapter, RS232 communication cable, results manager data download CD and operation manual

Optional Accessories

Part No:	Product:
E-602	Electrode holder
503025	Electrode Cable
503106	pH plastic combination electrode
503108	pH glass combination electrode
503109	Glass conductivity electrode K=1
503110	Epoxy conductivity electrode K=1
503111	General purpose reference electrode
503112	General purpose glass pH electrode
503113	Flat surface combination electrode
503114	Spear type combination electrode
503115	Gel filled combination electrode
503116	Epoxy conductivity electrode K = 0.1
503117	Epoxy conductivity electrode K = 10
503107	Temperature electrode
61-1040525	Buffer Solution pH 4
61-1070525	Buffer Solution pH 7
61-1090525	Buffer Solution pH 9
61-1100525	Buffer Solution pH 10
61-1110525	Buffer Solution pH 11
61-EFS3AC	100ml pH Electrode Filing Solution
61-ECS	100ml Electrode Cleaning Solution
61-ESS5	pH Electrode Storage Solution
61-CSKC84	500ml Conductivity Standard 84µS/cm
61-CSKCL1413	500ml Conductivity Standard 1413µS/cm
61-CSKC12880	500ml Conductivity Standard 12,880µS/cm
61-CS1382	TDS Standard 1382
61-PHKIT4710	pH Standards Kit 3 x 50 ml
61-CONKIT3	Conductivity & TDS Standards Kit 3 x 50 ml
61-CONKIT2	Conductivity Kit 2 x 50 ml

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