

LABORATORY pH / ION METER CPI-502

CPI-502 measures pH, redox potential (mV), ion concentration and temperature. Enables simultaneous ion selective measurement of chosen ion, pH or mV and temperature. The chosen measuring function may be viewed by pressing an appropriate button. The most recent model has been improved with more possibilities providing easier operation.

Characteristic features:

- Highly accurate measurement in each function.
- Easy parameter setting.
- The meter is equipped with built-in 60 mm thermal printer.
- Standardised procedures for pH and ion selective measurement facilitate working.
- "HOLD" function to freeze the result on the display.
- Signalisation of the result stabilisation with the "READY" symbol and a sound.
- Possibility of sending a calibration report to a PC - up to 10 last calibrations.



In the pH measuring function:

- Calibration of the pH electrode: 1 ÷ 5 points.
- Automatic pH buffer detection, their value may be set by the user.
- Automatic correction of the stored pH standard value influenced by the temperature change (compliant with NIST), what eliminates the necessity of the temperature adjustment.
- Storage of 3 electrodes calibration parameters enables quick replacement.
- Possibility to view the electrode's characteristics.
- Depending on type of the chosen electrode making measurement in pure water, sewage, pastes, etc. is possible.
- Isolated connectors for pH and ion selective electrode enable their simultaneous connection and measurements in one vessel.
- Automatic evaluation of the electrode condition.
- Readout of the pH electrode condition and data – the zero offset and slope percentage may be checked.

In the Ion selective measuring function:

- Enables ion concentration measurements of monovalent, bivalent, negative and positive ions.
- The measuring range enables work with all available ion selective electrodes (ISE), chosen adequately to the kind of measured ion, equipped with BNC-50 connector.
- The meter has separate BNC connectors for the pH electrode, Ion selective electrode and banana connector for the reference electrode.
- The meter automatically introduces the molar weight and valence of a particular ion.
- The user may choose the unit: pX, g/l, M/l, ppm.
- Automatic unit conversion (e.g. mol/l to mg/l).
- Possibility of entering freely chosen values of ion standard solutions.

In the redox potential measuring function:

- Precise redox potential measurement (accuracy 0.1 mV).
- Possibility of the mV measurement relatively to the entered or measured reference (V_{ref}) value.

Other features:

- Automatic and manual temperature compensation.
- Clock with date.
- Internal datalogger for up to 4000 sets of results collected singly or in series with temperature, time and date.
- The readings and calibration data are stored in non-volatile memory.
- Storing of the next calibration date.
- Possibility to connect the meter with a PC by USB output.
- Change of the date protected by a password
- The data transmission software enables printout of the data in a form protected against any changes.
- The meter meets the GLP requirements.

- 24 months of warranty for the meter.
- Pendrive with software for data transmission and collection and user's manual in English included in the set.

The standard set includes: **CT2B-121** temperature sensor with **Pt-1000B** resistor and **EPS-1** pH electrode for measurements in clear water, which should not be used in other types of liquid. Measurements in liquid with sediment should be made with use of **IJ44A** pH electrode, which enables measurements in various samples of both pure and contaminated liquids and semi-solids. Its unusual construction ("intermediate junction") protects the real junction (diaphragm) of the electrode against clogging, ensures stable measurements in these types of liquids or semi-liquid mass, in which other electrodes stop working quickly. When properly handled and maintained the electrode may be efficient for several years.

The ISE electrodes are chosen individually.

In comparison with the **CPI-505** meter, the **CPI-502** model is equipped with a smaller display.

Technical Data

Function	pH	mV	Temperature
Range	-6.000 ÷ 20.000 pH	±1999.9 mV	-50.0 ÷ 200.0 °C
Resolution	0.001 pH or 0.01 pH	0.1 mV	0.1 °C
Accuracy (± 1 digit)	±0.002 pH*	±0.1 mV*	±0.1 °C**
Temp. compensation	-5 ÷ 110 °C	-	-
Input impedance	10 ¹² Ω	10 ¹² Ω	-
Printer	thermal, width = 60 mm		
Power supply	6 V / 2 A power adapter		
Weight	660 g		
Dimensions (mm)	L= 180 W= 200 H= 20 / 50		
PC connection	USB		

*The accuracy of the meter only.

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In the range 0 ÷ 100 °C the acceptable error of the probe with Pt-1000B resistor: ±0.8 °C, with Pt-1000A resistor: ±0.35 °C.

Ion selective measurements

Function	Ion (M/l)	Ion (g/l)	Ion (ppm)	Ion (pX)
Range	0 ÷ 100	0 ÷ 1 000	0 ÷ 1 000 000	-2.000 ÷ 16.000 pX
Resolution	0.01 / 0.1	0.01 / 0.1	0.01 / 0.1	0.001 / 0.01
Accuracy (± 1 digit)	± 0.25 %*	± 0.25 %*	± 0.25 %*	± 0.002 pX*
Temperature compensation	-5 ÷ 110 °C			

*The accuracy of the meter only.

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