

## Compact pH Measuring Instruments

With innovative probe engineering



pH

°C

## The new pH measuring instruments with innovative probe engineering



pH1 probe head for liquids

Measurement of the pH value plays an important role in many areas. Anywhere where there are chemical and biochemical reactions, the pH value has an important indicator function.

Although the technology to accurately measure pH value has been available for several years, instruments previously available have posed several problems for users:

- Short life span of pH probes due to glass breakage and dirt ingress, for example
- Sensitivity to dirt of the pH probe resulting in incorrect measurements
- Spillage of storage solution
- Handling problems when calibrating
- Lack of one-hand penetration pH probes for liquid and semi-solid substances
- Lack of combined temperature and pH measurement



pH2 probe head for semi-solid substances

**Together with experts from trade and industry, Testo has developed innovative instruments that resolve these problems.**



Interchangeable probe

Instead of a liquid electrolyte, Testo pH probes have a gel electrolyte as a reference substance for pH measurement which facilitates the use of a hole diaphragm between the measurement electrode and housing in place of the micro-porous structure usually used in pH probes. The micro-porous structure becomes blocked up more quickly, similar to a finely woven sieve, consequently requiring regular service which in return results in a shorter life.

Due to the large volume of gel electrolyte and the hole diaphragm, Testo pH probes are not only leakproof, they are almost completely maintenance-free, robust and unaffected by dirt and dust.



The potassium chloride solution bonded in the gel cannot leak

The combination of the pH penetration tip and temperature probe in a one-hand instrument for accurate and fast temperature compensation is unique. Consequently, accurate readings are guaranteed in all ambient conditions.

With the development of different, breakproof probe geometries, Testo is making available special solutions for liquid as well as for semi-solid substances.

The leakproof storage solution is also new.

pH probes must be stored in moist conditions when not in use, in order to prevent the glass membrane coating around the measurement electrode and the diaphragm from drying out. Pure water alone should not be used since water would release the conducting components contained in the probe electrolytes. A potassium chloride solution is usually used for this purpose. As with every liquid, it can leak which, particularly in the food branch, can lead to contamination of raw foodstuffs or products.

Testo has produced a solution that has eliminated this disadvantage. The potassium chloride solution is available in a gel filled cartridge that does not drip or leak.



Fast and convenient measurement during production



pH tip embedded in break-proof plastic



Set case with testo 205, pH 4.0 and 7.0 buffers as well as storage cap



pH buffer solution in the storage bottle with dosing container

### The professional pH measuring instrument for the food sector

testo 205 is a pH measuring instrument, developed together with experts from the food sector, for measurements in semi-solid materials. Its main application is to be found in meat processing. Its ergonomic design and surface display make the testo 205 ideal for applications in production, incoming goods and for recurring measurements. The combination of the pH penetration tip and the temperature probe for fast and accurate temperature compensation is unique. Automatic recognition of a stable reading makes the whole measurement process much easier.

#### Benefits

- Combined penetration tip with temperature probe
- Measurement tip can be changed by user
- Maintenance-free gel electrode
- Backlit display
- Audible button feedback
- 2 line display
- Automatic full scale value recognition
- 1, 2, or 3 point calibration possible

#### Complete case for field use

All of the required accessories are clearly arranged in the high-quality aluminium case together with the testo 205 measuring instrument. The containers with the buffer solutions can be set up in the case so that calibration can be carried out on site.

#### Set contents

- testo 205
- pH buffer 4 and 7 (each 250 ml)
- Gel storage cap
- Instruction manual
- Batteries



Robust food penetration pH/°C meter with automatic temperature compensation

#### Technical Data

Instrument	testo 205
Parameters	pH / °C
Sensor	pH electrode / NTC
Number of meas. channels	2
Measurement range	0 to 14 pH
Resolution pH	0.01 pH
Resolution Temperature	0.1 °C
Accuracy pH	± 0.02 pH
Accuracy Temperature	± 0.4 °C
Temperature compensation	Automatic
Display	LCD, 2 line, 0 to 70 °C
Probes	Screw-in pH / °C probe modules
Measurement rate	2 measurements per second
Application temperature	0 °C to +60 °C
Storage temperature	-20 °C to +70 °C
Battery type	4x lithium button cell LR44
Battery life	80 h (Auto Off 10 Min)
Housing	ABS with soft coating in handle area, protection class IP 65
Dimensions	197 x 33 x 20 mm
Weight	69 g

## testo 206-pH1 / pH2 / pH3 – Versatile pocket-size pH sticks



pH1 probe head for liquids



pH2 probe head for semi-solid materials



pH3 probe head with BNC interface

### Benefits

#### testo 206 pH1 and pH2

- Insensitive to dirt on account of hole diaphragm and gel reference electrolyte
- Large volume of the gel reference electrode guarantees a long life
- No maintenance necessary. No need to fill up electrolyte solution.
- So versatile it can be used for nearly all applications, including
  - for materials containing protein
  - highly contaminated solutions
- Low membrane resistance results in fast and stable readings
- Unique design makes breakage practically impossible
- Combination: pH penetration tip with temperature measurement probe

#### testo 206 pH3

- Connection of all external probes with BNC plug
- Automatic and manual temperature compensation possible

#### testo 206 pH1, pH2 and pH3

- The instrument is also suitable for outdoor applications or for tough industrial conditions thanks to the "TopSafe" protection case included.
- 2 line display
- Automatic full scale value recognition
- 1, 2 or 3 point calibration possible

### Technical Data

Instrument	testo 206-pH1 and pH2
Parameters	pH / °C
Sensors	pH electrode / NTC
Number of meas. channels	2 channel
Measurement range	0 to 14 pH
Resolution pH	0.01 pH
Resolution Temperature	0.1 °C
Accuracy pH	± 0.02 pH
Accuracy Temperature	± 0.4 °C
Temp. compensation	Automatic
Display	LCD, 2 line, 0 to 70 °C
Probes	Screw-in pH / °C probe modules
Measurement rate	2 measurements per second
Application temperature	0 °C to +60 °C
Storage temperature	-20 °C to +70 °C
Battery type	1x CR2032
Battery life	80 h (Auto Off 10 Min)
Housing	ABS with Top Safe, protection class IP 68
Dimensions	197 x 33 x 20 mm
Weight	69 g

#### Technical Data for testo 206-pH3:

Refer to the corresponding probe for pH and temperature accuracy.

## testo 206-pH1, compact pH tester for liquids



testo 206-pH1 is ideal for measurements in liquids



The "TopSafe" case protects in tough industrial conditions

### testo 206-pH1, compact pH tester for liquids

Compact pH measuring instrument for measuring liquids. Built-in temperature probe for efficient temperature compensation. Automatic recognition of a stable reading makes it easier to measure. The "TopSafe" case included makes the instrument ideal for outdoor applications or for use in tough industrial conditions.

#### Benefits

- Versatile, accurate pH measuring instrument
- Not affected by dust or dirt thanks to the TopSafe protection case
- Maintenance-free gel electrode
- Built-in temperature probe
- 2 line display
- Automatic full scale value recognition
- 1, 2, or 3 point calibration possible

### testo 206-pH1 applications

- pH measurement in the environmental sector (water, waste water,...)
- Condensate neutralisation (heating engineering/condensing boilers)
- pH applications in the industrial sector (e.g. pH value of lubricants)
- pH measurement in the food sector (e.g. fruit juice production)
- Generally: Liquids in all sectors

### testo 206-pH1 – Instruments Set



testo 206 instrument+probe module pH1 + TopSafe Leak-proof gel storage cap

Belt/wall holder

Part no. 0563 2061

### testo 206-pH1 – Starter Set



testo 206 instrument+probe module pH1 + TopSafe Leak-proof gel storage cap

Belt/wall holder

2 x 250ml buffer solution with dosing chamber (pH 4 and pH 7)

High-standard aluminium storage case

Part no. 0563 2065

## testo 206-pH2, compact pH tester for semi-solid substances



Automatic full scale value recognition and clear 2 line display.

### testo 206-pH2, compact pH tester for semi-solid substances

testo 206-pH2 is a pH measuring instrument for measurements in semi-solid materials, such as jelly, creams, meat, cheese, marmalade and fruit. The combination of a pH penetration tip and temperature probe for efficient temperature compensation is unique. Automatic recognition of a stable reading makes the whole measurement process easier. The "TopSafe" case supplied makes the instrument ideal for outdoor applications and for use in tough industrial conditions.

### testo 206-pH2 applications

- Milk and dairy products (e. g. yoghurt,cheese)
- pH value of mash during the production of spirits
- pH value during food production (e.g. salad dressing)
- Applications in the cosmetics sector (cream production)
- pH monitoring during meat processing



testo 206-pH2 is ideal for measurements in viscoplastic substances.

### Benefits

- Compact pH measuring instrument with penetration tip
- Not affected by dirt and dust thanks to TopSafe protection case
- Maintenance-free gel electrode
- Automatic full scale value recognition
- Built-in temperature probe
- 2 line display
- 1, 2, or 3 point calibration possible

### testo 206-pH2 – Instruments Set



testo 206 instrument +probe module pH2 + TopSafe Leak-proof gel storage cap

Belt/wall holder

Part no. 0563 2062

**EUR 169.-**

### testo 206-pH2 – Starter Set



testo 206 instrument +probe module pH2 + TopSafe Leak-proof gel storage cap

Belt/wall holder

2 x 250ml buffer solution with dosing chamber (pH 4 and pH 7)

High-standard aluminium storage case

Part no. 0563 2066

## testo 206-pH3, compact pH tester with connection to external BNC probes



testo 206-pH3 facilitates the connection of external pH probes



Automatic temperature compensation in external probes with temperature sensor

### testo 206-pH3, pH tester for connecting external probes

testo 206-pH3 is equipped with a BNC socket which makes it possible to connect all pH probes to the instrument. The temperature value supplied is automatically analysed if Testo pH probes with a built-in temperature sensor are used. In the case of probes without a temperature sensor, the temperature can be set manually. Automatic recognition of a stable reading makes the measurement easier. Thanks to the "TopSafe" protection case, the instrument is ideal for outdoor applications and for use in tough industrial conditions.

### Benefits

- External pH probes can be connected
- Not affected by dirt and dust thanks to the TopSafe protection case
- 2 line display
- Automatic full-scale value recognition
- 1, 2, or 3 point calibration possible

### testo 206-pH3 applications

- All of the probes with BNC plugs available on the market can be connected.
- Testo probes with temperature measurement facilitate automatic temperature compensation.
- Ideal for pH measurements in the lab
- pH monitoring in the environmental sector (water quality, earth samples)
- pH monitoring in the industrial sector (e.g. photo processing vats)

### testo 206-pH3 – Instruments Set



testo 206 instrument+BNC connection socket + TopSafe Belt/wall holder

Part no. 0563 2063

### testo 206 pH3 – Versatile Set



testo 206 instrument + BNC connection socket + TopSafe pH probe Type 14 (not shown) Leak-proof gel storage cap

Belt/wall holder

2 x 250ml buffer solution with dosing chamber (pH 4 and pH 7)

High-standard aluminium storage case

Part no. 0563 2068

### testo 206 pH3 – Affordable Set



testo 206 instrument + BNC connection socket + Top Safe pH probe Type 01

Leak-proof gel storage cap

Belt/wall holder

2 x 250ml buffer solution with dosing chamber (pH 4 and pH 7)

High-standard aluminium storage case

Part no. 0563 2067

## Ordering Data

Qty.	Instruments	Part no.
	testo 205 Starter Set: pH measuring instrument with penetration probe, gel storage cap, wall holder, pH4 buffer (250 ml), pH 7 buffer (250 ml) in an aluminium case	0563 2052
	testo 205 Instruments Set: pH measuring instrument with penetration probe, gel storage cap and wall holder	0563 2051
	testo 206-pH1 - Starter Set: pH measuring instrument with versatile probe, gel storage cap, TopSafe, wall holder, pH4 buffer (250 ml), pH 7 buffer (250 ml) in an aluminium case	0563 2065
	testo 206-pH1 - Instruments Set: pH measuring instrument with versatile probe, gel storage cap, TopSafe and wall holder	0563 2061
	testo 206-pH2 - Starter Set: pH measuring instrument with penetration probe, gel storage cap, TopSafe, wall holder, pH4 buffer (250 ml), pH 7 buffer (250 ml) in an aluminium case	0563 2066
	testo 206-pH2 - Instruments Set: pH measuring instrument with penetration probe, gel storage cap, TopSafe and wall holder	0563 2062
	testo 206-pH3 - Instruments Set: pH measuring instrument with BNC connection socket, TopSafe and wall holder	0563 2063
	testo 206-pH3 - Affordable Set: pH measuring instrument with BNC socket, pH probe Type 01, gel storage cap, TopSafe, wall holder, pH4 buffer (250 ml), pH 7 buffer (250 ml) in an aluminium case	0563 2067
	testo 206-pH3 - Versatile Set: pH measuring instrument with BNC socket, pH probe Type 14, gel storage cap, TopSafe, wall holder, pH4 buffer (250 ml), pH 7 buffer (250 ml) in an aluminium case	0563 2068

Subject to change without notice.

Qty.	Accessories	Part no.
	Spare pH probe for testo 205 incl. gel storage cap	0650 2051
	Spare pH probe pH1 for testo 206 incl. gel storage cap	0650 2061
	Spare pH probe pH2 for testo 206 incl. gel storage cap	0650 2062
	Spare probe Type 01 for testo 206-pH3, incl. gel storage cap	0650 2063
	Spare probe Type 14 for testo 206-pH3, incl. gel storage cap	0650 2064
	Storage cap for testo 205 with KCl gel filling	0554 2051
	Storage cap for testo 205 with KCl gel filling (pack of 3)	0554 2052
	Storage cap for testo 206 with KCl gel filling	0554 2067
	Storage cap for testo 206 with KCl gel filling (pack of 3)	0554 2068
	pH buffer solution 4.01 in a dosing bottle (250 ml)	0554 2061
	pH buffer solution 4.01 in a dosing bottle (pack of 3 each with 250 ml)	0554 2062
	pH buffer solution 7.00 in a dosing bottle (250 ml)	0554 2063
	pH buffer solution 7.00 in a dosing bottle (pack of 3 each with 250 ml)	0554 2064
	pH buffer solution 10.01 in a dosing bottle (250 ml)	0554 2065
	pH buffer solution 10.01 in a dosing bottle (pack of 3 each with 250 ml)	0554 2066

### testo 230, The Classic in the Compact Class



testo 230 is a complete pH measuring instrument combined with a high standard thermometer in a compact, water-proof housing. The redox voltage can be measured via the redox electrode Type 06. The instrument has automatic temperature compensation and can be calibrated in the pH range using standard and DIN buffers.

Part no. 0560 2304

For more detailed information about testo 230, please send for the "pH measuring instrument plus thermometer" (Part no. 0981 3434).

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#### Sender

Name	Address
Company	
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