

# TEST KIT (ชุดทดสอบ)

## TEST KIT FOR INDUSTRIAL & ENVIRONMENT

(ชุดทดสอบด้านอุตสาหกรรมและสิ่งแวดล้อม)

### PH TEST KIT (ชุดทดสอบความเป็นกรด-ด่าง)

#### pH indicators

##### pH-Fix – unmatched pH test strips

pH-Fix is a high quality, color-fixed pH test strip. For many years it has been very popular among professional analysts as well as chemical laymen.

Benefits:

##### Long handle

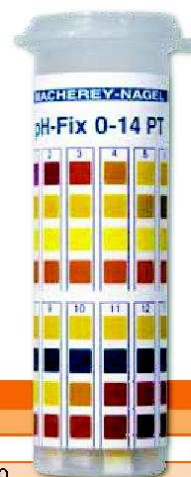
It prevents fingers from coming into contact with the sample. This adds handling convenience and **increases safety** of operation.

##### Color-fixed reactive pads

To prevent bleeding, the pH-indicator is chemically bound to the cellulose fiber. This **effectively protects the sample** against contamination and enables measurements even in weakly buffered or strongly alkaline solutions.

##### Brilliant color chart

Four different color blocks for each pH-value (pH-Fix 0–14) enable **highly precise pH-determination** and make the application rapid and reliable.



##### pH-Fix PT – convenient PlopTop tubes

pH-Fix PT is an alternative packaging for pH-Fix test strips, especially developed for convenience and safety in everyday lab work

Benefits:

##### PlopTop closure

The cap of the tube can be easily opened and closed with the thumb. This makes working with pH-Fix PT **comfortable and relaxing**.

##### Heavy duty tubes

pH-Fix PT comes in virtually unbreakable HDPP tubes that provide an **especially safe** packing.

Test	Gradation	REF
<b>Classic flat box with 100 test strips 6 x 85 mm</b>		
pH-Fix 0–14	0 · 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12 · 13 · 14	921 10
pH-Fix 0.0–6.0	0 · 0.5 · 1.0 · 1.5 · 2.0 · 2.5 · 3.0 · 3.5 · 4.0 · 4.5 · 5.0 · 5.5 · 6.0	921 15
pH-Fix 2.0–9.0	2.0 · 2.5 · 3.0 · 3.5 · 4.0 · 4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0	921 18
pH-Fix 4.5–10.0 <b>CE</b> <sup>1)</sup>	4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0 · 9.5 · 10.0	921 20
pH-Fix 6.0–10.0	6.0 · 6.4 · 6.7 · 7.0 · 7.3 · 7.6 · 7.9 · 8.2 · 8.4 · 8.6 · 8.8 · 9.1 · 9.5 · 10.0	921 22
pH-Fix 7.0–14.0	7.0 · 7.5 · 8.0 · 8.5 · 9.0 · 9.5 · 10.0 · 10.5 · 11.0 · 11.5 · 12.0 · 12.5 · 13.0 · 13.5 · 14.0	921 25
pH-Fix 0.3–2.3	0.3 · 0.7 · 1.0 · 1.3 · 1.6 · 1.9 · 2.3	921 80
pH-Fix 1.7–3.8	1.7 · 2.0 · 2.3 · 2.6 · 2.9 · 3.2 · 3.5 · 3.8	921 90
pH-Fix 3.1–8.3 <b>CE</b> <sup>1)</sup>	3.1 · 3.5 · 3.9 · 4.3 · 4.7 · 5.1 · 5.5 · 5.9 · 6.3 · 6.7 · 7.1 · 7.5 · 7.9 · 8.3	921 35
pH-Fix 3.6–6.1 <b>CE</b> <sup>1)2)</sup>	3.6 · 4.1 · 4.4 · 4.7 · 5.0 · 5.3 · 5.6 · 6.1	921 30
pH-Fix 5.1–7.2	5.1 · 5.4 · 5.7 · 6.0 · 6.3 · 6.6 · 6.9 · 7.2	921 40
pH-Fix 6.0–7.7	6.0 · 6.4 · 6.7 · 7.0 · 7.3 · 7.7	921 50
pH-Fix 7.5–9.5	7.5 · 7.9 · 8.2 · 8.4 · 8.6 · 8.8 · 9.1 · 9.5	921 60
pH-Fix 7.9–9.8	7.9 · 8.3 · 8.6 · 8.9 · 9.1 · 9.4 · 9.8	921 70
<b>PlopTop tube with 100 test strips 6 x 85 mm</b>		
pH-Fix 0–14 PT	0 · 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12 · 13 · 14	921 11
pH-Fix 3.6–6.1 PT <b>CE</b> <sup>1)2)</sup>	3.6 · 4.1 · 4.4 · 4.7 · 5.0 · 5.3 · 5.6 · 6.1	921 31
pH-Fix 4.5–10.0 PT	4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0 · 9.5 · 10.0	921 21

**CE:** CE-marked according to <sup>1)</sup> the IVD-directive 98/79/EG <sup>2)</sup> the directive for medical products 93/42/EWG

## pH indicators

### pH indicator papers – standard for many applications

pH indicator papers have been on the market for decades and are the standard for many applications. For each pH-value these papers show a single color which can be matched with the color scale at intervals of 0.2–1 pH.

The characteristic features of pH indicator papers are:

pH indicators are supplied in plastic reels that ensure long term stability and protection against many external influences. The indicator paper will **always** be **ready-to-use** when needed.

pH indicators are manufactured from high quality filter papers from MACHEREY-NAGEL. Combined with our ISO 9001 quality control scheme this ensures optimal quality. The user will always get **reliable readings**.

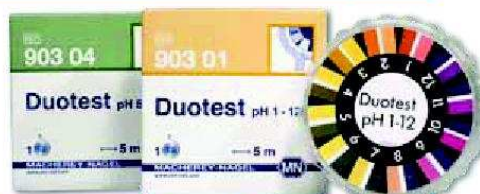
The colors of the color scales are specially mixed to perfectly match the reaction color of the indicator papers. This makes the read-off of results **easy and accurate**.



Test	Gradation	Presentation	REF
Universal indicator paper 1–11	1·2·3·4·5·6·7·8·9·10·11	reel of 5 m x 7 mm	902 01
Universal indicator paper 1–11	1·2·3·4·5·6·7·8·9·10·11	booklet of 100 strips 10 x 70 mm	902 03
Universal indicator paper 1–14	1·2·3·5·6·7·8·9·10·12·14	reel of 5 m x 7 mm	902 04
Special indicator paper 0.5–5.5	0.5·1.0·1.5·2.0·2.5·3.0·3.5·4.0·4.5·5.0·5.5	reel of 5 m x 7 mm	902 05
Special indicator paper 3.8–5.8	<3.8·3.8·4.1·4.3·4.5·4.7·4.9·5.2·5.5·5.8·>5.8	reel of 5 m x 7 mm	902 06
Special indicator paper 4.0–7.0	4.0·4.3·4.6·4.9·5.2·5.5·5.8·6.1·6.4·6.7·7.0	reel of 5 m x 7 mm	902 07
Special indicator paper 5.4–7.0	<5.4·5.4·5.7·6.0·6.2·6.4·6.7·7.0·>7.0	reel of 5 m x 7 mm	902 08
Special indicator paper 5.5–9.0	5.5·6.0·6.5·7.0·7.5·8.0·8.5·9.0	reel of 5 m x 7 mm	902 09
Special indicator paper 6.4–8.0	<6.4·6.4·6.6·6.8·7.0·7.2·7.4·7.6·7.8·8.0·>8.0	reel of 5 m x 7 mm	902 10
Special indicator paper 7.2–9.7	<7.2·7.2·7.5·7.8·8.1·8.4·8.7·9.0·9.3·9.7·>9.7	reel of 5 m x 7 mm	902 11
Special indicator paper 8.0–10.0	8.0·8.2·8.4·8.7·9.0·9.2·9.6·10.0	reel of 5 m x 7 mm	902 12
Special indicator paper 9.0–13.0	9.0·9.5·10.0·10.5·11.0·11.5·12.0·12.5·13.0	reel of 5 m x 7 mm	902 13
Special indicator paper 12.0–14.0	12.0·12.5·13.0·13.5·14.0	reel of 5 m x 7 mm	902 14

### Duotest – double zone pH-papers

These indicator papers show two different colors for each pH-value at intervals of 0.3–1 pH-unit. This allows more accurate reading and good estimation of intermediate values.



Test	Gradation	Presentation	REF
Duotest 1–12	1·2·3·4·5·6·7·8·9·10·11·12	reel of 5 m x 10 mm	903 01
Duotest 1.0–4.3	1.0·1.3·1.6·1.9·2.2·2.5·2.8·3.1·3.4·3.7·4.0·4.3	reel of 5 m x 10 mm	903 02
Duotest 3.5–6.8	3.5·3.8·4.1·4.4·4.7·5.0·5.3·5.6·5.9·6.2·6.5·6.8	reel of 5 m x 10 mm	903 03
Duotest 5.0–8.0	5.0·5.3·5.6·5.9·6.2·6.5·6.8·7.1·7.4·7.7·8.0	reel of 5 m x 10 mm	903 04
Duotest 7.0–10.0	7.0·7.3·7.6·7.9·8.2·8.5·8.8·9.1·9.4·9.7·10.0	reel of 5 m x 10 mm	903 05
Duotest 9.5–14.0	9.5·10.0·10.5·11.0·11.5·12.0·12.5·13.0·13.5·14.0	reel of 5 m x 10 mm	903 06

### Tritest – triple zone pH-papers

For most precise reading these papers show three different colors for each full pH unit. Tritest L is specially equipped with a hydrophobic barrier between the different indicators. As the different colors will not mix this ensures optimal usability.



Test	Gradation	Presentation	REF
Tritest 1–11	1·2·3·4·5·6·7·8·9·10·11	reel of 5 m x 10 mm	905 01
Tritest L 1–11	1·2·3·4·5·6·7·8·9·10·11	reel of 6 m x 14 mm	905 10



> Further information in our brochure "pH tests at a glance" (W 285115)



## pH test strips and papers

### pH determination made easy

To measure the pH swiftly and without using instruments, simply use Merck's all-purpose pH indicator papers and strips.

The pH tests are suited for all media in environmental analysis and in industrial in-process controls.

The visual Aquamerck® test kits are predestined for all applications in which the use of pH indicator solutions is required.

Merckoquant®  
Products  
from page 18

Aquamerck®  
Microquant®  
Aquaquant®  
from page 26

Reflectoquant®  
Products  
from page 44

Spectroquant®  
Products  
from page 52

Turbiquant®  
Products  
from page 116



The broad pH test range offers you an optimal solution for each application area.

## The advantages of Merck's pH tests

- Rapid on-the-spot pH determination
- More precise evaluation thanks to differentiated colour graduations
- Expressive results for environmental analysis and in-process controls
- Calibration and checking of the products by certified buffer solutions

### pH indicator papers

**The traditional option:** Our pH indicator papers consist of high-quality filter papers that are impregnated with indicator or mixed-indicator solutions, then dried and cut to size. We generally supply them in the roll format. This has the advantage that the tests can be better protected against external effects, such as e.g. moisture, light, and ambient gases, and can thus be stored for a longer time.

### pH indicator strips – non-bleeding

**The universal option:** Our pH indicator strips contain special indicator dyes that are covalently bound to the reagent papers. This special method of manufacture gives the pH indicator strips decisive advantages over the indicator papers: since the indicator does not bleed, the strips can be left in place in the measurement medium for an indefinite time without contaminating the medium.

### Shelf-life and storage

Our indicator papers and strips can be used for 3 to 5 years when stored at temperatures of 10 to 25 °C, protected from light in a dry laboratory atmosphere. To ensure optimal protection of the tests, the package should be closed immediately after removal of each strip or paper.

### Package sizes

We standardly pack our indicator papers in lengths of 4.8 meters in a roll dispenser. Our indicator test strips are packed in boxes containing 100 strips each. On request, from a defined order size upwards, the customer can also receive singly sealed test strips and indicator papers in other formats.

### Quality assurance

Merck checks and calibrates its tests using certified buffer solutions. These buffer solutions can be traced back directly to primary reference materials originating from NIST and PTB. This enables us to maintain a consistently high quality of our pH tests.



# pH test strips and papers

## pH indicator papers

Product	pH-measuring range	Graduation in pH-units	Roll length/ number of strips	Ord. No.
<b>Roll format</b>				
pH-Box	0.5 – 13.0	0.5	3 x 4.8 m	1.09565.0001
pH-indicator paper Replacement rolls*	0.5 – 5.0		3 x 4.8 m	1.09568.0003
pH-indicator paper Replacement rolls*	5.5 – 9.0		3 x 4.8 m	1.09569.0003
pH-indicator paper Replacement rolls*	9.5 – 13.0		3 x 4.8 m	1.09570.0003
pH-indicator paper Universal indicator	1 – 14	1	3 x 4.8 m	1.10962.0003
pH-indicator paper Replacement roll*			3 x 4.8 m	1.10232.0003
pH-indicator paper Universal indicator	1 – 10	1	3 x 4.8 m	1.09526.0003
pH-indicator paper Replacement roll*			3 x 4.8 m	1.09527.0003
pH-indicator paper Acilit®	0.5 – 5.0	0.5	3 x 4.8 m	1.09560.0003
pH-indicator paper Replacement roll*			3 x 4.8 m	1.09568.0003
pH-indicator paper Neutralit®	5.5 – 9.0	0.5	3 x 4.8 m	1.09564.0003
pH-indicator paper Replacement roll*			3 x 4.8 m	1.09569.0003
pH-indicator paper Alkalit®	9.5 – 13.0	0.5	3 x 4.8 m	1.09562.0003
pH-indicator paper Replacement roll*			3 x 4.8 m	1.09570.0003
pH-indicator paper Special indicator	3.8 – 5.4	0.2 / 0.3	3 x 4.8 m	1.09555.0003
pH-indicator paper Special indicator	5.4 – 7.0	0.2 / 0.4	3 x 4.8 m	1.09556.0003
pH-indicator paper Special indicator	6.4 – 8.0	0.2 / 0.3	3 x 4.8 m	1.09557.0003
pH-indicator paper Special indicator	8.2 – 10.0	0.2 / 0.4	3 x 4.8 m	1.09558.0003
Litmus paper, blue Reag. Ph Eur	pH < 7 red / > 7 blue	–	3 x 4.8 m	1.09486.0003
Litmus paper, neutral	pH < 7 red / > 7 blue	–	3 x 4.8 m	1.09518.0003
Litmus paper, red Reag. Ph Eur	pH < 7 red / > 7 blue	–	3 x 4.8 m	1.09489.0003
Congored paper Reag. Ph Eur	pH < 3 blue-violet/ > 5 red-orange	–	3 x 4.8 m	1.09514.0003
Phenolphthalein paper	pH < 8.5 colourless/ > 8.5 red	–	3 x 4.8 m	1.09521.0003
Brilliant yellow paper	pH < 6.5 yellow / > 8 red	–	3 x 4.8 m	1.09503.0003

### Booklet format

pH-indicator paper Universal indicator	1 – 10	1	3 x 100	1.09525.0003
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\* Replacement roll without colour scale

On request we are ready to supply pH-indicator paper as special customer orders in other presentations or dimensions, such as DIN A4 and larger.



## pH indicator strips (non-bleeding)

Product	pH-measuring range	Graduation in pH-units	Number of test strips	Ord. No.
pH-indicator strips Universal indicator	0 – 14	1	100	1.09535.0001
pH-indicator strips Acilit®	0 – 6.0	0.5	100	1.09531.0001
pH-indicator strips Neutralit®	5.0 – 10.0	0.5	100	1.09533.0001
pH-indicator strips Alkalit®	7.5 – 14.0	0.5	100	1.09532.0001
pH-indicator strips	2.0 – 9.0	0.5	100	1.09584.0001
pH-indicator strips Special indicator	0 – 2.5	0.3 / 0.5	100	1.09540.0001
pH-indicator strips Special indicator	2.5 – 4.5	0.2 / 0.5	100	1.09541.0001
pH-indicator strips Special indicator	4.0 – 7.0	0.2 / 0.5	100	1.09542.0001
pH-indicator strips Special indicator	6.5 – 10.0	0.2 / 0.5	100	1.09543.0001
pH-indicator strips Special indicator	11.0 – 13.0	0.2 / 0.5	100	1.09545.0001

### For professional use

<b>NEW</b>	pH-indicator strips Special indicator for pH-measurements in turbid solutions (suspensions)	2 – 9	1	100	1.09502.0001
	pH-indicator strips Special indicator for pH-measurements in meat	5.2 – 7.2	0.1 / 0.2	100	1.09547.0001
<b>NEW</b>	pH-indicator strips, CE-certified for in vitro diagnostics for semi-quantitative determination of pH in human urine	2.0 – 9.0	0.5	100	1.09584.1111
<b>NEW</b>	pH-indicator strips, singly sealed	2 – 9	without colour scale	1000	1.09450.0010
	pH-indicator strips, singly sealed	2 – 9	without colour scale	25000	1.09450.0013

Individually sealed pH-indicator strips in package units of 1000, 5000, and 25000 pieces are available on request, also for other pH-ranges.

**!** **pH indicator strips** Singly sealed pH indicator strips can be included or stuck in books, magazines, or brochures. These pH indicator strips are also used for product promotion and product differentiation purposes by adding them to a specific product.

