

Test papers and test strips

pH tests

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pH-Fix

Unmatched pH test strips

For many years untrained users as well as analytical professionals appreciate the experience of easy pH testing with pH-Fix. In contrast to common indicator papers, the indicator dyes in pH-Fix test strips are chemically bound to the test pads. This patented technology prevents bleeding of the dyes and therefore a contamination of the sample, even in highly alkaline solutions. The fixation enables the strips to remain in solution over extended periods of time allowing a safe pH determination even in weakly buffered solutions.

Good to know

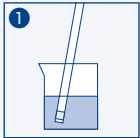
Many customers receive our pH-Fix test strips as an OEM product.



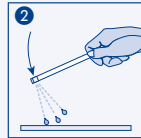
How it's done



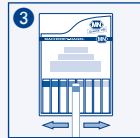
Using pH-Fix test strips



Dip in



Shake off



Read result

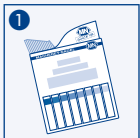
Optimized packages

In the classic packaging, the smart corner of the box safely prevents jamming of test strips. By simply tilting the box the strips fall easily into the smart corner allowing the closing with maximal comfort.

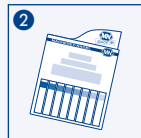
How it's done



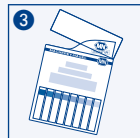
The smart corner



Remove strip



Hold box diagonally



Close easily

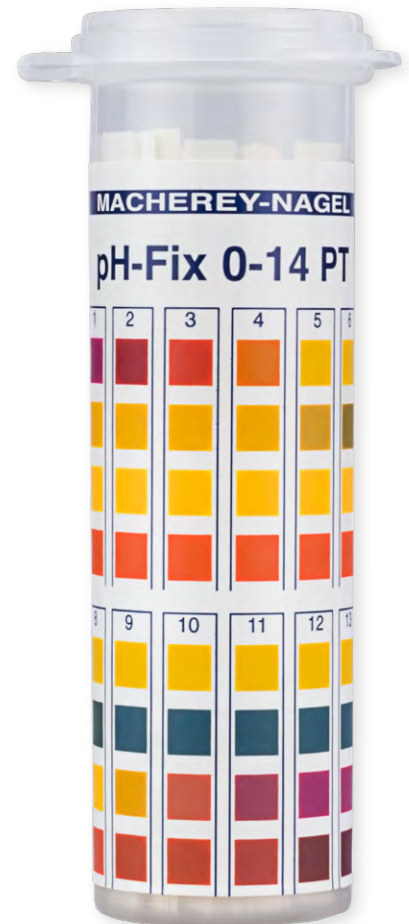
Especially users in the medical sector appreciate the robust PlopTop tube. The tube is higher than the length of the strips and can be easily opened and closed with the thumb of the holding hand. There is no risk of jamming the strip. The tube is virtually unbreakable and stands firmly on any flat surface.

CE-mark for medical applications

Some pH-Fix test strips are tested and approved for medical applications and carry a CE-mark for in-vitro-diagnostics 98/78/EG (for details see table on page 54). They meet the special demands of health care professionals and ensure safe results for medical pH testing.

Automatic evaluation with the QUANTOFIX® Relax

The strip reader QUANTOFIX® Relax (see page 154) allows the easy and reliable documentation of pH testing. The system provides objective and quantitative results. It allows printing and storing of test data including time and sample ID. Test strips covering the complete pH range can be evaluated using the QUANTOFIX® Relax (for details see table on page 54).



Rapid

- Dip & Read
- Results in seconds
- Always ready for use

Easy

- No calibration
- No maintenance
- No accessories

Reliable

- Long handle for sufficient hand-sample-distance
- Brilliant color chart for precise readings
- Automatic evaluation with QUANTOFIX® Relax for safe documentation

Good to know

Many pH-Fix test strips can be also evaluated on the strip reader QUANTOFIX® Relax (see page 154).



Ordering information

Test papers and test strips

Test	REF	Measuring range (visual)	Measuring range (instrumental) ¹⁾
■ 0-14	92110	0 · 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12 · 13 · 14	1-13
■ 0.0-6.0	92115	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	0.5-6.0
■ 2.0-9.0	92118	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	2.0-9.0
■ 4.5-10.0	92120	4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0 · 9.5 · 10.0	4.5-10.0
■ 6.0-10.0	92122	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	6.0-10.0
■ 7.0-14.0	92125	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	7.0-13.5
■ 0.3-2.3	92180	0.3 · 0.7 · 1.0 · 1.3 · 1.6 · 1.9 · 2.3	-
■ 1.7-3.8	92190	1.7 · 2.0 · 2.3 · 2.6 · 2.9 · 3.2 · 3.5 · 3.8	-
■ 3.1-8.3	92135	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	-
■ 3.6-6.1	92130	3.6 · 4.1 · 4.4 · 4.7 · 5.0 · 5.3 · 5.6 · 6.1	3.6-6.1
■ 4.0-7.0	92137	4.0 · 4.4 · 4.7 · 5.0 · 5.3 · 5.5 · 5.8 · 6.1 · 6.5 · 7.0	-
■ 5.1-7.2	92140	5.1 · 5.4 · 5.7 · 6.0 · 6.3 · 6.6 · 6.9 · 7.2	-
■ 6.0-7.7	92150	6.0 · 6.4 · 6.7 · 7.0 · 7.3 · 7.7	6.0-7.7
■ 7.5-9.5	92160	7.5 · 7.9 · 8.2 · 8.4 · 8.6 · 8.8 · 9.1 · 9.5	-
■ 7.9-9.8	92170	7.9 · 8.3 · 8.6 · 8.9 · 9.1 · 9.4 · 9.8	-
■ 0-14 PT	92111	0 · 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12 · 13 · 14	1-13
■ 3.6-6.1 PT	92131	3.6 · 4.1 · 4.4 · 4.7 · 5.0 · 5.3 · 5.6 · 6.1	3.6-6.1
■ 4.5-10.0 PT	92121	4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0 · 9.5 · 10.0	4.5-10.0

CE/ gastric juice: According to IVD directive 98/79/EG approved for pH determination in gastric juice, for professional use only.

CE/ vaginal secretion: According to IVD directive 98/79/EG approved for pH determination in vaginal secretion, for professional use only.

¹⁾ Together with QUANTOFIX® Relax, the test strips may not be used for any medical application.



Number of tests	Shelf life	QUANTOFIX® Relax	Classic flat box	PlopTop tube	CE / gastric juice	CE / vaginal secretion	Test
100	4 years	■	■				0-14
100	4 years	■	■				0.0-6.0
100	4 years	■	■				2.0-9.0
100	4 years	■	■				4.5-10.0
100	4 years	■	■				6.0-10.0
100	4 years	■	■				7.0-14.0
100	4 years		■				0.3-2.3
100	4 years		■				1.7-3.8
100	4 years		■				3.1-8.3
100	4 years	■	■				3.6-6.1
100	4 years		■				4.0-7.0
100	4 years		■				5.1-7.2
100	4 years	■	■				6.0-7.7
100	4 years		■				7.5-9.5
100	4 years		■				7.9-9.8
100	4 years	■		■			0-14 PT
100	4 years	■		■		■	3.6-6.1 PT
100	4 years	■		■	■		4.5-10.0 PT

QUANTOFIX® Relax

Reflectometer for evaluation of test strips





Perfect optic – Exact results

- Intuitive operation
- Highest precision
- Reproducible results independently from the user
- Printout of the results for optimal documentation



PEHANON®

pH determination in colored samples

PEHANON® test strips unify pH indicator and reference color chart on one strip. Any sample color has the same effect on both, the reference colors and the reactive pad, allowing unadulterated pH reading even in colored solutions.

Safe testing of hazardous samples

An invisible hydrophobic barrier just above the top color field prevents migration of the sample. The handle remains dry and clean and the user is safely protected from contamination due to capillary rise.

No separate color chart needed

PEHANON® test strips can be read without a separate color chart. Workers in production can use single strips instead of complete packs making the product very economical.



Ordering information

Test	REF	Measuring range	Number of Tests	Shelf life
■ pH 1–12	90401	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12	200	3 years
■ pH 0–1.8	90411	0 · 0.3 · 0.6 · 0.8 · 1.0 · 1.2 · 1.5 · 1.8	200	3 years
■ pH 1.0–2.8	90412	1.0 · 1.3 · 1.6 · 1.8 · 2.0 · 2.2 · 2.5 · 2.8	200	3 years
■ pH 1.8–3.8	90413	1.8 · 2.1 · 2.4 · 2.7 · 3.0 · 3.2 · 3.5 · 3.8	200	3 years
■ pH 2.8–4.6	90414	2.8 · 3.1 · 3.4 · 3.6 · 3.8 · 4.0 · 4.3 · 4.6	200	3 years
■ pH 3.8–5.5	90415	3.8 · 4.0 · 4.2 · 4.4 · 4.6 · 4.9 · 5.2 · 5.5	200	3 years
■ pH 4.0–9.0	90424	4.0 · 4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0	200	3 years
■ pH 5.2–6.8	90416	5.2 · 5.5 · 5.7 · 5.9 · 6.1 · 6.3 · 6.5 · 6.8	200	3 years
■ pH 6.0–8.1	90417	6.0 · 6.3 · 6.6 · 6.9 · 7.2 · 7.5 · 7.8 · 8.1	200	3 years
■ pH 7.2–8.8	90419	7.2 · 7.4 · 7.6 · 7.8 · 8.0 · 8.2 · 8.5 · 8.8	200	3 years
■ pH 8.0–9.7	90420	8.0 · 8.2 · 8.4 · 8.6 · 8.8 · 9.1 · 9.4 · 9.7	200	3 years
■ pH 9.5–12.0	90421	9.5 · 10.0 · 10.5 · 11.0 · 11.5 · 12.0	200	3 years
■ pH 10.5–13.0	90422	10.5 · 11.0 · 11.5 · 12.0 · 12.5 · 13.0	200	3 years
■ pH 12.0–14.0	90423	12.0 · 12.5 · 13.0 · 13.5 · 14.0	200	3 years



Universal- and indicator papers

pH indicator papers - standard for many applications

pH indicator papers have been available 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 units. The indicator papers come in plastic reels that ensure long-term stability and protection against many external influences. They will be always ready-to-use when needed.

MACHEREY-NAGEL also controls the production of the raw papers which ensures – in combination with our ISO 9001 QC system – the high quality of the indicator papers.

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

Good to know

We produce pH indicator booklets for pharmaceutical industries with a CE-marking for urine diagnostics.



Ordering information

Test	REF	REF refill	Measuring range	Presentation	Shelf life
■ pH 1–11	90201	90202	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11	Reel of 5 m length and 7 mm width	3 years
■ pH 1–11	90203	–	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11	Booklet with 100 strips 10 x 70 mm	3 years
■ pH 1–14	90204	90224	1 · 2 · 3 · 5 · 6 · 7 · 8 · 9 · 10 · 12 · 14	Reel of 5 m length and 7 mm width	3 years
■ pH 0.5–5.5	90205	90225	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 length and 7 mm width	3 years
■ pH 3.8–5.8	90206	90226	< 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 length and 7 mm width	3 years
■ pH 4.0–7.0	90207	90227	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 length and 7 mm width	3 years
■ pH 5.4–7.0	90208	90228	< 5.4 · 5.4 · 5.7 · 6.0 · 6.2 · 6.4 · 6.7 · 7.0 · > 7.0	Reel of 5 m length and 7 mm width	3 years
■ pH 5.5–9.0	90209	90229	5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0	Reel of 5 m length and 7 mm width	3 years
■ pH 6.4–8.0	90210	90230	< 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 length and 7 mm width	3 years
■ pH 7.2–9.7	90211	90231	< 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 length and 7 mm width	3 years
■ pH 8.0–10.0	90212	90232	8.0 · 8.2 · 8.4 · 8.7 · 9.0 · 9.2 · 9.6 · 10.0	Reel of 5 m length and 7 mm width	3 years
■ pH 9.0–13.0	90213	90233	9.0 · 9.5 · 10.0 · 10.5 · 11.0 · 11.5 · 12.0 · 12.5 · 13.0	Reel of 5 m length and 7 mm width	3 years
■ pH 12.0–14.0	90214	90234	12.0 · 12.5 · 13.0 · 13.5 · 14.0	Reel of 5 m length and 7 mm width	3 years

refill: Refill pack



Duotest and Tritest

pH papers with multiple indicator zones

By the combination of several indicators on one test paper, a better recognition between different pH values is achieved. This makes the correct pH reading easier.

Duotest – two indicator zones for higher accuracy

Duotest indicator papers combine two different indicator zones on a single strip. The zones are separated by a hydrophobic barrier, which effectively prevents mixing of the reaction colors and increases the mechanical stability.

Tritest – three indicator zones for highest precision

Tritest indicator paper has three different indicator zones on a single paper. The three zones guarantee optimal color differences and safe determination of in-between values. Tritest indicator paper is available for a pH range from 1–11 and feature 1 pH unit increments.

In Tritest L indicator paper, two hydrophobic barriers separate the indicator zones. Even in strongly alkaline solutions, the colors of the zones do not mix.



Ordering information

Duotest

Test	REF	REF refill	Measuring range	Presentation	Shelf life
■ pH 1–12	90301	90311	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12	Reel of 5 m length and 10 mm width	3 years
■ pH 1.0–4.3	90302	90312	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 length and 10 mm width	3 years
■ pH 3.5–6.8	90303	90313	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 length and 10 mm width	3 years
■ pH 5.0–8.0	90304	90314	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 length and 10 mm width	3 years
■ pH 7.0–10.0	90305	90315	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 length and 10 mm width	3 years
■ pH 9.5–14.0	90306	90316	9.5 · 10.0 · 10.5 · 11.0 · 11.5 · 12.0 · 12.5 · 13.0 · 13.5 · 14.0	Reel of 5 m length and 10 mm width	3 years

refill: Refill pack

Tritest

Test	REF	REF refill	Measuring range	Presentation	Shelf life
■ pH 1–11	90501	90502	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11	Reel of 5 m length and 10 mm width	3 years
■ L pH 1–11	90510	90511	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11	Reel of 6 m length and 14 mm width	3 years

refill: Refill pack

pH papers without color chart and indicator solutions

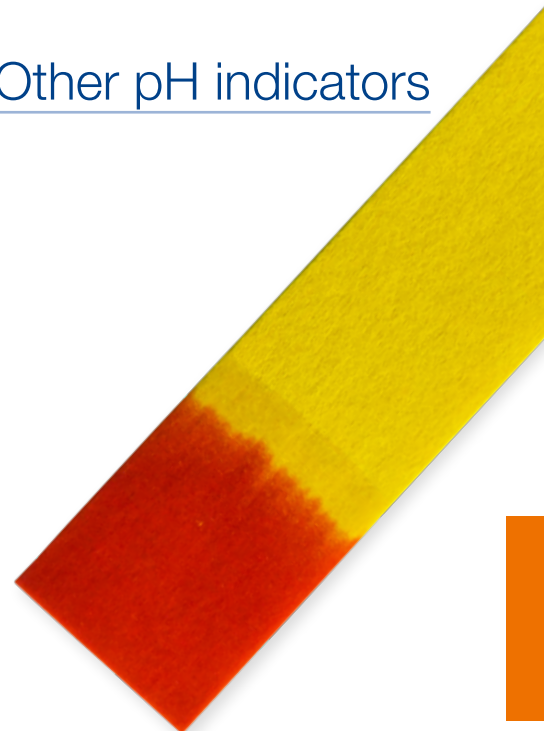
For some specific analytical questions, qualitative pH papers or indicator solutions are used.

Simplest acid/base determination

Qualitative pH papers without color chart are simple, completely impregnated indicator papers. They indicate if the pH of a solution is above or below the transition point (color change) and are useful to distinguish between acids and bases.

pH determinations in weakly buffered solutions

UNISOL indicator solutions are used for pH determination in pure water, in surface waters and in very dilute acids or bases. An indicator solution is added to the sample and the reaction color is compared with a color scale. Therefore, they allow the easy and reliable pH determination in weakly buffered solutions.



Ordering information

pH papers without color scale

Test	REF	REF refill	Color change / pH	Presentation	Shelf life	GHS
■ Brilliant yellow paper	90701	–	yellow → red / 6.7–7.9	Box of 200 strips 20 x 70 mm	2 years	
■ Congo paper MN 816 N	90702	90703	red → blue / 5.0–3.0	Reel of 5 m length and 7 mm width	2 years	■
■ Congo paper MN 616 T	90704	–	red → blue / 5.0–3.0	Box of 200 strips 20 x 70 mm	2 years	■
■ Congo paper MN 260 HE	90705	–	red → blue / 5.0–3.0	Box of 200 strips 20 x 70 mm	2 years	■
■ Litmus paper blue	91106	91116	blue → red / 8.0–5.0	Reel of 5 m length and 7 mm width	3 years	
■ Litmus paper blue	91126	–	blue → red / 8.0–5.0	Booklet of 100 strips 10 x 70 mm	3 years	
■ Litmus paper neutral	91107	91117	red → violet-blue / 5.0–8.0	Reel of 5 m length and 7 mm width	3 years	
■ Litmus paper neutral	91127	–	red → violet-blue / 5.0–8.0	Booklet of 100 strips 10 x 70 mm	3 years	
■ Litmus paper red	91108	91118	red → blue / 5.0–8.0	Reel of 5 m length and 7 mm width	3 years	
■ Litmus paper red	91128	–	red → blue / 5.0–8.0	Booklet of 100 strips 10 x 70 mm	3 years	
■ Nitrazine yellow paper	90711	–	yellow → blue-violet / 6.0–7.0	Box of 200 strips 20 x 70 mm	2 years	
■ Phenolphthalein paper	90712	90713	white → red / 8.3–10.0	Reel of 5 m length and 7 mm width	2 years	

refill: Refill pack

GHS: Globally harmonized system: This product contains harmful substances which must be specially labeled as hazardous. For detailed information please see the SDS.

UNISOL

Test	REF	Measuring range	Presentation	Shelf life	GHS
■ 410, pH 4–10	91002	4.0 · 4.5 · 5.0 · 5.5 · 6.0 · 6.5 · 7.0 · 7.5 · 8.0 · 8.5 · 9.0 · 9.5 · 10.0	1 bottle of 100 mL, color chart + cuvette	3 years	■
■ 113, pH 1–13	91031	1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9 · 10 · 11 · 12 · 13	1 bottle of 100 mL, color chart + cuvette	3 years	■
■ Plastic cuvettes MN 13/72	91039	–	Pack of 5 rectangular cuvettes	–	

GHS: Globally harmonized system: This product contains harmful substances which must be specially labeled as hazardous. For detailed information please see the SDS.