

# Simply rapid MQuant™ and MColorpHast™ the mobile analysis system





EMD Millipore Corp. is a subsidiary of Merck KGaA, Darmstadt, Germany

## Test strips from EMD Millipore Easy - rapid - safe

Of all mobile analysis systems, test strips provide the easiest handling. Such simplicity, however, can only come from a real high-tech product. Test strips are a laboratory on a few square millimeters. Mobility is an essential feature of test strips. They fit into any pocket and can be taken anywhere. As a screening method, they provide the user with a rapid overview of the problem situation and, by helping the user make the correct preliminary choice, can save considerable time and analysis costs. The environmental aspect is also considered: a biologically degradable polyester foil and the low reagent content in the reaction zones assist a problem-free waste disposal.

EMD Millipore offers you different kinds of test strips. To measure the pH on-site quickly without a lot of preparation and without using instruments, simply use EMD Millipore's MColorpHast™ pH test strips and papers.

Furthermore, EMD Millipore offers MQuant™ test strips for the semiquantitative detection of ions and of inorganic and organic substances. They can be used to measure concentrations from as low as 1 or 10 mg/l as the case may be, right up to the g/l range. MQuant™ test strips are high-tech products, which can easily be used anywhere. Quality checks and in-process controls can be performed much more quickly.

Test strips from EMD Millipore – NEW trademarks!

MColorpHast™ pH test strips Test strips

MQuant™

## MColorpHast<sup>™</sup> pH test strips and papers

## pH determination made easy

To measure the pH swiftly and without using instruments, simply use EMD Millipore'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.



## MColorpHast<sup>™</sup> pH test strips and papers

#### The advantages of EMD Millipore pH tests

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

#### MColorpHast™ 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.

#### 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.

#### 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

EMD Millipore 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.

## MColorpHast<sup>™</sup> pH test strips and papers

## pH indicator papers

Product	pH-measuring range	Graduation	Roll length/ number of strips	VWR Cat. No.
Roll format				
pH-Box	0.5 - 13.0		3 x 4.8 m	EM1.09565.0001
pH-indicator paper Replacement rolls*	0.5 - 5.0	0.5-1.0-1.5-2.0-2.5-3.0-3.5-4.0-4.5-5.0	6 x 4.8 m	EM1.09568.0001
pH-indicator paper Replacement rolls*	5.5 - 9.0	5.5-6.0-6.5-7.0-7.5-8.0-8.5-9.0	6 x 4.8 m	EM1.09569.0001
pH-indicator paper Replacement rolls*	9.5 – 13.0	9.5-10.0-10.5-11.0-11.5-12.0-12.5-13.0	6 x 4.8 m	EM1.09570.0001
pH-indicator paper Universal indicator	1 – 14	1.0-2.0-3.0-4.0-5.0-6.0-7.0-8.0-9.0-10.0- 11.0-12.0-13.0-14.0	3 x 4.8 m	EM1.10962.0003
pH-indicator paper Replacement rolls*			6 x 4.8 m	EM1.10232.0001
pH-indicator paper Universal indicator	1 – 10	1.0-2.0-3.0-4.0-5.0-6.0-7.0-8.0-9.0-10.0	3 x 4.8 m	EM1.09526.0003
pH-indicator paper Replacement rolls*			6 x 4.8 m	EM1.09527.0001
pH-indicator paper Acilit®	0.5 - 5.0	0.5-1.0-1.5-2.0-2.5-3.0-3.5-4.0-4.5-5.0	3 x 4.8 m	EM1.09560.0003
pH-indicator paper Replacement rolls*			6 x 4.8 m	EM1.09568.0001
pH-indicator paper Neutralit®	5.5 - 9.0	5.5-6.0-6.5-7.0-7.5-8.0-8.5-9.0	3 x 4.8 m	EM1.09564.0003
pH-indicator paper Replacement rolls*			6 x 4.8 m	EM1.09569.0001
pH-indicator paper Alkalit®	9.5 - 13.0	9.5-10.0-10.5-11.0-11.5-12.0-12.5-13.0	3 x 4.8 m	EM1.09562.0003
pH-indicator paper Replacement rolls*			6 x 4.8 m	EM1.09570.0001
pH-indicator paper Special indicator	3.8 - 5.4	< 3.8-3.8-4.1-4.4-4.6-4.8-5.1-5.4	3 x 4.8 m	EM1.09555.0003
pH-indicator paper Special indicator	5.4 - 7.0	< 5.4-5.4-5.8-6.2-6.4-6.7-7.0->7.0	3 x 4.8 m	EM1.09556.0003
pH-indicator paper Special indicator	6.4 - 8.0	6.4-6.7-7.0-7.2-7.5-7.7-8.0->8.0	3 x 4.8 m	EM1.09557.0003
pH-indicator paper Special indicator	8.2 – 10.0	< 8.2-8.2-8.5-8.8-9.0-9.3-9.6-10.0	3 x 4.8 m	EM1.09558.0003
Litmus paper, blue Reag. Ph Eur	pH < 7 red / > 7 blue	_	3 x 4.8 m	EM1.09486.0003
Litmus paper, red Reag. Ph Eur	pH < 7 red / > 7 blue	-	3 x 4.8 m	EM1.09489.0003
Congo red paper Reag. Ph Eur	pH < 3 blue-violet /	-	3 x 4.8 m	EM1.09514.0003
	> 5 red-orange			
Phenolphthalein paper	pH < 8.5 colorless / > 8.5 red	-	3 x 4.8 m	EM1.09521.0003
Booklet format				
pH-indicator paper Universal indicator	1 – 10	1.0-2.0-3.0-4.0-5.0-6.0-7.0-8.0-9.0-10.0	3 x 100	EM1.09525.0003

On request we are ready to supply pH-indicator paper as special customer orders in other presentations or dimensions.

<sup>\*</sup> Replacement roll without color scale

## pH indicator strips (non-bleeding)

Product	pH-measuring range	Graduation	Number of test strips	VWR Cat. No.
pH-indicator strips Universal indicator	0 – 14	0-1.0-2.0-3.0-4.0-5.0-6.0-7.0-8.0-9.0- 10.0-11.0-12.0-13.0-14.0	100	EM1.09535.0001
			6 x 100	EM1.09535.0007
pH-indicator strips	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	100	EM1.09531.0001
			6 x 100	EM1.09531.0007
pH-indicator strips	5.0 - 10.0	5.0-5.5-6.0-6.5-7.0-7.5-8.0-8.5-9.0-9.5-10.0	100	EM1.09533.0001
			6 x 100	EM1.09533.0007
pH-indicator strips	7.5 – 14.0	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	100	EM1.09532.0001
pH-indicator strips	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	100	EM1.09584.0001
pH-indicator strips Special indicator	0 - 2.5	0-0.5-1.0-1.3-1.6-1.9-2.2-2.5	100	EM1.09540.0001
pH-indicator strips Special indicator	2.5 - 4.5	2.5-3.0-3.3-3.6-3.9-4.2-4.5	100	EM1.09541.0001
pH-indicator strips Special indicator	4.0 - 7.0	4.0-4.4-4.7-5.0-5.3-5.5-5.8-6.1-6.5-7.0	100	EM1.09542.0001
			6 x 100	EM1.09542.0007
pH-indicator strips Special indicator	6.5 – 10.0	6.5-6.8-7.1-7.4-7.7-7.9-8.1-8.3- 8.5-8.7-9.0-9.5-10.0	100	EM1.09543.0001
			6 x 100	EM1.09543.0007
pH-indicator strips Special indicator	11.0 - 13.0	11.0-11.5-11.8-12.1-12.3-12.5-12.8-13.0	100	EM1.09545.0001
For professional use				
pH-indicator strips Special indicator 2.0 – 9.0 for pH-measurements in turbid solutions (suspensions)		2.0-3.0-4.0-5.0-6.0-7.0-8.0-9.0	100	EM1.09502.0001
pH-indicator strips Special indicator for pH-measurements in meat	5.2 - 7.2	5.2-5.6-6.0-6.4-6.8-7.2	100	EM1.09632.0001
pH-indicator strips, singly sealed	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	25000	EM1.09450.0013

Individually sealed pH-indicator strips are available on request, also for other pH-ranges.



## MQuant™

## Test strips from EMD Millipore

#### Universal, fast and simple

Test strips actually constitute a genuine high-tech product: each one is a mobile lab taking up just a few square millimeters and easily fits in your pocket to be taken wherever you go. MQuant™ Test strips are ideally suited for the semiquantitative determination of ions and compounds. They can be used in concentration ranges from 1 resp. 10 mg/l right up to the g/l range.

As a screening tool they enable the user to run a swift check on the contents of a sample and help save many time-consuming and cost-intensive analytical procedures. Quality-and process control operations are carried out more rapidly. Thanks to the PET film and the low reagent content, the test strips are also easy to dispose of.



## The advantages of the MQuant<sup>™</sup> test strips

- Small and easy to handle for on-the-spot use
- Results provided fast and easily
- Broad range with over 50 tests
- Flexible and universal application
- Ideal for screening time and cost-saving

## MQuant™ – take your pick!



MQuant™ test strips yield a rapid measurement result in the semiquantitative range for over 30 parameters.



In some tests the sample must be pretreated. Again; no problem – all the necessary reagents are included in the pack.



Some test strips are also available individually sealed. This keeps them protected against external influences, and they can be easily inserted or stuck in books, magazines, and brochures.



From a given order volume up, MQuant™ test strips can also be supplied in the customer's own package design.

## **MQ**uant<sup>™</sup>

## Test strips from EMD Millipore



1. MQuant™ test strips couldn't be easier to handle.



2. The reaction zones are wetted with the solution to be tested simply by dipping them briefly into the liquid sample. Any excess liquid is then shaken off or removed by drawing the test strip across the edge of the vessel.



 After the specified reaction time of at most one minute has expired, the color of the reaction zone is compared with the color scale printed on the tube label and the corresponding concentration is read.

#### Shelf-life and storage

When stored cool (refrigeration is necessary in some cases) and dry, the test strips can be used at least up to the expiration date printed on the pack. The tube must be reclosed immediately after the removal of each strip to ensure the remaining test strips are protected.

#### Package sizes

Our standard package consists of 100 test strips packed in an aluminium tube. For certain parameters we also offer packs containing 25 test strips. In cases in which sample preparation is necessary, the additionally required reagents are also included in the pack.

#### Quality assurance

EMD Millipore checks and calibrates its tests and the exact comparison colors using certified standard solutions. These solutions can be traced back directly to primary reference materials originating from NIST. This enables us to achieve a consistently high quality of our MQuant™ test strips.

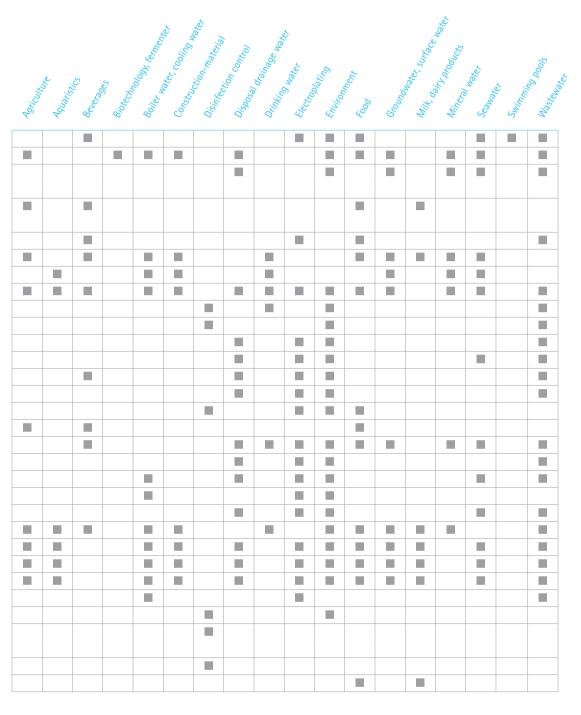


## Index A-P

## MQuant™ Test strips

Param	eter	Graduation	No. of tests	VWR Cat. No.	Method	Туре
A Alumir	nium Test	10-25-50-100-250 mg/l Al	100	EM1.10015.0001	Aurin tricarboxylic acid	R
Ammo	nium Test	10-30-60-100-200-400 mg/l NH <sub>4</sub>	100	EM1.10024.0001	Neßler	R
Arseni	c Test	0.02-0.05-0.1-0.2-0.5 mg/l As	100	EM1.17917.0001	modified Gutzeit test	R
		0.1-0.5-1.0-1.7-3 mg/l As				
Ascorb	ic Acid Test	50-100-200-300-500-700-	100	EM1.10023.0001	Phosphormolybdenum blue	
		1000-2000 mg/l ascorbic acid				
B Blank	strip		100	EM1.11860.0001		
C Calciur	m Test	10-25-50-100 mg/l Ca	60	EM1.10083.0001	Glyoxal bishydroxyanil	R
Carbor	nate Hardness Test	5-10-15-20-30 °e	100	EM1.10648.0001	Mixed indicator	
Chloric	de Test	500-1000-1500-2000-3000 mg/l Cl	100	EM1.10079.0001	Silver chromate	
Chlorir	ne Test	0.5-1-2-5-10-20 mg/l Cl <sub>2</sub>	75	EM1.17925.0001	Redox reaction	
Chlorir	ne Test	25-50-100-200-500 mg/l Cl <sub>2</sub>	100	EM1.17924.0001	Redox reaction	
Chrom	ate Test	3-10-30-100 mg/l CrO <sub>4</sub>	100	EM1.10012.0001	Diphenylcarbazide	R
Cobalt	Test	10-30-100-300-1000 mg/l Co	100	EM1.10002.0001	Rhodanide	
Coppe	r Test	10-30-100-300 mg/l Cu	100	EM1.10003.0001	2,2'-Cuproin	
Cyanid	le Test	1-3-10-30 mg/l CN	100	EM1.10044.0001	Barbituric acid derivative	R
F Formal	ldehyde Test	10-20-40-60-100 mg/l HCHO	100	EM1.10036.0001	Triazole	R
G Glucos	e Test	10-25-50-100-250-500 mg/l Glucose	50	EM1.17866.0001	Enzymatic reaction	
I Iron Te	st	3-10-25-50-100-250-500 mg/l Fe(II)	100	EM1.10004.0001	2,2'-Bipyridine	
L Lead Te	est	20-40-100-200-500 mg/l Pb	100	EM1.10077.0001	Rhodizonic acid	R
M Manga	nese Test	2-5-20-50-100 mg/l Mn	100	EM1.10080.0001	Oxidation/Redox indicator	R
Molybo	denum Test	5-20-50-100-250 mg/l Mo	100	EM1.10049.0001	Toluene-3,4-dithiol	R
N Nickel	Test	10-25-100-250-500 mg/l Ni	100	EM1.10006.0001	Diacetyldioxime	
Nitrate	Test	10-25-50-100-250-500 mg/l NO <sub>3</sub>	100	EM1.10020.0001	modified Griess' reaction	
Nitrite	Test	0.5-1-2-5-10 mg/l NO <sub>2</sub>	75	EM1.10057.0001	Griess' reaction	
Nitrite	Test	2-5-10-20-40-80 mg/l NO <sub>2</sub>	100	EM1.10007.0001	Griess' reaction	
Nitrite	Test	2-5-10-20-40-80 mg/l NO <sub>2</sub>	25	EM1.10007.0002	Griess' reaction	
Nitrite	Test	0.1-0.3-0.6-1-2-3 g/l NO <sub>2</sub>	100	EM1.10022.0001	Griess' reaction	
P Perace	tic Acid Test	5-10-20-30-50 mg/l Peracetic acid	100	EM1.10084.0001	Redox reaction	
Perace	tic Acid Test	100-150-200-250-300-	100	EM1.10001.0001	Redox reaction	
		400-500 mg/l Peracetic acid				
Perace	tic Acid Test	500-1000-1500-2000 mg/l Peracetic acid	100	EM1.17922.0001	Redox reaction	
Peroxio	dase Test	yes/no result	100	EM1.17828.0001	Enzymatic reaction	R

IS individually sealed | R incl. reagent



Å	Aluminium Test
ŀ	Ammonium Test
A	Arsenic Test
A	Ascorbic Acid Test
E	Blank strip
(	Calcium Test
(	Carbonate Hardness Test
(	Chloride Test
(	Chlorine Test
(	Chlorine Test
(	Chromate Test
(	Cobalt Test
(	Copper Test
(	Cyanide Test
F	Formaldehyde Test
(	Glucose Test
l	ron Test
Į	Lead Test
ľ	Manganese Test
ľ	Molybdenum Test
1	Nickel Test
1	Nitrate Test
	Nitrite Test
_	Nitrite Test
_	Nitrite Test
_	Nitrite Test
	Peracetic Acid Test
F	Peracetic Acid Test
_	Peracetic Acid Test
F	Peroxidase Test

Parameter

## Index P-Z

### MQuant™ Test strips

Parameter	Graduation	No. of tests	Ord. No.	NEW Ord. No.	Method	Туре
P Peroxide Test	0.5-2-5-10-25 mg/l H <sub>2</sub> O <sub>2</sub>	100	10011-1	1.10011.0001	Enzymatic reaction	
Peroxide Test	0.5-2-5-10-25 mg/l H <sub>2</sub> O <sub>2</sub>	25		1.10011.0002	Enzymatic reaction	
Peroxide Test	1-3-10-30-100 mg/l H <sub>2</sub> O <sub>2</sub>	100	10081-1	1.10081.0001	Enzymatic reaction	
Peroxide Test	100-200-400-600-800-1000 mg/l H <sub>2</sub> O <sub>2</sub>	100	10337-1	1.10337.0001	Enzymatic reaction	
Phosphate Test	10-25-50-100-250-500 mg/l PO <sub>4</sub>	100		1.10428.0001	Phosphormolybdenum blue	R
Quaternary Ammonium	10-25-50-100-250-	100		1.17920.0001	Indicator	
Compounds	500 mg/l Benzalkonium chloride					
S Sulfate Test	200-400-800-1200-1600 mg/l SO <sub>4</sub>	100	10019-1	1.10019.0001	Ba-thorin complex	
Sulfite Test	10-40-80-180-400 mg/l SO <sub>3</sub>	100	10013-1	1.10013.0001	Nitroprusside/	
					Zn-hexacyanoferrate	
T Tin Test	10-25-50-100-200 mg/l Sn	50		1.10028.0001	Toluene-3,4-dithiol	R
Total Hardness Test	4-5-9-18-26 °e	100	10025-1	1.10025.0001	EDTA	
Total Hardness Test	4-5-9-18-26 °e	5000		1.10029.0001	EDTA	IS
Total Hardness Test	4-5-9-18-26 °e	1000		1.10032.0001	EDTA	IS
Total Hardness Test	6-13-19-25-31 °e	100	10046-1	1.10046.0001	EDTA	
Total Hardness Test	6-13-19-25-31 °e	25000		1.10047.0013	EDTA	IS
Total Hardness Test	< 1.5; 1.5-2.5; > 2.5 mmol/l CaCO <sub>3</sub>	100		1.17934.0001	EDTA	
Z Zinc Test	0-4-10-20-50 mg/l Zn	100	89423-636	1.17953.0001	Dithizone	R

IS individually sealed | R incl. reagent

### Reagent papers

Lead acetate paper 3 rolls each with 4.8 meters

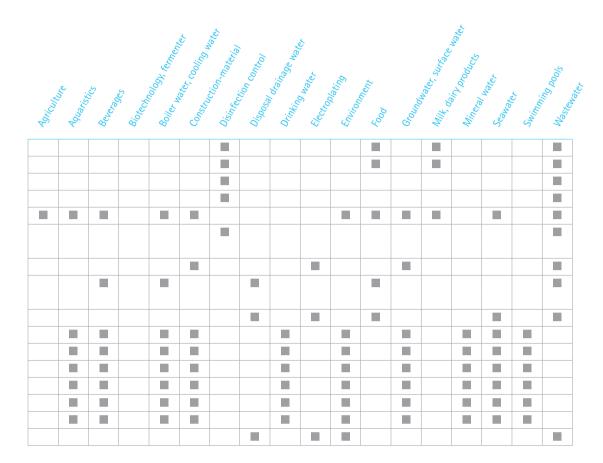
VWR Cat. No. EM1.09511.0003

Lead acetate paper is used for the determination of sulfide and hydrogen sulfide

Potassium iodide-starch paper, Reag. Ph Eur 3 rolls each with 4.8 meters

VWR Cat. No. EM1.09512.0003

Potassium iodide paper is used for the determination of oxidizing agents



Parameter
Peroxide Test
Peroxide Test
Peroxide Test
Peroxide Test
Phosphate Test
Quaternary Ammonium
Compounds
Sulfate Test
Sulfite Test
Tin Test
Total Hardness Test
Total Hardness Test
Total Hardness Test
Total Hardness Test
Total Hardness Test
Total Hardness Test
Zinc Test



We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.





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