MQuant<sup>®</sup> Test Strips Rapid visual analysis

# Just a quick dip



## What is the quality of your milk?

### Detect peroxidase activity in milk

### The Application

Milk pasteurization is the process of gently heating milk in order to inactivate or destroy the enzymes and microorganisms that contribute to spoilage or risk of disease. The enzyme lactoperoxidase (POD) is naturally present in milk and is inactivated if heated to temperatures higher than 85 °C. Its activity can be used to check that milk has not been heated too harshly, and therefore that pasteurization was performed correctly. For dairies, a yes/no statement in terms of POD is usually sufficient.

### **Our Solution: MQuant® Peroxidase Test strips**

With the qualitative MQuant<sup>®</sup> Peroxidase Test strips, you can now determine POD in your milk sample much more quickly than traditional photometry with comparable reliability to the photometric reference method (DIN 10483-1). The simplicity of the method allows for it to be performed directly at the sampling site, and makes it more cost-effective because no additional equipment is required.

### Benefits

- Simple and fast determination of peroxidase activity
- Reliable
- Flexible can be used on-site
- Low cost
- Easy evaluation with a color scale and no additional instrumentation

Learn more at: SigmaAldrich.com/test-strips

### **MQuant® Test Strips**

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## MQuant<sup>®</sup> Test Strips

Rapid visual analysis

## **Test strips**

Highly reliable and portable, MQuant<sup>®</sup> test strips are designed for semi-quantitative determination of ions and other compounds. These versatile strips can be used in concentration ranges from <1 mg/L up to the g/L range. The test strips save you considerable time and costs during analyses, quality checks, and in-process controls. The PET film backing material and the low reagent content also make the test strips easy to dispose of.



# What is the glucose content of your food?

### Semi-quantitative glucose measurement

### **The Application**

Glucose is an important parameter in many foods and beverages, and is regularly tested in raw materials and final products. Traditional glucose analysis involves time-consuming enzymatic determination in laboratories.

### **Our Solution: MQuant® Glucose Test strips**

MQuant<sup>®</sup> Glucose Test strips allow fast, cost-effective analysis anywhere. They deliver reliable semi-quantitative results, and are ideal for quick on-the-spot screening of samples when there is no time for lab analysis.

### Benefits

- Pocket-sized tests for on-site or laboratory use
- Simple analysis with pictogram instructions on label
- Fast, accurate results in minutes
- Cost-effective
- Easy disposal

rast results, easy usage, safe disposal

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## Brilliant color scales for exact results

Many Measuring ranges available

## Further MQuant® applications

### Check the quality of frying oils

Deep-frying causes oils and fats to decompose over time, producing free fatty acids. When these acids exceed an acceptable limit, they affect the quality of fried food. With MQuant<sup>®</sup> Free Fatty Acids test strips, you can easily monitor the quality of your oil and determine the right time for a change.

MQuant® Free Fatty Acids | Cat. No. 1.17046.0001

### **Ensure safe disinfections**

Disinfection is critical in many different sectors such as food production, hospitals, biotech, and pharmaceutical. It is necessary to determine both that the correct concentration of a given disinfectant is used, and that residues do not remain when the process is complete to not be passed on to the final product. MQuant® test strips help you monitor these steps of cleaning by checking concentrations of disinfectants including chlorine, formaldehyde, peracetic acid, peroxide and quaternary ammonium compounds.





### SigmaAldrich.com/test-strips

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## MQuant<sup>®</sup> Test Strips

Rapid visual analysis

## it's that simple:



### **1** Sample preparation

MQuant<sup>®</sup> test strips tolerate a range of interferences and most can be used without any sample pre-treatment. For challenging samples, we offer special reagents and a range of application notes for your convenience.

## 2 Testing



Remove one MQuant<sup>®</sup> test strip from the protective tube.



Dip strip into the test solution to wet reaction zones and remove excess liquid. After the specified reaction time (maximum one minute), compare the color of the reaction zone with the color

scale printed on the tube label to determine

the concentration.

## **3 Disposal**

MQuant<sup>®</sup> test strips can be safely and easily disposed of with regular waste. Take note of any regional regulations to dispose of/recycle the aluminium tube and other packaging material.

### Shelf-life and storage

When stored in a cool and dry area (refrigeration is necessary in some cases), test strips can be used for up to three years (details provided on the package). The tube must be closed immediately after removal of each strip to ensure the remaining test strips are protected from moisture and air.

### **Quality assurance**

We check and calibrate all MQuant $^{\circ}$  tests and comparison colors using certified standard solutions. These solutions can be traced directly to primary reference materials from NIST and PTB.

## Don't guess, measure!

Accurate chemical analyses and digital documentation with a NEW smartphone test strip reader

### The Application

Quick and easy testing for laboratory and in-process control of water, food, and beverage samples without compromising accuracy and reproducibility.

### **Our Solution: The MQuant® StripScan App**

Digital readouts of pH and chemical analytes are now at your fingertips with the MQuant<sup>®</sup> StripScan app. A camera readout of MQuant<sup>®</sup> test strips on a reference card provides instant results on your smartphone. You can synchronize your data to the StripScan web platform to compare, graph, and share your results.

### Benefits

- Get reliable results faster
- Acquire and manage your data digitally
- Ensure traceability and allow collaboration

pH Reference Card | Cat. No. 1.03736.0001 Nitrate Reference Card | Cat. No. 1.03733.0001

Download free-of-charge from the App Store or Google Play mquant-stripscan.com/login





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## **MQuant® Test Strips**

Rapid visual analysis

Electro-plating

	Beer processing	Food testing	Juices	Milk products	Mineral water	Soft drinks	Aquaculture	Boiler water, cooling water	Drinking water	Ground-water, surface water	Industrial water	Process water	Seawater	Swimming pools	Wastewater	Agriculture	Disinfection control
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### MQuant<sup>®</sup> Test Strips Parameter A–Z

	Parameter	Graduation	No. of tests	Cat. No.	Method	Туре		Fo	od & B	leverag	es						Water						Others	
Α	Aluminium Test	10-25-50-100-250 mg/L Al	100	1.10015.0001	Aurintricarboxylic acid	Reagent, incl.	•	•	•		•	•					•				•			
	Ammonium Test	10-30-60-100-200-400 mg/L NH4	100	1.10024.0001	Neßler	Reagent, incl.										•		•			•	•		
	Arsenic Test	0.005-0.010-0.025-0.05-0.10- 0.25-0.5 mg/L As	100	1.17927.0001	modified Gutzeit test	Reagent, incl.					•				•	•							•	
	Arsenic Test	0.02-0.05-0.1-0.2-0.5 mg/L As 0.1-0.5-1.0-1.7-3.0 mg/L As	100	1.17917.0001	modified Gutzeit test	Reagent, incl.					•				•	•								
	Ascorbic Acid Test	50-100-200-300-500-700- 1,000-2,000 mg/L ascorbic acid	100	1.10023.0001	Phosphomolybdenum blue		•	•	•			•												
3	Blank strip		100	1.11860.0001			•	•	•			•												
:	Calcium Test	10-25-50-100 mg/L Ca	60	1.10083.0001	Glyoxal-bis-hydroxyanil	Reagent, incl.	•	•	•	•	•	•		•	•		•					•		
	Carbonate Hardness Test	5-10-15-20-30 °e	100	1.10648.0001	Mixed indicator						•		•		•	•	•							
	Chloride Test	500-1,000-1,500-2,000-≥3,000 mg/L Cl	100	1.10079.0001	Silver chromate			•								•					•			
	Chlorine Test (free chlorine)	0.5-1-2-5-10-20 mg/L Cl <sub>2</sub>	75	1.17925.0001	Redox reaction																•		•	
	Chlorine Test (free chlorine)	25-50-100-200-500 mg/L Cl <sub>2</sub>	100	1.17924.0001	Redox reaction																•		•	
	Chromate Test	3-10-30-100 mg/L CrO4	100	1.10012.0001	Diphenylcarbazide	Reagent, incl.															•			
	Cobalt Test	10-30-100-300-1,000 mg/L Co	100	1.10002.0001	Rhodanide																•			
	Copper Test	10-30-100-300 mg/L Cu	100	1.10003.0001	2,2'-Biquinoline										•					•	•			
	Cyanide Test	1-3-10-30 mg/L CN	100	1.10044.0001	König reaction	Reagent, incl.															•			
F	Formaldehyde Test	10-20-40-60-100 mg/L HCHO	100	1.10036.0001	Triazole	Reagent, incl.												•					•	
	Free Fatty Acids	0.5-1.0-2.0-3.0 mg/g KOH	100	1.17046.0001	pH indicator			•																
G	Glucose Test	10-25-50-100-250-500 mg/L Glucose	50	1.17866.0001	Enzymatic reaction		•	•	•	•		•												
I	Iron Test	3-10-25-50-100-250-500 mg/L Fe(II)	100	1.10004.0001	2,2'-Bipyridine			•	•	•		•			•	•	•				•			
-	Lead Test	20-40-100-200-500 mg/L Pb	100	1.10077.0001	Rhodizonic acid	Reagent, incl.										•					•	•		
1	Manganese Test	2-5-20-50-100 mg/L Mn	100	1.10080.0001	Oxidation/Redox indicator	Reagent, incl.									•	•	•				•			
	Molybdenum Test	5-20-50-100-250 mg/L Mo	100	1.10049.0001	Toluene-3,4-dithiol	Reagent, incl.								•										
4	Nickel Test	10-25-100-250-500 mg/L Ni	100	1.10006.0001	Dimethylglyoxime																•			
	Nitrate Test	10-25-50-100-250-500 mg/L NO3	100	1.10020.0001	modified Griess' reaction			•	•		•		•		•	•	•		•		•	•		
	Nitrate Test	10-25-50-100-250-500 mg/L NO <sub>3</sub>	25	1.10020.0002	modified Griess' reaction			•	•		•		•		•	•	•		•		•	•		
	Nitrate Test	10-25-50-100-250-500 mg/L NO <sub>3</sub>	1,000	1.10092.0021	modified Griess' reaction	Individually sealed		•	•		•		•		•	•	•		•		•	•		
	Nitrite Test	0.5-1-2-5-10 mg/L NO <sub>2</sub>	75	1.10057.0001	Griess' reaction			•					•	•	•		•		•		•			
	Nitrite Test	2-5-10-20-40-80 mg/L NO <sub>2</sub>	100	1.10007.0001	Griess' reaction			•					•	•	•		•		•		•			
	Nitrite Test	2-5-10-20-40-80 mg/L NO <sub>2</sub>	25	1.10007.0002	Griess' reaction			•					•	•	•		•		•		•			
	Nitrite Test	0.1-0.3-0.6-1-2-3 g/L NO <sub>2</sub>	100	1.10022.0001	Griess' reaction									•										

	upid visual analy						Beer processing	Food testing	Juices	Milk products	Mineral water	Soft drinks	Aquaculture	Boiler water, cooling water	Drinking water	Ground-water, surface water	Industrial water	Process water	Seawater	Swimming pools	Wastewater	Agriculture	Disinfection control	Electro-plating
	Parameter	Graduation	No. of tests	Cat. No.	Method	Туре		Fo	od & B	everag	es						Water						Others	
Р	Peracetic Acid Test	5-10-20-30-50 mg/L Peracetic acid	100	1.10084.0001	Redox reaction																		•	
	Peracetic Acid Test	20-40-80-120-160 mg/L Peracetic acid	100	1.17976.0001	Redox reaction																		•	
	Peracetic Acid Test	100-150-200-250-300-400-500 mg/L Peracetic acid	100	1.10001.0001	Redox reaction																		•	
	Peracetic Acid Test	500-1,000-1,500-2,000 mg/L Peracetic acid	100	1.17922.0001	Redox reaction																		•	
	Peroxidase Test	yes/no result	100	1.17828.0001	Enzymatic reaction			•		•														
	Peroxide Test	0.5-2-5-10-25 mg/L H <sub>2</sub> O <sub>2</sub>	100	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	1.10081.0001	Enzymatic reaction					•										•	•		•	
	Peroxide Test	100-200-400-600-800-1,000 mg/L H <sub>2</sub> O <sub>2</sub>	100	1.10337.0001	Enzymatic reaction																•		•	1
	Phosphate Test	10-25-50-100-250-500 mg/L PO <sub>4</sub>	100	1.10428.0001	Molybdate ion	Reagent, incl.		•													•	•		
	Potassium Test	250-450-700-1,000-1,500 mg/L K	100	1.17985.0001	Dipicrylamine	Reagent, incl.					•				•		٠				•	•		
Q	Quaternary Ammonium Compounds	10-25-50-100-250-500 mg/L Benzalkonium chloride	100	1.17920.0001	Indicator																		•	
s	Sulfate Test	<200->400->800->1200->1600 mg/L SO <sub>4</sub>	100	1.10019.0001	Ba-thorin complex										•	•	•				•			
	Sulfite Test	10-40-80-180-400 mg/L SO <sub>3</sub>	100	1.10013.0001	Nitroprusside/ Zn-hexacyanoferrate			•	•		•	•		•							•			
т	Tin Test	10-25-50-100-200 mg/L Sn	50	1.10028.0001	Toluene-3,4-dithiol	Reagent, incl.		•	•	•											•	•	•	
	Total Hardness Test	<4->5->9->18->26 °e	100	1.10025.0001	EDTA						•				•	•								
	Total Hardness Test	<4->5->9->18->26 °e	1,000	1.10032.0001	EDTA	Individually sealed					•				•	•								
	Total Hardness Test	>6->13->19->25->31 °e	100	1.10046.0001	EDTA						•				•	•								
	Total Hardness Test	>6->13->19->25->31 °e	25,000	1.10047.0013	EDTA	Individually sealed					•				•	•								
z	Zinc Test	0-4-10-20-50 mg/L Zn	100	1.17953.0001	Dithizone																•			•

## Your brand - Merck quality

### Want to add your branding to our test strips or papers for pH or chemical parameters?

### Choose from the following options:

**MQuant® Test Strips** 

- Individually-sealed and branded test strips Ideal for inserting in books, magazines, and brochures, or for adhering to products.
- Branded tubes with either our catalog items or customized strips/papers Provide your customers with consistent, high-quality Merck products with your branding on the packaging or modify the appearance of the test strips/papers and color card as well.
- Innovative customized products If the test you need is not offered, we can discuss solutions for your individual requirements.

For our minimum order quantity requirements, or additional details, visit SigmaAldrich.com/customized-test-strips

### **MQuant® Reagent Papers**

Description								
Lead(II) acetate paper, 3 rolls, each 4.8 meters, for the determination of sulfide & hydrogen sulfide	1.09511.0003							
Potassium iodide-starch paper, grade value Reag. Ph. Eur., 3 rolls, each 4.8 meters for the determination of oxidizing agents	1.09512.0003							



# resting colored samples?

MQuant<sup>®</sup> blank strips have a reagent-free test field. This allows you to check whether the sample solution changes the test field's color significantly, potentially leading to mis-matches with the color scale and inaccurate results.

#### SigmaAldrich.com/test-strips