

# Reflectoquant® System. Easy in-process monitoring for food & beverages.



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

# Take your lab with you

At EMD Millipore, when we say that we support you every step of the way, we truly mean it. A prime example is the Reflectoquant® System. Simply put, it's your inexpensive, mobile laboratory for on-the-spot analysis – anywhere and anytime.

While Reflectoquant® is convenient and simply to use, it's also state-of-the-art. It allows you to reliably examine every stage of your production process thus ensuring a consistently high quality. This comprehensive system includes everything you'll need for in-process monitoring: test strips and test kits as well as the RQflex® 10 and RQflex® 10 plus reflectometers.

Reflectoquant® is also versatile. Offering numerous tests with a broad range of parameters, measuring ranges and applications, it can handle many sample materials. So whether you work in agriculture, food and water analysis, cleaning control, or industrial analysis, the Reflectoquant® System is a mini-lab that's made just for you.



*Reflectoquant® Ascorbic Acid Test  
simplifies the-in-process controls  
for juice production.*

# Your benefits

- Small and easy to handle for on-the-spot analysis
- Barcode calibration for reliable, quantitative results in a matter of minutes
- Many applications available
- Low analysis costs
- Environmentally friendly thanks to a minimal requirement of reagents

## The Reflectoquant® product range at a glance

The basic components of a compact solution to analyze more than 20 parameters



Instruments	RQflex® 10 Instrument and basic accessories to measure test strips	RQflex® 10 plus Most flexible instrument to measure test strips and solutions (cell tests)
<b>Test kits</b>		
<b>Reflectoquant® Tests</b> Many parameters need only test strips. If further reagents and tools are needed, they are included in the kits	●	●
<b>Reflectoquant® plus Tests</b> Cell test kits for higher sensitivity especially in agricultural and water analysis		●
<b>Application instructions</b>		
<b>www.merckmillipore.com – Application finder – Reflectometry:</b> Tested protocols to prepare food and beverage samples for analysis	●	●
<b>Quality control</b>		
<b>Standards</b> Instruction manuals recommend EMD Millipore standard solutions or materials to prepare your own standard solution	●	●
<b>Data transfer</b>		
<b>RQdata</b> Interface and software package for transfer and documentation of results on IBM-compatible PCs	●	●

# Reflectoquant® System

Fast and inexpensive  
supervision of raw materials  
during production

## Hydroxymethylfurfural (HMF) in honey

The amount of hydroxymethylfurfural (HMF) in honey is an important quality criterion. The Reflectoquant® HMF test is the very first rapid test for the determination of hydroxymethylfurfural (HMF) content in honey. Check our application "HMF in honey" which is an alternative to time consuming HPLC analysis for your screening tests.

## Ascorbic acid in food

Ascorbic acid (vitamin C) counts as an essential quality characteristic in many foods. A loss of vitamin C means a deterioration of the food quality which can even be tasted. Check our Reflectoquant® Ascorbic Acid Test applications for over 15 sample materials.

## Reducing (total) sugar in potatoes

In fried or baked goods, such as potato chips, acrylamide may be produced by the reaction between asparagine and reducing sugars (fructose, glucose, etc.). The recommended upper level of reducing sugars in potatoes should not exceed a set limit. Check our application "Total sugar in potatoes" for Reflectoquant® Total Sugar Test.

## Nitrate in vegetables

Nitrate in itself is not harmful to human health. Its metabolic products, on the other hand, can be harmful. Limits have been set for nitrate levels in foods, like drinking water, infant foods and vegetables. Check our Reflectoquant® Nitrate Test applications for over 15 sample materials.



## RQflex® 10/RQflex® 10 plus reflectometers

### RQflex® 10

Ord. No. M116950001

NEW!

Ord. No. M116970001

Reflectometer for the evaluation of Reflectoquant® test strips

Scope of delivery and features

includes test strip adapter and recalibration set, double optical system (option for evaluation for two reaction zones), memory for five methods, memory slots for 50 results (with date, time, parameter, and result), interface to PC, batch-specific calibration function (bar-code technology), battery operation with 4 AAA batteries, detailed manual for reflectometer and tests



NEW!

### RQflex® 10 plus

Ord. No. M116955001

Reflectometer for the evaluation of Reflectoquant® test strips and Reflectoquant® plus test kits

Scope of delivery and features

as above for Ord. No. M116970001, also contains cell adapter and eight empty cells



## RQflex® sample preparation

NEW!

### Dilution and decoloration

Ord. No.

Polyvinylpyrrolidone Divergan® RS, 100 g

M1073020100

NEW!

### Preserving milk samples

Ord. No.

Sodium azide tablets, 5,000 tabs

M1066870001

Potassium dichromate tablets, 5,000 tabs

M1048580001

## RQflex® accessories

NEW!

	Ord. No.	Ord. No.
RQdata for RQflex® 10 and RQflex® 10 plus Interface and software package for transfer and documentation of results on IBM-compatible PCs	M1169980007	M1169980001
Test-strip adapter for RQflex® 10 and RQflex® 10 plus	M1169530007	M1169530001
Cell adapter for RQflex® 10 plus		M1167290001
Recalibration set for RQflex® 10 and RQflex® 10 plus	M1169540007	M1169540001
Empty cells for RQflex® 10 plus, 100 disposable cells		M1167270001
RQcheck check set for RQflex® 10 and RQflex® 10 plus	M1169570007	M1169570001



# Index A-Z

## Reflectoquant® tests

							NEW!
Parameter	Graduation	No. of tests	Ord. No.	Ord. No.	Method	Type	
<b>A</b> Ammonium Test	0.2–7.0 mg/l NH <sub>4</sub>	50		M1168920001	Indophenol blue	R	
Ammonium Test	5.0–20.0 mg/l NH <sub>4</sub>	50		M1168990001	Indophenol blue	R	
Ammonium Test	20–180 mg/l NH <sub>4</sub>	50		M1169770001	Nessler	R	
Ascorbic Acid Test	25–450 mg/l ascorbic acid	50	16981-1	M1169810001	Phosphormolybd. blue		
Ascorbic Acid Test RQeasy	25–450 mg/l ascorbic acid	50		M1179630001	Phosphormolybd. blue		
<b>B</b> Blank Strip		50		M1167300001			
<b>C</b> Calcium Test	2.5–45.0 mg/l Ca	50		M1169930001	Glyoxalbishydroxyanil	R	
Calcium Test	5–125 mg/l Ca	50		M1161250001	Phthaleinkomplexone		
Chlorine Test	0.5–10.0 mg/l Cl <sub>2</sub>	50		M1168960001	Redox reaction	R	
<b>F</b> Formaldehyde Test	1.0–45.0 mg/l HCHO	50		M1169890001	Triazole	R	
Free Sulfurous Acid Test	1.0–40.0 mg/l SO <sub>2</sub>	50	16137-1	M1161370001	Nitroprusside/ Zn-hexacyanoferrate	R	
<b>G</b> Glucose Test	1–100 mg/l glucose	50	16720-1	M1167200001	Enzymatic reaction		
<b>H</b> Hydroxymethylfurfural Test	1.0–60 mg/l HMF	50	117952.0007	M1179520001	Enzymatic reaction		
<b>I</b> Iron Test	0.5–20.0 mg/l Fe(II)	50	16982-1	M1169820001	Triazine		
Iron Test	20–200 mg/l Fe(II)	50		M1169830001	2,2'-Bipyridine		
<b>L</b> Lactic Acid Test	3–60.0 mg/l lactic acid	50		M1161270001	Enzymatic reaction		
<b>M</b> Magnesium Test	5–100 mg/l mg	50		M1161240001	Phthaleinkomplexone		
Malic Acid Test	5.0–60.0 mg/l malic acid	50	16128-1	M1161280001	Enzymatic reaction		
<b>N</b> Nitrate Test	3–90 mg/l NO <sub>3</sub>	50	16995-1	M1169950001	Modified Griess' reaction		
Nitrate Test	5–225 mg/l NO <sub>3</sub>	50	16971-1	M1169710001	Modified Griess' reaction		
Nitrate Test RQeasy	5–250 mg/l NO <sub>3</sub>	50		M1179610001	Modified Griess' reaction		
Nitrite Test	0.5–25.0 mg/l NO <sub>2</sub>	50	16973-1	M1169730001	Griess' reaction		
Nitrite Test	0.03–1.00 g/l NO <sub>2</sub>	50		M1167320001	Aromatic amine		
<b>P</b> Peracetic Acid Test	1.0–22.5 mg/l peracetic acid	50	16975-1	M1169750001	Redox reaction		
Peracetic Acid Test	75–400 mg/l peracetic acid	50	16976-1	M1169760001	Redox reaction		
Peroxide Test	0.2–20.0 mg/l H <sub>2</sub> O <sub>2</sub>	50	16974-1	M1169740001	Enzymatic reaction		
Peroxide Test	100–1000 mg/l H <sub>2</sub> O <sub>2</sub>	50		M1167310001	Enzymatic reaction		
pH Test	pH 1.0–5.0	50		M1168940001	Mixed indicator		
pH Test	pH 4.0–9.0	50		M1169960001	Mixed indicator		
pH Test for Cooling Lubricants	pH 7.0–10.0	50		M1168980001	Mixed indicator		
Phosphate Test RQflex plus	0.1–5.0 mg/l PO <sub>4</sub>	100		M1179420001	Phosphormolybd. blue		
Phosphate Test	5–120 mg/l PO <sub>4</sub>	50		M1169780001	Phosphormolybd. blue	R	
Potassium Test RQflex plus	1.0–25.0 mg/l K	100		M1179450001	Kalignost, turbidimetric		
Potassium Test	0.25–1.20 g/l K	50		M1169920001	Dipicrylamine	R	
<b>S</b> Sucrose Test	0.25–2.5 g/l	50	1.16141.0007	M1161410001	Enzymatic reaction	R	
Sulfite Test	10–200 mg/l SO <sub>3</sub>	50		M1169870001	Nitroprusside/ Zn-hexacyanoferrate		
<b>T</b> Total Acidity Test pH 7.0	2.0–14.0 g/l (as tartaric acid)	100		M1161350001	Mixed indicator	R	
Total Acidity Test pH 8.2	2.0–14.0 g/l (as tartaric acid)	100	16138-1	M1161380007	Mixed indicator	R	
Total Hardness Test	0.1–30.0 °d	50		M1169970001	Phthaleinkomplexone	R	
Total Sugar Test (glucose and fructose)	65–650 mg/l total sugar	50		M1161360001	Enzymatic reaction	R	
<b>U</b> Urea Test in Milk Application	0.2–7.0 mg/l NH <sub>4</sub>	50		M1168920001	Indophenol blue	R	

R incl. reagent

	Agriculture	Aquaristics	Beverages	Biotechnology, fermenter	Boiler water, cooling water	Construction-material	Disinfection control	Disposal drainage water	Drinking water	Electroplating	Environment	Food	Groundwater, surface water	Milk, dairy products	Mineral water	Seawater	Swimming pools	Wastewater	Parameter	
•			•	•	•			•	•		•	•	•	•				•	Ammonium Test	
•				•	•			•	•		•		•		•	•		•	Ammonium Test	
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										•										pH Test for Cooling Lubricants
•	•	•	•		•						•		•						•	Phosphate Test RQflex plus
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•			•									•		•	•	•				Potassium Test RQflex plus
•			•									•		•	•					Potassium Test
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			•		•			•				•								Sulfite Test
			•																	Total Acidity Test pH 7.0
			•																	Total Acidity Test pH 8.2
		•	•		•				•		•		•		•				•	Total Hardness Test
			•																	Total Sugar Test (glucose and fructose)
													•							Urea Test in Milk Application

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