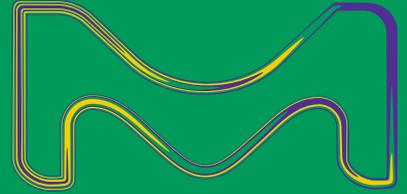


**Supelco®**  
Analytical Products



# PRECISE & MOBILE LABORATORY

## RQflex® 20

Reflectoquant® system for  
easy in-process monitoring  
and rapid QC analysis



The life science business of Merck operates  
as MilliporeSigma in the U.S. and Canada.

**MERCK**

## Reflectoquant® system

Mobile accuracy with test strips

### strip – dip – read – record – action

Take your lab to the sample with the compact and easy-to-use RQflex® 20. Monitor materials at any stage of your production process or during disinfection control to obtain precise quantitative results rapidly, and directly on-site.

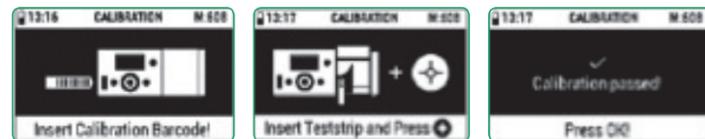
The Reflectoquant® system consists of test strips and reflectometers, this mobile laboratory gives you all the tools you need for high quality, low cost analyses for a wide spectrum of sample materials from food, water, and industrial to environmental samples.

#### 1. INTUITIVE MENU NAVIGATION

Our new menu is simple and easy to use to access all your methods, results and quality assurance options, along with the ability to tailor your settings to your needs.



The display shows easy-to-follow pictograms of the method and workflow for straightforward measurement and accurate reproducible results.



#### 7. DIFFERENT LANGUAGES AVAILABLE

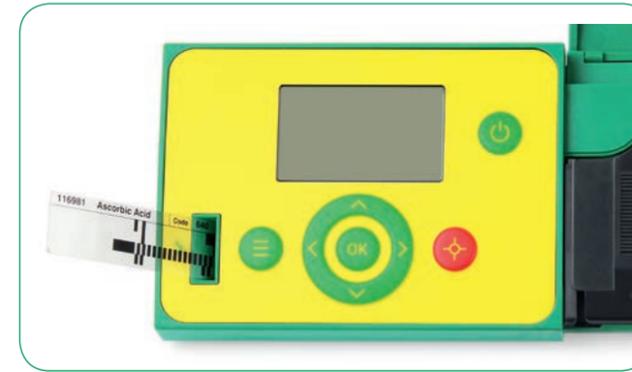
Choose from English, German, French, Spanish, Portuguese, Japanese, and Chinese.

#### 2. PORTABLE ANALYSIS

This light and compact system acts like a mobile laboratory to perform critical analyses and obtain quantitative results directly on-site. Get results in minutes for easy monitoring of your materials throughout your workflow.



#### 3. BARCODED TEST STRIPS WITH BATCH SPECIFIC CALIBRATION



For every test condition, each batch of test strips is calibrated and equipped with a barcode for accurate and reproducible results. Obtain consistent results quickly with an average accuracy within  $\pm 10\%$  in the middle of the measuring range.

#### 4. INSTRUMENT-SUPPORTED ANALYTICAL QUALITY ASSURANCE

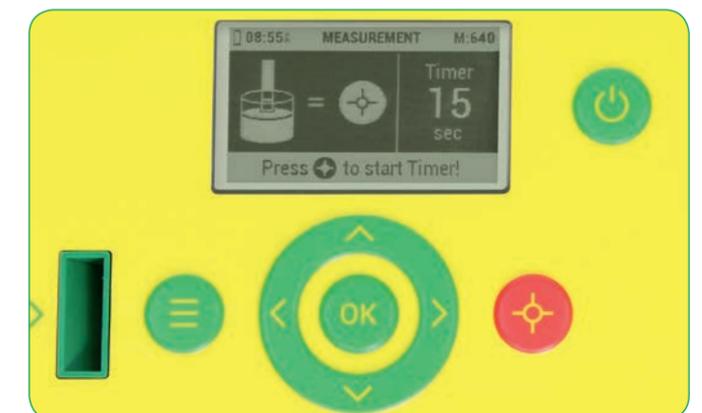
For analytical quality assurance (AQA), the RQcheck and total system monitoring (TSM) process ensures accurate and precise measurement results. Straightforward calibration can be easily carried out to reset the baseline, so your results will always be reliable.

#### 5. TESTS AND APPLICATION NOTES TO FIT YOUR NEEDS

From ammonium through to nitrate and urea, we have a comprehensive range of test kits for fast instrumental analysis, e.g., for testing sugar content in chocolate, nitrate content in vegetables, or the freshness of honey.

#### 6. COUNTDOWN-TIMER TO STREAMLINE YOUR ANALYSIS

For maximum reproducibility, a countdown-timer with an advanced warning alert before the end of the test strip preparation time can be tailored to fit in with your workflow.



## DISCOVER OUR APPLICATION NOTES FOR REFLECTOMETRY

Reflectoquant® application notes offer a step-by-step sample preparation guide, and information to determine various parameters for agriculture, food & beverage, or disinfection control processes.

With over 100 application notes for reflectometry, find the ideal method to support your production processes and analyses.

[SigmaAldrich.com/wfa-applications](https://www.sigmaaldrich.com/wfa-applications)



## AGRICULTURE



### CONTROL NUTRIENTS IN SOILS AND PLANT PRODUCTS

Along with nitrogen, phosphorus is a nutrient that plants need in large quantities for normal growth. Due to possible over-fertilization, it is important to analyze those parameters in agriculture production.

**Find out how the mobil Reflectoquant® test system and application notes for agriculture will support your analyses and crop management. For high-precision analyses we offer a bench top spectrophotometer system Spectroquant® Prove.**

## DISINFECTION CONTROL

### 0.1 % PERACETIC ACID IS ENOUGH TO KILL BACTERIA, VIRUSES, FUNGI AND EVAN SPORES IN THE SHORTEST POSSIBLE TIME

That's why it is used for cold septic disinfection of beverage bottle, for example. Complete disinfection control involves various methods for testing parameters at high and low concentration ranges.

**See how our mobil Reflectoquant® systems as well as our handy MQuant® Test Strips offers efficient solutions for on-site analysis. Our Spectroquant® Move system has a dedicated handheld instrument for disinfection control analysis.**



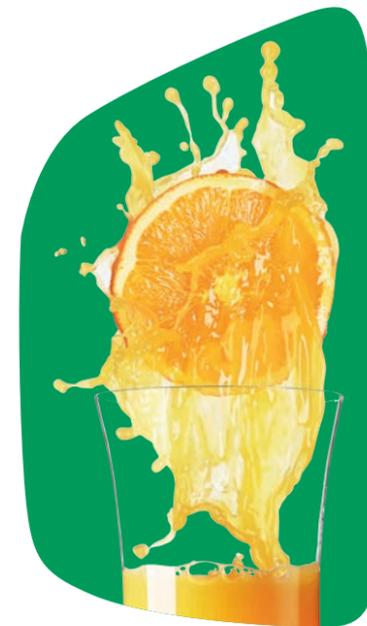
## FOOD & BEVERAGE

### RAPID QUANTITATIVE DETECTION OF HYDROXYMETHYLFURFURAL IN HONEY

The freshness of honey is determined by measuring its hydroxymethylfurfural (HMF) content. HMF is an organic compound that arises from the dehydration of fructose, e.g. when honey is heated for easier filling. HMF is barely detectable in freshly centrifuged honey, but increases about 2.3 mg/kg annually, depending on storage temperature and pH.

At 21 °C, HMF content can rise to 20 mg/kg in just one year.

**See how our application notes "HMF in Honey" and the Reflectoquant® HMF test provide you the first rapid test for the accurate determination of HMF content in just a few minutes.**



### TEST VITAMIN C IN FOOD & BEVERAGES

Vitamin C (ascorbic acid) is an essential characteristic of many foods and drinks. Its depletion should be monitored as it implies a deterioration of quality and taste.

**See our Reflectoquant® Ascorbic Acid Test application notes for over 15 sample materials.**

### MONITOR ACRYLAMIDE FORMATION

In fried or baked goods, like potato chips, the reaction between asparagine and educing sugars (fructose, glucose, etc.) may produce acrylamide, which is considered toxic and carcinogenic. Consequently, maximum limits of reducing sugars in potatoes should not be exceeded.

**Find our application "Total sugar in potatoes" for Reflectoquant® Total Sugar Test.**





## TECHNICAL DATA

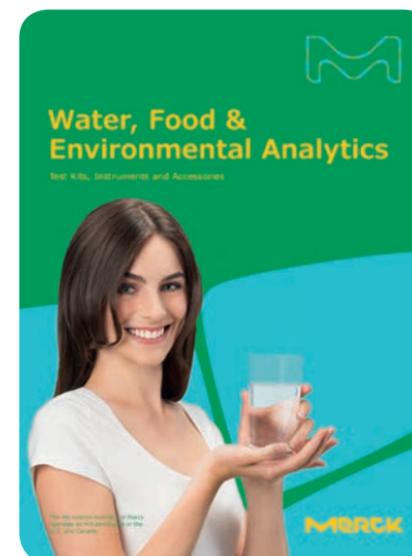
Dimensions:	184 × 79 × 30 mm
Weight:	253 g (including batteries)
Memory:	50 test methods 200 measurement results 50 RQcheck results 50 calibration results
Light source:	4 LEDs, green/red, double optics
Power source:	4 × 1.5-V batteries (AAA)
Display:	Reflective LCD Graphic Module (256 × 160 dot)
Measurement range:	4–90% rel. remission
Reflection area:	4 × 6 mm
Resolution:	0.1% rel. remission
Operating temperature:	5–40 °C for ideal measurements
Operating humidity:	below 80% for ideal measurements

## ORDER INFORMATION

Product	Ord. No.
Reflectoquant® RQflex® 20 – Reflectometer	1.17246.0001
Reflectoquant® RQCheck Set for RQflex® 20	1.17247.0001
Reflectoquant® RQcalibration set	1.16954.0001
Reflectoquant® Strip Adapter	1.16953.0001

## GET ALL THE TOOLS YOU NEED FOR PRECISE ANALYSIS FROM ONE TRUSTED SOURCE

Our latest edition of the **Water Food & Environmental Analytics Catalog** is available online. It is packed with essential information and state-of-the-art tools to support your analyses in water & wastewater, food & beverage or industry & environmental application.



- Find information on over 500 quantitative and semi-quantitative tests and instruments for bench top or mobile measurements.
- Get an overview about our comprehensive ready to use methods for Spectoquant® photometric test kits and Reflectoquant®.
- Discover our Analytical Quality Assurance concept to find measures for simple and reliable quality control in accordance with ISO 9000, ISO 17025, ISO 14000 and Good Laboratory Practice.

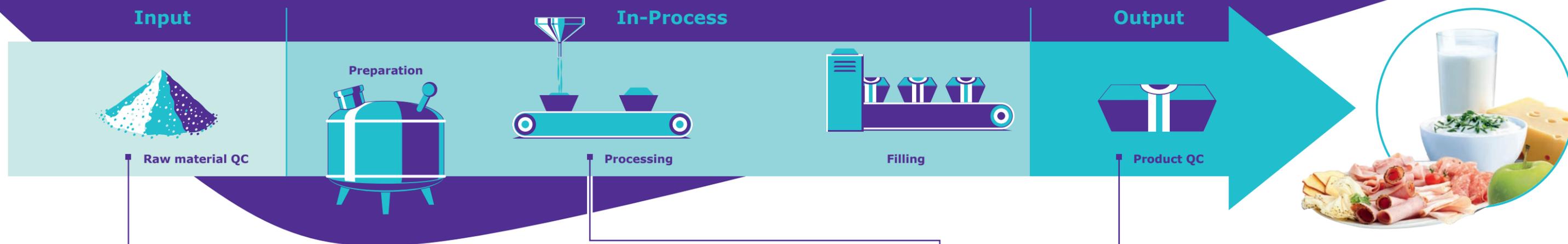


[SigmaAldrich.com/wfa-catalog](https://SigmaAldrich.com/wfa-catalog)

# food & beverage workflow

Food and beverage producers face increasing safety regulations, and are required to perform detailed analyses of raw materials, in-process controls, quality tests, and hygiene monitoring. As all of these analyses take time, our rapid and on-the-spot tests for chemical and microbiological contamination are designed to help you get your product to the market faster.

The workflow diagram shows the products you need to accurately analyze important chemical parameters in food and beverages, such as the concentration of ascorbic acid, glucose and fructose, or microbiological contamination.



### Quality Control

<p><b>Chromatography</b></p> <ul style="list-style-type: none"> <li>• HPLC, GC, TLC</li> <li>• Syringe filters</li> </ul>	<p><b>Microbial and pathogen testing</b></p> <ul style="list-style-type: none"> <li>• Microbial filtration testing, e.g. EZ family</li> <li>• Culture media, dehydrated and ready-to-use media</li> </ul>
<p><b>Spectrophotometry</b></p> <ul style="list-style-type: none"> <li>• Spectroquant® Prove 600</li> <li>• Spectroquant® test kits, e.g. calcium, nitrate, sulfite</li> </ul>	<p><b>Water purification system</b></p> <ul style="list-style-type: none"> <li>• Milli-Q® system</li> </ul>
<p><b>Reference materials</b></p> <ul style="list-style-type: none"> <li>• CRM for test kits</li> <li>• Certipur®</li> <li>• Standards for pesticides</li> </ul>	<p><b>Ingredient and nutritional testing</b></p> <ul style="list-style-type: none"> <li>• Kjeldahl, total dietary fiber</li> <li>• Flavors and fragrances</li> <li>• Karl Fischer – reagents</li> </ul>

### In-Process Control

<p><b>Semi-quantitative testing</b></p> <ul style="list-style-type: none"> <li>• pH strips and paper</li> <li>• MQuant® test strips, e.g. free fatty acids</li> </ul>	<p><b>Microbial and pathogen testing</b></p> <ul style="list-style-type: none"> <li>• Air sampler, e.g. MAS-family</li> <li>• Surface monitoring, e.g. HY-LiTE®, HY-RiSE®</li> </ul>
<p><b>Quantitative testing Test strips</b></p> <ul style="list-style-type: none"> <li>• RQflex® 20</li> <li>• Reflectoquant® test kits e.g. HMF, glucose, sucrose, ascorbic acid</li> </ul>	<p><b>Reference materials</b></p> <ul style="list-style-type: none"> <li>• CRM</li> <li>• Certipur®</li> </ul>
<p><b>Photometry</b></p> <ul style="list-style-type: none"> <li>• Move 100 and Move Cl<sub>2</sub>/O<sub>3</sub>/ClO<sub>2</sub>/CyA/pH colorimeters</li> <li>• Spectroquant® test kits, e.g. iron, magnesium, sulfite</li> </ul>	

**FIND ALL THE PRODUCTS YOU NEED:**

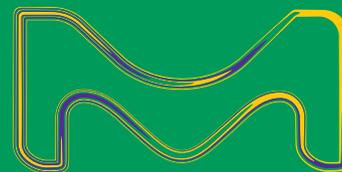
[www.SigmaAldrich.com](http://www.SigmaAldrich.com)

**To place an order or  
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