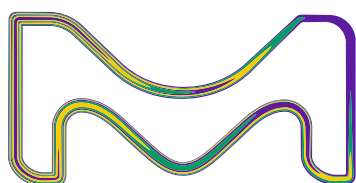


# A Precise & Mobile Laboratory RQflex® 20 reflectometer

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



MilliporeSigma is the U.S. and  
Canada Life Science business of  
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**Supelco®**  
Analytical Products

Find it at [fishersci.com](http://fishersci.com) and [fishersci.ca](http://fishersci.ca)

## 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 reflectometer from Supelco® analytical products. 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 analyses for a wide spectrum of sample materials from food, water, and industrial to environmental samples.

**Our high standards match yours.  
We are your trusted partner in  
analytical chemistry.**

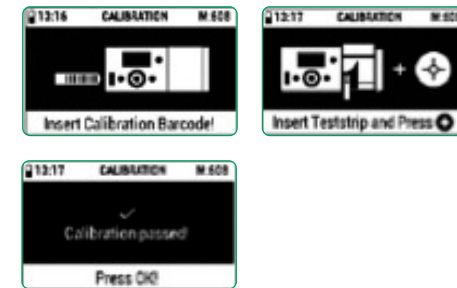


### 1. Intuitive menu navigation

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.



### 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. Straight forward 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.



### 7. Different languages available

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

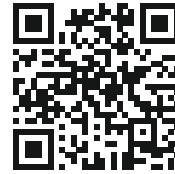
## Reflectoquant® System

Mobile accuracy with test strips

## 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.



Scan QR code to access

## Agriculture



### Control nutrients in soil 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 mobile Reflectoquant® test system and our application notes for agriculture will support your analyses and crop management. For high-precision analyses, we offer Spectroquant® Prove plus benchtop system.**

## Disinfection Control

**0.1% peracetic acid is enough to kill bacteria, viruses, fungi and even spores in the shortest possible time**

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

**See how our mobile Reflectoquant® system as well as our handy MQuant® test strips offer efficient solutions for on-site analysis.**



## Food & Beverage Testing

### 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 note “HMF in honey” and the Reflectoquant® HMF test provide the first rapid test method 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 note for over 15 sample materials.**

### Monitor acrylamide formation

In fried or baked goods, like potato chips, the reaction between asparagine and reducing 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 note “Total sugar in potatoes” for the Reflectoquant® Total Sugar Test.**



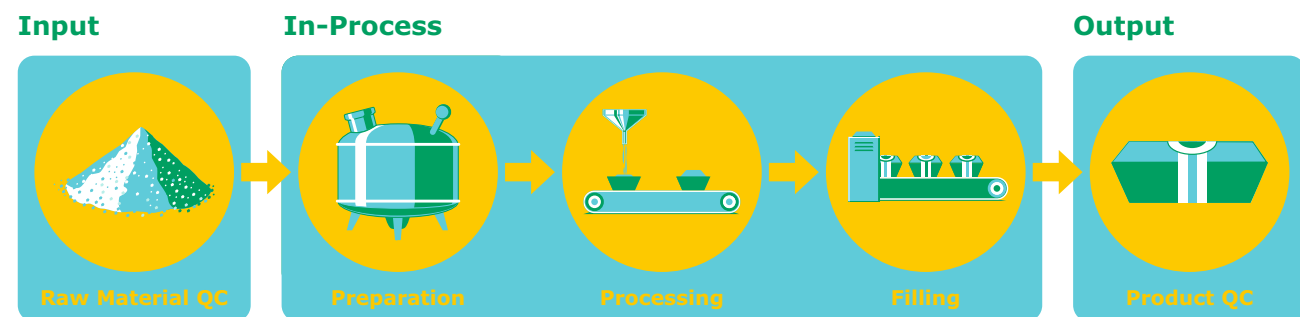






# FOOD & BEVERAGE WORKFLOW

Food and beverage producers face increasing safety regulations requiring detailed analyses of raw materials, in-process controls, quality tests, and hygiene monitoring. Because all of these analyses take time, our rapid and on-the-spot tests for chemical and microbiological contamination are designed to help get your product ready for purchase faster. Find a selection of products that support your workflow to accurately analyze microbiological contamination and important chemical parameters in food and beverages such as ascorbic acid, glucose, and fructose.



## Instruments & Test Kits

### Reference Materials

- Ready-to-use reference materials for photometric test kits
- Certipur® standards
- Standards for pesticides

### Ingredient and Nutritional Testing

- Kjeldahl, total dietary fiber
- Flavors and fragrances
- Karl Fischer – reagents

### Rapid Chemical Testing with Reflectoquant® or MQuant® Systems

- Reflectometer®: RQflex20®  
Cat. No. 1.17246.0001
- Reflectometric tests
  - Ascorbic Acid Test Cat. No. 1.16981.0001
  - Sucrose Test Cat. No. 1.16141.0001
  - Glucose Test Cat. No. 1.16720.0001
  - Nitrate Test Cat. No. 1.16971.0001
  - Urea (Ammonium) Test Cat. No. 1.16892.0001
- Visual tests
  - pH-indicator strips pH 0-14  
Cat. No. 1.09535.0001  
Cat. No. 1.09535.0007
  - Free Fatty Acids Test strips  
Cat. No. 1.17046.0001

### Complementary Testing

- Chromatography, e.g. HPLC, GC, TLC
- Microbial filtration testing, e.g. EZ family
- Water purification testing, e.g. Milli-Q® system

## Protocols & Resources

- Selection of Application Notes
  - Chromium (total) in dairy products
  - Nickel (total) in dairy products
  - Nitrogen (total) in dairy products
  - Phosphorus (total) in dairy products
  - Urea in milk
  - Hydroxymethylfurfural (HMF) in honey
  - Ascorbic acid in juices
  - Sucrose (saccharose) in soft drinks
  - Glucose in red and white wine
  - Nitrate in Vegetables
  - Nitrate in Milk Powder
  - Nitrate in Vegetables
  - How Fresh is Your Honey
  - Total Sugar Testing in Diet Soft Drinks
  - Glucose Content Testing
  - Ascorbic Acid in Food
  - Monitor Acrylamide
  - Quality of Frying Oil
  - Milk Quality Testing

# Disinfection Control in Your Workflow

## Tasks requiring disinfection control



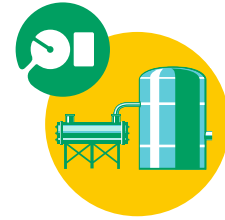
**Water Bottling**  
Packaging Control



**Brewery**  
Filling/Bottling



**Food Processing**  
Product QC



**Wastewater**  
Output Control

## Instruments & Test Kits

### Rapid Chemical Testing with Reflectoquant® or MQuant® Systems

- Reflectometer: RQflex® 20 **Cat. No. 1.17246.0001**
- Reflectometric tests
  - Chlorine Test Cat. No. 1.16896.0001
  - Peroxide Test Cat. No. 1.16731.0001
  - Peracetic Acid Test Cat. No. 1.16976.0001
  - More reflectometric test kits see page 6
- Visual tests
  - pH-indicator strips pH 0-14  
Cat. No. 1.09535.0001  
Cat. No. 1.09535.0007
  - Peroxide Test strips  
Cat. No. 1.10011.0001  
Cat. No. 1.10011.0002

### Spectroquant® Instruments

- Vis Spectrophotometer Prove 100 plus  
**Cat.No. 1.73026.0001**
- UV/Vis Spectrophotometer Prove 300 plus  
**Cat. No. 1.73027.0001**
- UV/Vis Spectrophotometer Prove 600 plus  
**Cat.No. 1.73028.0001**
- Colorimeter: Move DC **Cat. No. 1.73635.0001**

Facilities that are not disinfected effectively have more potential safety risks. Disinfection control remains critical in ensuring the safety of your product. However, the determination of chemical cleanliness requires instruments and means and not just the human eye. Ensure the safety of your production line after disinfection.

### Are you working in these areas?

- dairy or infant formula
- vegetarian dishes
- meat products
- products with allergen free claims
- other food and beverage industries

Thorough disinfection control testing of filling and processing equipment must be conducted to ensure that no disinfectant residues remain and subsequently contaminate the final food or beverage products.

## Protocols & Resources

- Selection of Application Notes
  - Perchlorate in wastewater
  - Surfactants (nonionic) in Extran® rinse solutions
  - Glutardialdehyde in aqueous solutions



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Analytical Products

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