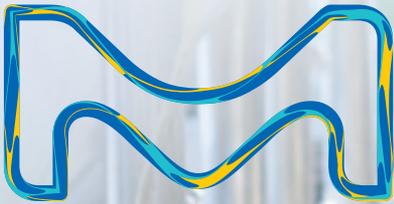




**MILLIPORE  
SIGMA**

# Environmental Monitoring Solutions

for the Food &  
Beverage Industry



 **KRACKELER**  
Scientific

**Millipore®**

Preparation, Separation,  
Filtration & Monitoring Products

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

# Total Solutions Provider

MilliporeSigma brings you innovative and proven solutions for your manufacturing environment, equipment, surfaces, air, and water or wastewater testing. Offering microbiology tools to help you monitor your critical control points, keeping your manufacturing space compliant and ensuring an efficient sanitization program. Our focus application areas are hygiene monitoring, active and passive air monitoring, culture media, traditional surface and liquid monitoring, and a full array of services. We have every part of your program covered.

## Sanitation and Cleaning Verification

Effective cleaning and disinfection are the foundations for good hygiene. Our hygiene monitoring range has been developed and optimized in close cooperation with industrial users and operators, as well as with opinion leaders of supervising authorities.

### Rapid Surface Monitoring

In order to meet the food and beverage industry's need for faster results, we have developed rapid microbiological solutions for surface and personnel monitoring. Our methods are based on ATP, NAD or protein detection; ATP and NAD are known as indicators of overall surface hygiene and cleaning efficacy.

[SigmaAldrich.com/Rapid-Surface-Monitoring](https://www.sigmaaldrich.com/Rapid-Surface-Monitoring)



### HY-RiSE® Color Hygiene Test Kit

The HY-RiSE® kit provides a method for assessing the general cleanliness of surfaces and Cleaning In Place (C.I.P.) rinse water. A color change on the test strip indicates cleanliness by measuring organic surface or C.I.P. rinse water contamination in the form of product residues left after inadequate cleaning. Measurements made with the HY-RiSE® can provide early warning of possible contamination on specific surface areas allowing immediate corrective action (e.g. removing food & beverage soil).

On visibly clean surfaces the test can reveal the presence of product residues invisible to the eye, therefore indicating hidden potential for microbial growth.



## MVP ICON® Hygiene Monitoring and HACCP Management System

The MVP ICON® system is an instrument and software platform that combines HACCP and hygiene monitoring with powerful program management capabilities. The MVP ICON® system allows you to monitor key HACCP parameters, reducing the need for multiple instruments. Available measurements include:

- ATP (Adenosine Triphosphate)
- Chemical Concentration (ppm)
- Conductivity (µS)
- pH
- Temperature

Rapid results allow for real-time decision making and corrective action. The patented design of the sampling device ensures a high degree of accuracy—even in the presence of sanitizers. The MVP ICON® system is the most complete HACCP and hygiene monitoring system with dashboard software that displays key performance metrics, so you can effectively manage your quality assurance program.



### Dashboard Benchmarks



Zero in on failed test points that are not being properly re-cleaned and re-tested to improve retest compliance.

Ensure all MVP ICON® instruments are up-to-date on calibration.

Automatically identify test points with the highest Fail Rate (problem areas).

Track ATP swab usage to ensure the correct amount of testing is being performed

See the distribution of Pass, Warn and Fail results for the most problematic test points.

## FLASH® Rapid Allergen Indicator Total Protein Detection test

Protein swab tests are used to help quickly verify cleaning effectiveness by detecting protein residues, including allergens left on food contact surfaces after cleaning.

The FLASH® test is a visually read total protein test that produces results within 10 minutes, allowing corrective action to be taken immediately. No instrumentation is required, and the test can be used by all personnel without the need for extensive training.

- Easy-to-interpret color change results within 10 minutes
- Single swab providing flexible test method based on desired level of sensitivity
- Room temperature readings detect down to 20 µg
- Achieve higher sensitivity detection down to 3 µg when incubated at 70 °C
- Detects total protein, including samples comprising the “Big 8” food allergens: gluten flour, soy flour, egg powder, milk powder, roasted almonds, peanut butter, raw shrimp, and raw fish (cod)

# Environmental Monitoring

## Active and passive air monitoring

Hygiene standards in a production environment are directly linked to the microbiological safety of the finished products. We ensure our active microbial air samplers produce precise, reliable and reproducible results. We offer a comprehensive range of active and passive microbial air monitoring solutions for effective use in the food and beverage industry to meet today's regulatory expectations.

## Viable Air Sampling

Our air samplers are based on different principles, enabling selection of the technology to suit your needs. Our range includes MAS-100<sup>®</sup> air samplers which are based on the Anderson impaction principle that use settle plates or contact plates, as well as RCS<sup>®</sup> (Reuter Centrifugal Sampler) that use dedicated agar strips. Both instruments are designed for economical use in the food and beverage industry.

[SigmaAldrich.com/Microbial-Air-Monitoring](https://www.sigmaaldrich.com/Microbial-Air-Monitoring)



## MAS-100<sup>®</sup> ECO Air Sampler

The MAS-100<sup>®</sup> ECO microbial air sampler system is designed for reliable and easy microbial monitoring of ambient air in food and beverages manufacturing facilities.

- Accurate, reproducible measurements and outstanding user flexibility
- Excellent collection efficiency
- 90 mm settle plates used for sampling



## RCS® High Flow Touch and Compressed Gas Adapter

The RCS® High Flow Touch allows you to not only sample viable air, but compressed gasses as well which can save your manufacturing site time and money. The instrument also uses the same consumable for both samples which streamlines your sampling process.

- 100 L/min sampling speed
- High resolution color touch screen
- Innovative battery design
- Validated with our agar strip media
- Compressed Gas adapter is simple and easy to use



## Passive Air Monitoring: LI (Long Incubation) Settle Plates

LI Settle Plates are single-bagged and non-irradiated and are ideal for air monitoring in less critical areas. These plates contain either Tryptic Soy agar (TSA) general purpose media, or Sabouraud Dextrose agar (SDA), which is ideally suited for the growth of yeast and molds.

- Room temperature storage
- Our standard filling volume of 30mL helps to compensate for dehydration.
- Barcoded to enable full traceability
- Can be used for passive air monitoring or used with our MAS-100 Eco viable air monitor



# Convenient and Traditional Media Solutions

## Convenient Media

### MC-Media Pad®

The MC-Media Pad® is designed for convenient and rapid routine testing of microbial contamination in your food and beverage products. The pads are coated with a growth medium and chromogenic substrate for specific detection allowing faster results and improved readout. While the pads can be used for indicator organisms testing in your EMP (Environmental Monitoring Program), they can also be used in hygiene monitoring for surface testing, personnel testing, and passive air monitoring.

- Save space in your fridge and incubator
- Improve your inventory management with a shelf-life of up to 36 months
- Validated to AOAC-PTM, Microval and ISO 16140
- No spreading device required
- Compatible with Interscience Scan® 1200 reader (Ref. 437 000)
- Go green & gain: reduce your environmental impact

[SigmaAldrich.com/MC-MediaPad](http://SigmaAldrich.com/MC-MediaPad)



## Culture Media

The superior granulation technology of our traditional dehydrated culture media meets the highest industry performance standards, while guaranteeing that our products provide maximum convenience and safety.

Want to learn more about the benefits of granulated media compared to powdered media?

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



[Watch our video](#)



### GranuCulture® ISO 11133: 2014 Compliant Granulated Culture Media

Our GranuCulture® low-dust dehydrated culture media granules are compliant with EN ISO 11133:2014 standards, as well as other ISO standards and FDA-BAM and USDA-FSIS methods for food and water sample testing. It is also released through an ISO17025 accredited QC laboratory.

- **Safer:** Reduction of fine dust inhalation and less contamination of working environment
- **Accurate:** no clumping or separation
- **Fast:** rapid and uniform dissolution into water
- **Easier:** media does not stick to container for better weighing and handling
- **Reliable:** even distribution of ingredients guarantees high reproducibility

## Traditional surface and liquid monitoring

We provide a wide range of solutions for surface, personnel and liquid sampling that are critical to confirm the contamination risk in the production plant. These products are proven to monitor the effectiveness of disinfection routines. Easy-to-use solutions are available for standard and irregular surfaces, in addition to hard to reach areas.

[SigmaAldrich.com/Surface-Monitoring](https://SigmaAldrich.com/Surface-Monitoring)

### Dip & Swabs

The swab allows the user to sample difficult to reach areas. These dip and swab testers are ready to use, available in heterotrophic plate count (HPC), yeast & mold, and coliforms. They are suitable for testing liquid samples as well as surface samples.



### Envirocheck® Contact Slides

Our Envirocheck® Contact Slides provide semi-quantitative detection of microorganisms on surfaces and in liquid samples. The flexible paddle is coated with a different nutrient media on each side, allowing you to test for two parameters in one step. Envirocheck® Contact Slides are available for the following parameters: Disinfection control, Total Colony Count, yeasts and molds, *Enterobacteriaceae*, and total coliforms / *E. coli*.



## Services

### Are you ready to start testing?

Our Services support our customers in the food industry throughout the entire workflow of food safety testing in order to ensure optimum performance and regulatory compliance. Regardless of product, we offer a variety of services including:

- Application services: feasibility studies using your specific matrices, method verification
  - Validation services: instrument qualification, PQ support, regulatory consultancy
  - Maintenance services: calibration, preventive maintenance, repair, extended warranty on-site or in our local repair center
- Training: seminars, on-site operator training and eLearning

[Sigmaaldrich.com/Food-Services](https://Sigmaaldrich.com/Food-Services)

