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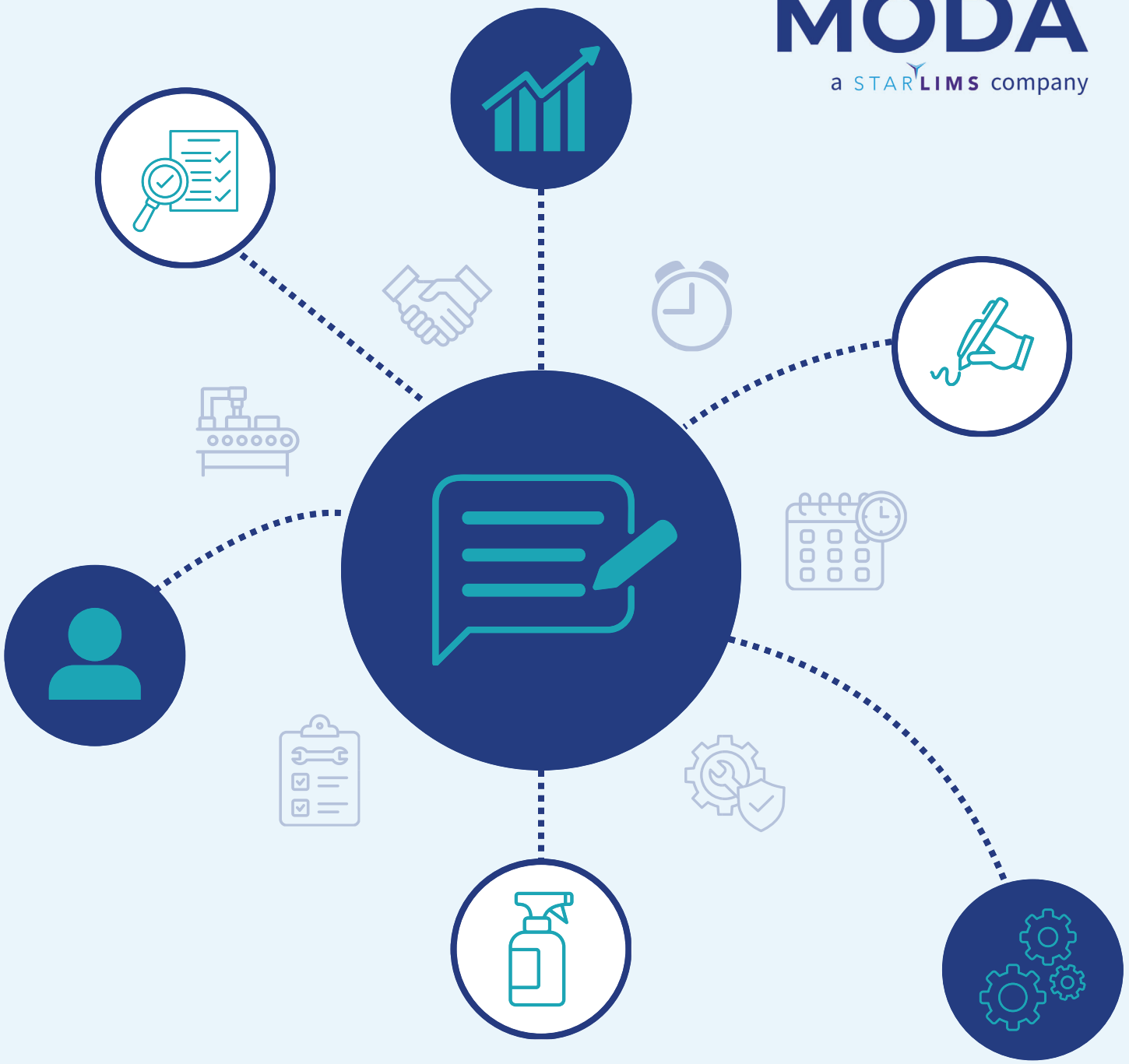


Solution Brief

MODA-EM

Environmental Monitoring Informatics for QC Microbiology

The Problem with Paper-Based QC Microbiology

For most quality control (QC) microbiology teams, environmental monitoring still runs on manual, paper-based processes — and the burden is real. Scheduling, sample labeling, result entry, logbook documentation, deviation tracking, and reconciliation all depend on fragmented workflows and physical records that accumulate into shelves of binders that are difficult to search, audit, and defend.

The downstream impact goes even deeper. When data is captured and reviewed manually, trend identification and reporting for Corrective and Preventative Action (CAPA) activities can take weeks. The longer it takes to identify potential issues, the harder it becomes to respond quickly and make informed quality decisions.

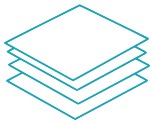
Without a solid digital solution in place, QC microbiology teams will struggle to turn documentation into actionable, real-time insights. That's where MODA-EM (Environmental Monitoring) for Quality Control Microbiology comes in.

Typical collection time per shift

Time spent on manual sample collection and documentation

8+ weeks for CAPA trend reporting effort

Time to compile complete trend reports and drive action



Paper-based manual workflows

Fragmented, manual processes create risk and limit visibility

Introducing MODA-EM

MODA-EM is an environmental monitoring informatics platform purpose-built for QC microbiology. It replaces paper-based processes with automated scheduling, mobile data capture, device integration, and real-time analytics, giving your team the tools to move from reactive documentation to proactive quality control.

50%

Faster sample collection with MODA-EM

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Gain Complete Insight into Manufacturing Ops

By combining automated scheduling, mobile data acquisition, device integration, and advanced analytics, the MODA-EM platform delivers measurable efficiencies across your entire QC and manufacturing organization.

For QC Technicians

- Quickly and accurately collect data in critical areas
- Reduce manual transcription and data re-entry
- Scan and label samples at the point of collection

For Lab Managers

- Automate scheduling and sample tracking workflows
- Gain direct traceability across QC Micro programs
- Improve compliance and audit readiness

For Supervisors

- Access immediate, detailed production area reporting
- Enable sound product release and release decisions
- Respond quickly and confidently to audits and investigations

For Executive Management

- Access longer-term trend data and reports for program assessment
- Support green initiatives and sustainability goals
- Reduce operational overhead

Featured: MODA-VIP Module

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One Platform for Environmental Monitoring

The MODA-EM platform brings environmental monitoring data, workflows, and analytics together in a single, connected system built on three interdependent modules: MODA-EM, MODA-FDC (Field Data Capture), and MODA-VIP (Visual Intelligence Portal).

Execution data captured in MODA-FDC flows directly into MODA-EM for review and approval, and into MODA-VIP for trending and visualization, giving QC teams a single, unbroken thread from sample collection through analysis.

The platform also integrates with your LIMS, delivering a connected view of QC microbiology activities across your lab and manufacturing environments. Backed by dedicated implementation services and purpose-built software, the MODA-EM platform helps organizations streamline deployment, reduce manual processes, and give QC teams more time to focus on quality, investigations, and continuous improvement initiatives.

MODA-EM	Paperless environmental monitoring that automates QC micro data collection and management for EM, utility, and product testing.
MODA-VIP	A visual analysis tool that correlates production-related information with a floor plan of the physical facility, plotting EM, utility monitoring, and other production data.
MODA-FDC	A platform that collects, labels (via barcode), and tracks EM, utility, and product bioburden test samples, usable on a cleanroom-compatible tablet PC set up with offline capability for contemporaneous data collection.

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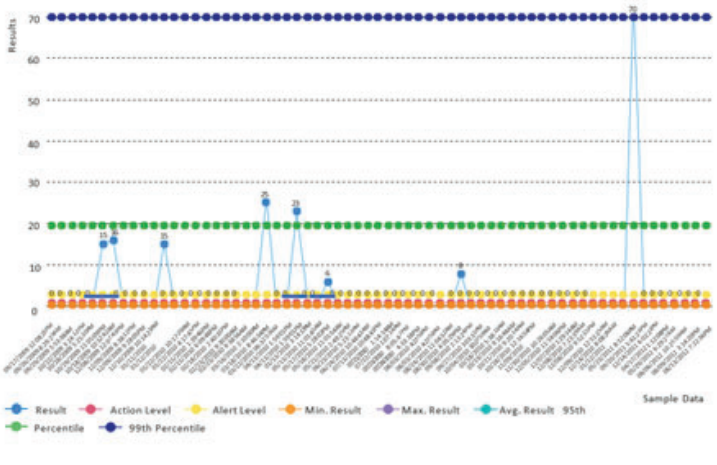
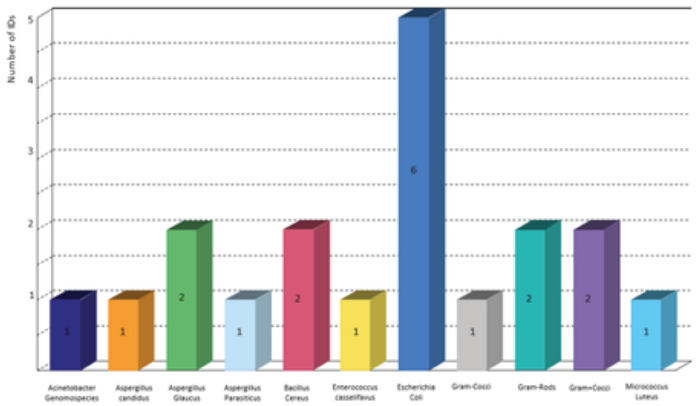
Turn Data into Real-Time, Actionable Insight

MODA-EM includes a visualization mapping tool that correlates test results directly with the floor plans of your physical facility. Zone classifications on the processing plant floor are configurable and compatible with industry-standard drawing packages, such as AutoCAD and Visio.





On-demand analytics include deviation summary reports, trend reports for user-selected tests and timeframes, and tabular views for rapid data review, all of which are available at the click of a button without relying on manual compilation.

Purpose-Built for Life Sciences

Regulatory agencies require comprehensive QC microbiology programs that demonstrate processing environments are controlled for both viable and non-viable contamination. Meeting those requirements through paper-based processes can be time-consuming, error-prone, and difficult to sustain as operations grow.

Built specifically for pharmaceutical and biotechnology manufacturers, MODA-EM helps modernize environmental monitoring through digital workflows, automated data collection, and real-time visibility into quality data. The result is a more connected approach to QC microbiology that supports faster investigations, improved oversight, and more informed decision-making.

Visit us at: **modatechplatform.com**

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