

Take Control of Your Bioprocess Development

Make Decisions Faster with Your Own Quality Data



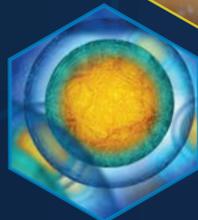
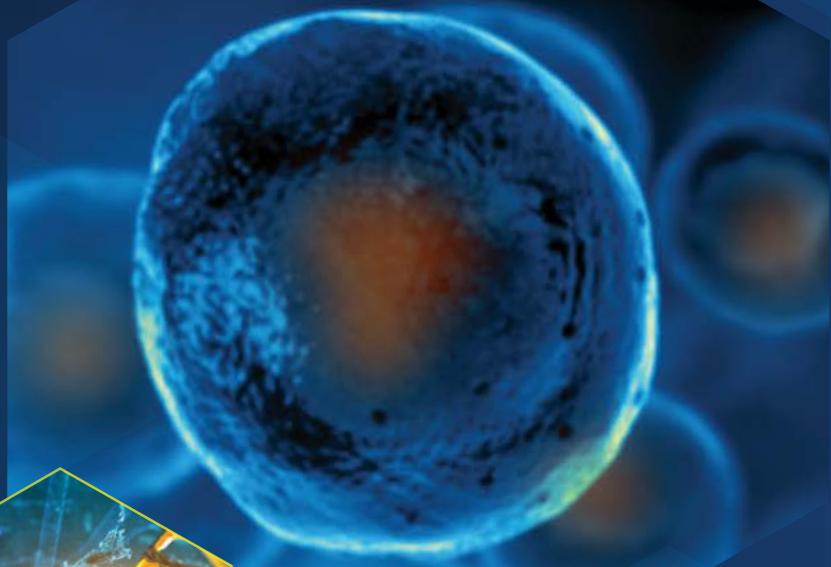
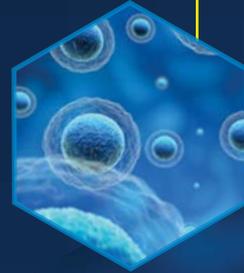
BIOPROCESSING

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

Upstream Bioprocess

Development engineers require a more effective and data driven optimization of cell lines and manufacturing process. Get access to direct measurement of Product Quality Attributes and Culture Media characteristics during clone selection and bioprocess development to allow access to analytical information at point of decision.



Make faster decisions, accelerate development and save money by avoiding costly, time-consuming optimization cycles.

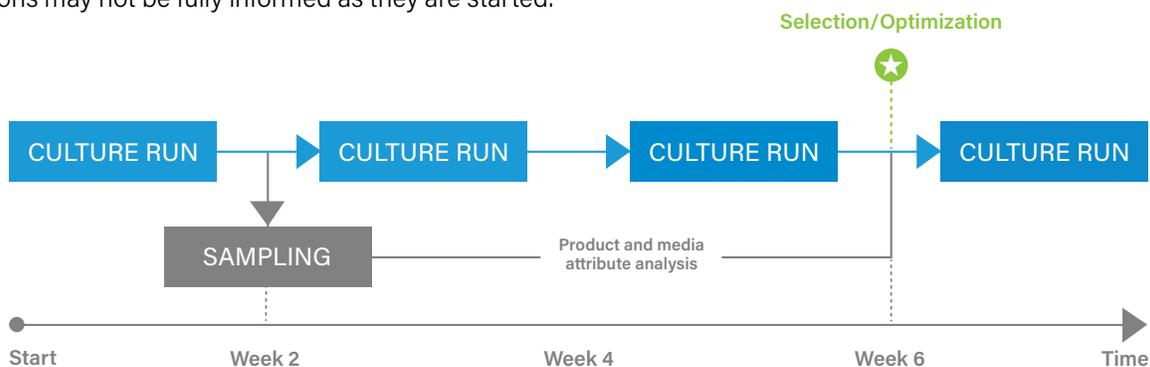
The BioAccord™ LC-MS System with dedicated workflows for the Sartorius Ambr® 15 and small bioreactors enables Process Engineers to directly measure Product Quality Attributes (PQAs) and cell culture media.

Improve your clone selection and bioprocess development to maximize drug product quality, yield and manufacturing efficiency.

LC-MS Performed by Partner Lab

Current State

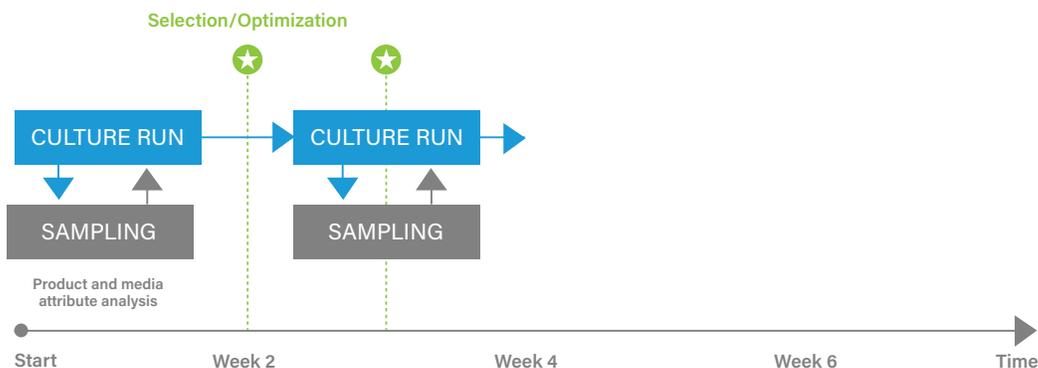
With **up to 4 weeks** to receive PQA and culture media results from culture runs, next iterations may not be fully informed as they are started.



Direct LC-MS Measurement in Bioprocess Lab - Make better and more informed decisions

BioAccord LC-MS System

Generate PQA and culture media data **within 24 hours** of sampling, immediately informing decisions during cell culture processes and for future experiments.





We believe analytical results driving process decisions should be readily accessible from the hands of process engineers.

- Correlate Process Input and Product Quality Outputs: Monitor cell culture media characteristics and product attributes on a single platform
- Get Continuous Product Quality Feedback: Access leading indicators to make decisions in near-real time
- Ensure Reproducibility and Traceability: Implement workflows without the requirement of programming or automation engineering, thanks to the Andrew+™ automation platform
- Rely on the BioAccord LC-MS System: A high throughput, easy to deploy and to operate platform for non-expert users with seamless workflows for bioprocess assays

Automated Product Quality Attribute Monitoring

Fast end-to-end methods for glycoform distribution, modifications and purity assessment (low molecular weight analysis).

- Efficiency: 6 min run time (intact mass analysis), automated processing and interpretation
- Multi-attribute tracking: titer, identity, purity, glycan profile, modifications, ...
- Accessibility: Automated workflows from sample treatment to reporting with a system that is easy to deploy and to operate
- Connectivity: Results feedback to Sartorius Ambr® allowing decision making

Cell Culture Media Analysis

A fast and complete method allowing the screening of 200+ media components in 20min per sample.

- Efficiency: No additional sample preparation needed
- Specificity: Compound tracking with high accuracy
- Information rich: Automated structural elucidation of detected unknown components
- Reproducibility and sensitivity: Down to sub ng/mL

SELECTION

Sartorius Ambr® Interface

Simplify data transfers between BioAccord LC-MS System and Ambr® 15 high throughput automated bioreactor system for 24 or 48 parallel cultivations at the 10 – 15 mL microbioreactor scale. Ambr® 15 offers high levels of flexibility to support applications, including:

- Clone selection
- Media and feed development
- Early-stage process optimization
- Screening under perfusion mimic conditions



AUTOMATION

Andrew+ Pipetting Robot

Andrew+ Pipetting Robot and OneLab™ is your extra set of hands in the lab, allowing you to easily automate your most time-intensive liquid handling tasks. This robot ensures reproducibility and traceability of experiments by automation of complete laboratory workflows:

- Simple installation and virtual support
- Scripts and kits available for concentration normalization, protein clean up, sub-unit analysis and released N-Glycan analysis



ANALYSIS

BioAccord LC-MS System

The BioAccord LC-MS System provides appropriate performance for directly analyzing biomolecules and metabolites. The system comes with optimized workflows for:

- Intact mass analysis of proteins and oligonucleotides
- Subunit analysis of monoclonal antibodies (mAbs)
- Peptide mapping/MAM (multi-attribute method)
- Released N-glycan analysis
- Cell culture media analysis



waters.com/Bioprocessing

For your local sales
office, please visit
waters.com/contact



Waters Corporation
34 Maple Street
Milford, MA 01757 U.S.A.
T: 1 508 478 2000
F: 1 508 872 1990
waters.com

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