

# Executive Brief Multiple Attribute Methodology (MAM) by LC-MS

## Overview

Multiple analytical assays are currently used for product quality attribute (PQA) monitoring and product purity testing throughout biopharmaceutical development and production.

### Accurate mass LC-MS using a Multiple Attribute Methodology (MAM) can:

- Directly detect and measure biologically relevant attributes
- Give increased confidence using an **Orthogonal assay** in process development and product release
- Accelerate development and reduce cost of quality

### Moving to an LC-MS based MAM assay has historically been challenging due to:

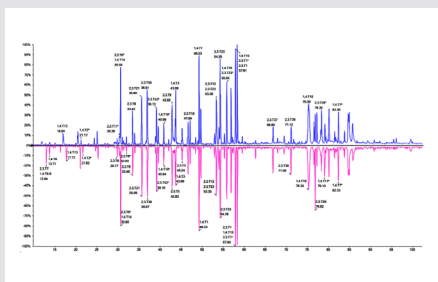
- Complex system setup and data acquisition
- Multiple steps and software platforms required to perform ID, quantitation, purity testing and reporting
- Software processing that limits the number of PQAs it can handle

Biologic PQA Assessments	LC-MS MAM Workflow	SEC	CEX	CE-SDS	HILIC	ELISA
Deamidation						
Glycation						
High Mannose						
Methionine Oxidation						
Signal Peptide						
Glycosylation						
CDR Tryptophan Degradation						
C-terminal Lysine						
Misincorporations						
C-terminal amidation						
Fucosylation						
Residual Protein A						
Host Cell Protein						
Aggregate						
Cysteine Adduct Assessment						

The new **Streamlined SCIEX Solution for MAM** removes these barriers, and puts powerful mass spec capabilities into the hands of all analytical scientists.

## Benefits of SCIEX Workflow for MAM

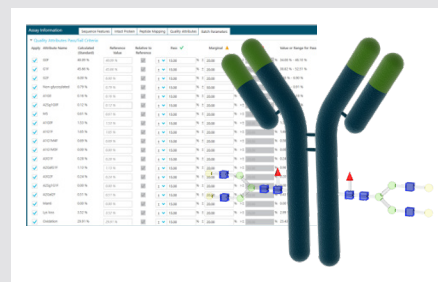
**Reproducible** and robust LC-MS data to detect and quantify known components and confidently perform purity tests



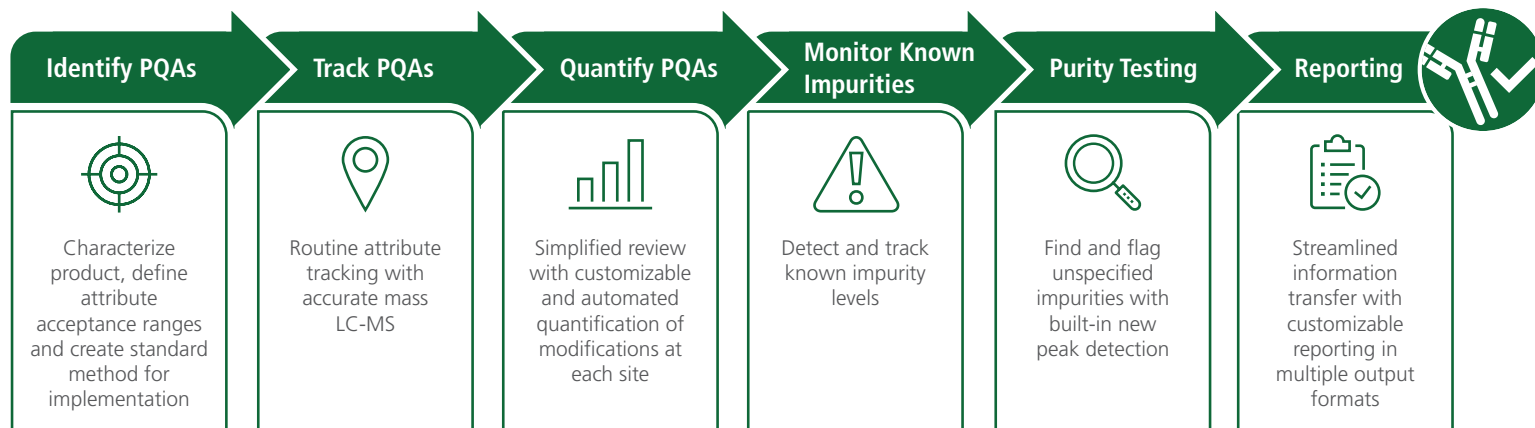
**Simplified** development and running of MAM assay on X500B QTOF System with easy-to-use SCIEX OS user interface



**Single software** for identification, quantitation, new peak detection and reporting with BioPharmaView™ Software 3.0



## Streamlined MAM with SCIEX X500B QTOF and BioPharmaView™ Software 3.0



**Bottom Line:** This streamlined methodology can be used to complement several conventional process development, QC, and release methods in a single simplified analysis. Moving to a powerful high-resolution, accurate mass LC-MS based MAM assay has never been easier with the user-friendly X500B QTOF System, and all-in-one BioPharmaView™ Software 3.0.