



Answers for Science.  
Knowledge for Life.™



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## Case Study

### Project Goal

To analyze cohorts of IgGs and mAb based modalities using mass spectrometry characterization using a complete analytical workflow on a single workhorse instrument.

### The Challenges

- Require a single, complete MS platform that can handle a diversity of the analytical workflows- intact mass, peptide mapping in reduced and non-reduced conditions, and relative quantitation of post-translational modifications
- Need an easy-to-use MS system that does not require extensive training. Walk-up resource, ready to use instantly.
- Want automated calculations and customized reporting for data that relies on minimal external intervention.

### Solution

The X500B QTOF System, a robust LC-MS platform with:

- Good sensitivity & linear dynamic range
- User-friendly data acquisition system
- Dedicated BioPharmaView™ Software to do a full characterization of biotherapeutics

### The Outcomes

- After a quick calibration, the X500B QTOF is ready to use within minutes
- The system is easy-to-use. New users in the team can be trained within a few hours, and are completely operational.
- After six-months of operation, and around 2000 injections, no downtime has occurred, and there has been minimal cleaning of the source.
- The BioPharmaView software solution allows for step-by-step biotherapeutic characterization, for naked antibodies and even immunoconjugates.

**“The accuracy and sensitivity of the X500B LC-MS instrument, with improved robustness, allows for monitoring of manufacturing batches with increased analytical throughput.”**

#### Type of Organization

Sanofi S.A. is a global healthcare leader in biopharmaceuticals. The structural analysis department specializes in mass spectrometry and structural analysis for biologics characterization.

#### Goals

To gain better knowledge of biopharmaceutical products in development by reliable mass spectrometry characterization at the intact protein and peptide level.

#### Applications

SWATH® Acquisition:

- Data Independent Acquisition (DIA)
- Peptide Mapping
- Intact Protein Analysis
- Post-Translational Modification Analysis

#### SCIEX products

- X500B QTOF System
- SCIEX OS Acquisition Software
- BioPharmaView™ Software

**“The follow-up of post-translational modifications with non-targeted and targeted (MAM) workflows is becoming mandatory to develop a new project.”**

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