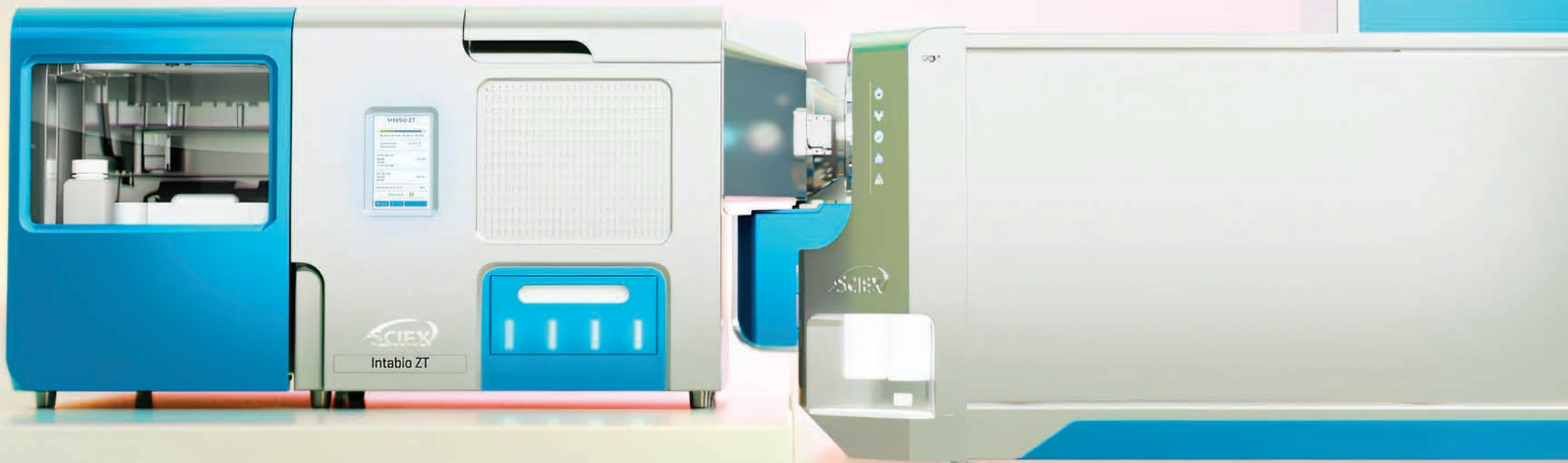




Intabio ZT system

Be unstoppable with comprehensive
charge variant analysis on a single system



The Power of Precision

A photograph of two scientists, a woman and a man, in a laboratory setting. They are both wearing white lab coats and safety glasses. The woman is on the left, looking at a large monitor that is out of focus in the foreground. The man is on the right, looking towards the camera with a slight smile. The background shows a clean, modern lab environment with white walls and ceiling lights.

“We need to look at the data in totality.”

“Is this candidate suitable for development?”

“What is the reason we are seeing these peaks?”



Cut out risk, cut out information gaps. Gain multiple pieces of critical data up front.

Accelerate candidate selection by achieving separation, quantitation, and identification of biopharmaceutical charge variants and their proteoforms with icIEF-UV/MS via the Intabio ZT system. The Intabio ZT system can be used throughout the development process for monitoring of intact level biologics and it provides comprehensive characterization of charge variant-associated quality attributes.

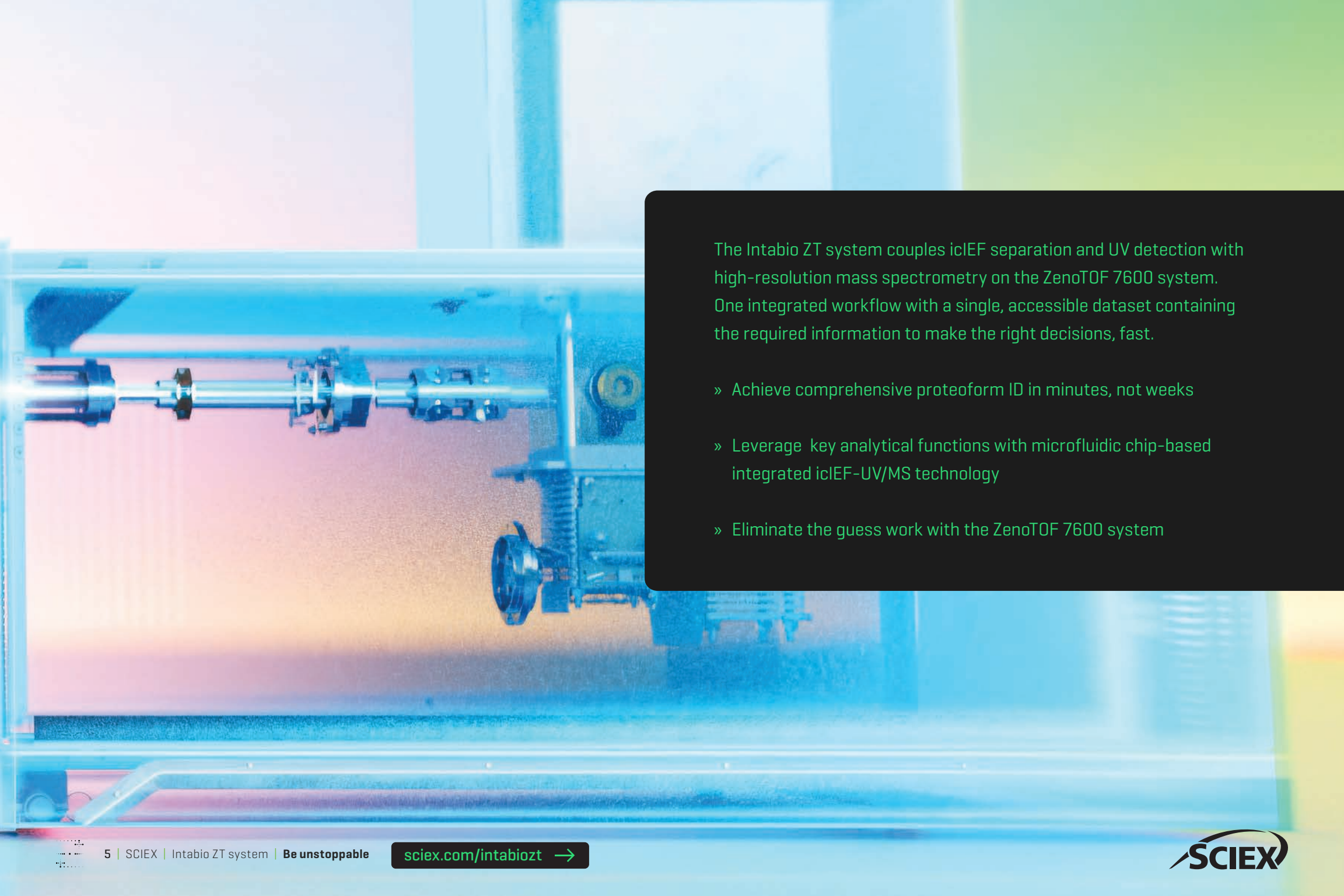
Reduce the process time from weeks to minutes by coupling icIEF separation with the ZenoTOF 7600 system in a single workflow.



Be unstoppable with charge variant analysis on a single system

Charge ahead with separation, UV detection and MS identification, fully integrated with the power of the ZenoTOF 7600 system.





The Intabio ZT system couples icIEF separation and UV detection with high-resolution mass spectrometry on the ZenoTOF 7600 system. One integrated workflow with a single, accessible dataset containing the required information to make the right decisions, fast.

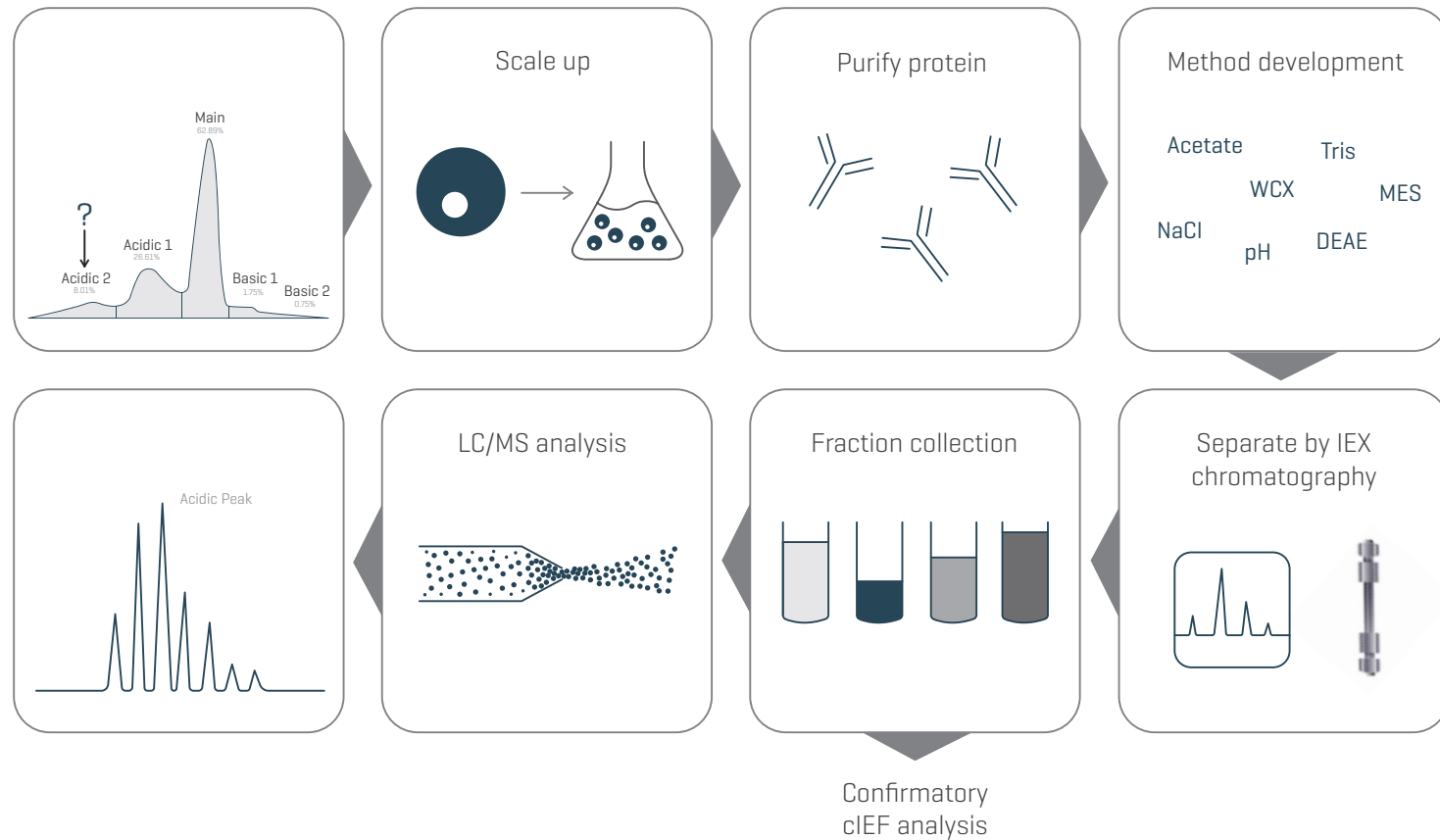
- » Achieve comprehensive proteoform ID in minutes, not weeks
- » Leverage key analytical functions with microfluidic chip-based integrated icIEF-UV/MS technology
- » Eliminate the guess work with the ZenoTOF 7600 system



Replace your time-consuming workflow

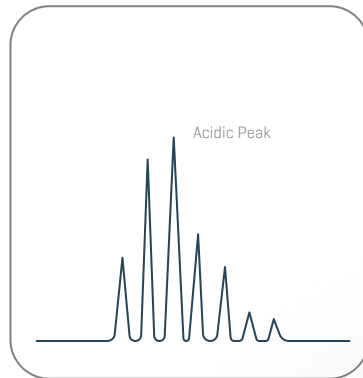
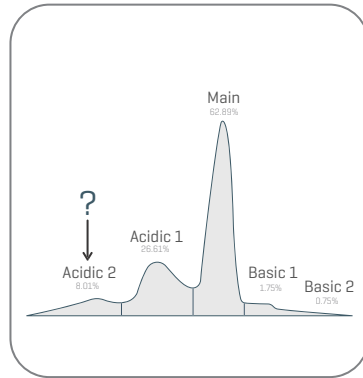
Conventionally, the process of identifying individual charge variant components and interpreting their structural differences takes weeks and requires the use of multiple instruments, with multiple manual steps.

Conventional IEX workflow



Comprehensive charge variant analysis in minutes

Workflow on
Intabio ZT system



Characterization by MS

Rapid multi-attribute monitoring
of intact biotherapeutics and
comprehensive characterization
by icIEF-UV/MS

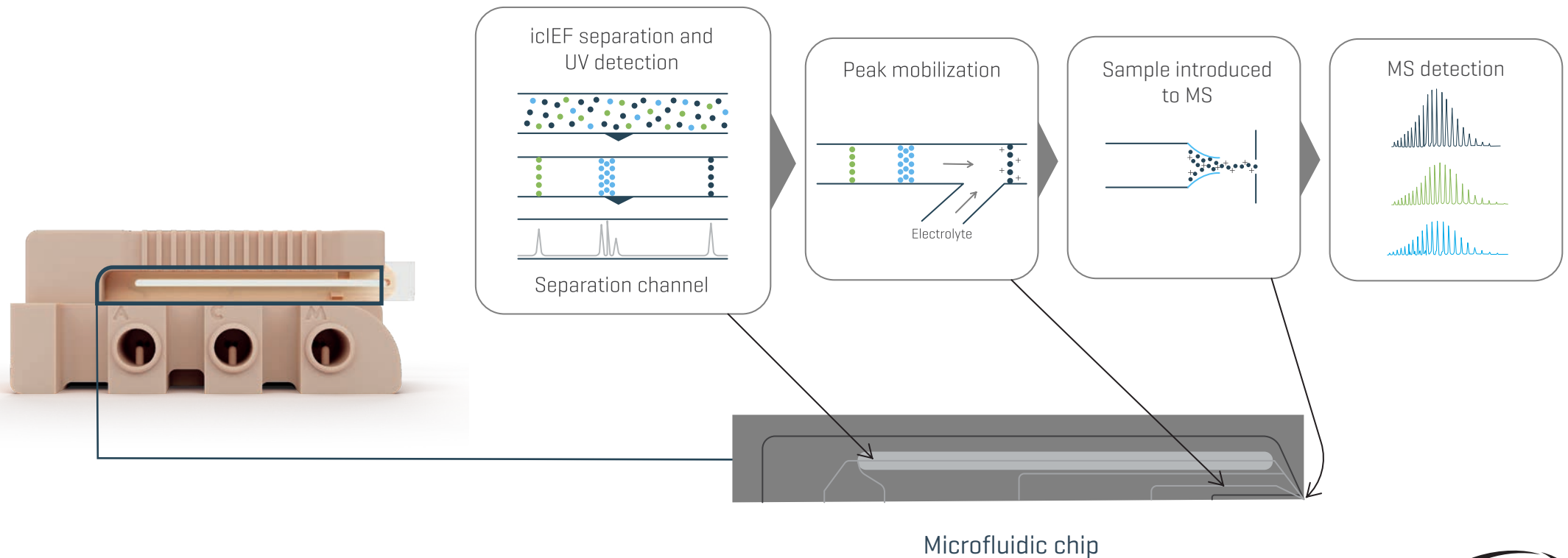
When the Intabio ZT system is coupled with the ZenoTOF 7600 system, separation, quantitation and identification of charge variants can be achieved in minutes on a single integrated system.



Microfluidic technology integrates key analytical functions

The Intabio ZT cartridge integrates key analytical functions using proprietary microfluidic chip technology for seamless icIEF-UV/MS analysis.

- » Separation of charge variants with imaged capillary isoelectric focusing (icIEF)
- » Quantitation with real-time UV detection
- » Integrated on-chip electrospray ionization for MS identification



Eliminate the guesswork with the ZenoTOF 7600 system

Leverage mass information to determine post-translational modifications for charge variants with high-resolution mass spectrometry fully integrated with icIEF separation and UV detection. Experience one single workflow for direct peak identification and enhanced understanding of charge variant profiles.

Enable a more detailed characterization approach by leveraging the enhanced capabilities of the powerful ZenoTOF 7600 system to provide confirmation and localization of post-translational modifications.



Scan to explore the ZenoTOF 7600 system



Guide decisions with multidimensional analysis

Maintain data continuity with a single workflow producing one, accessible dataset, where UV peaks correlate with MS peaks.

Let Biologics Explorer software do the heavy lifting with pre-built workflows for charge variant analysis. Get the required information to make confident decisions, fast.



Hit the ground running from day one

Reduce the training burden with on-screen “system helpers”. Real-time guides eliminate the guesswork from setup through implementation. Straightforward interface enables execution of system preparation, while internal cameras enable visualization of all steps, helping you stay on the fast track.

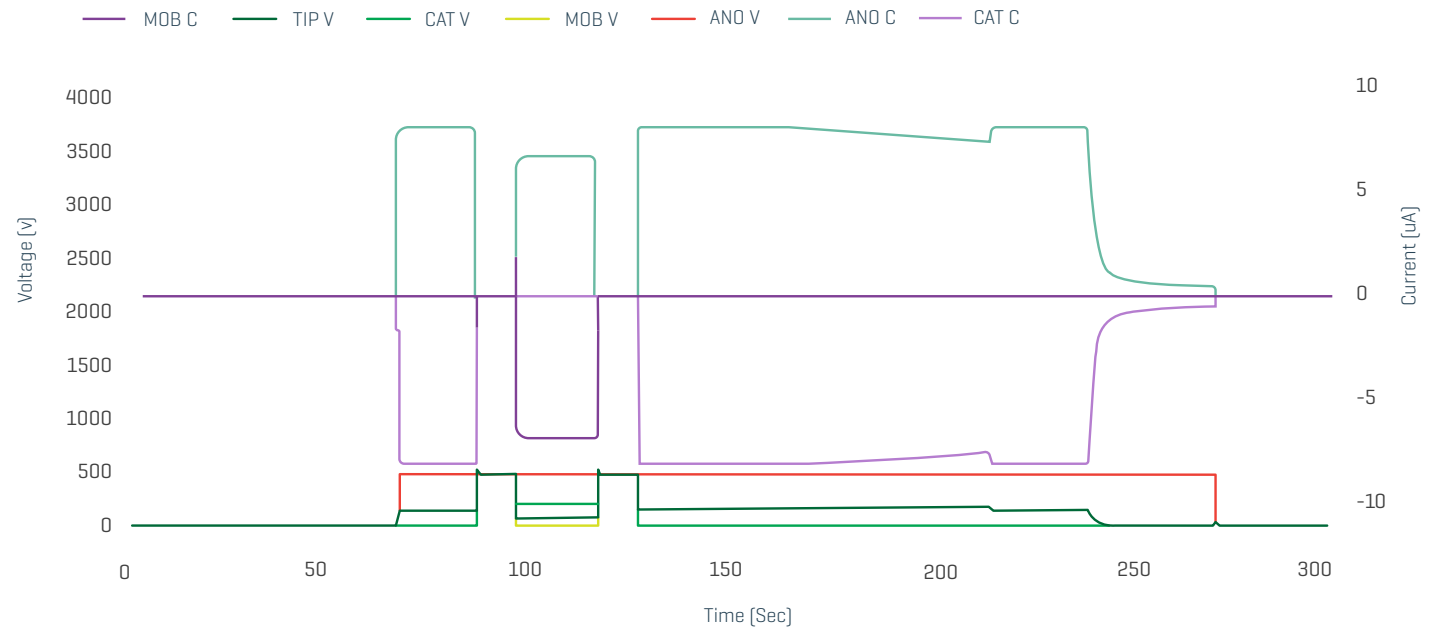
System Helpers

Guided procedures

- Home and align to the MS >
- Set the stage positions for offline operation >
- Prime the fluidics and wash the autosampler >
- Install or replace the cartridge >
- Optimize the position for ESI infusion >
- System performance check >**
- Prepare to run a sequence >
- System shutdown checklist >

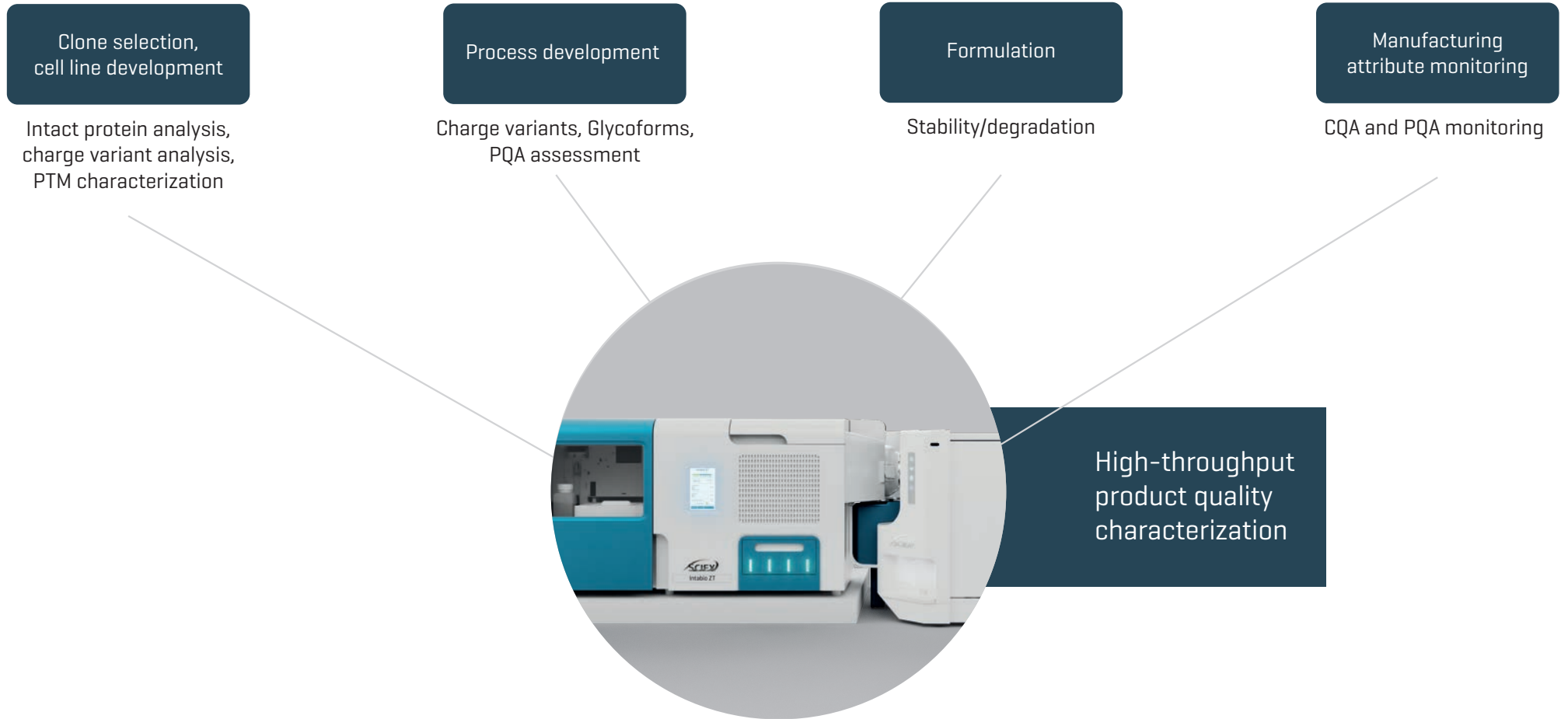
A passing HD test is shown below. Note that the axes on the left and right side of the collected data may need to be adjusted to correspond to the image below. Note the horizontality of the held voltages over time.

Check



Separate, characterize, identify

Achieve high-throughput product quality characterization, with rapid multi-attribute monitoring of intact biotherapeutics and identification of charge variants throughout the drug development pipeline.



Met oxidation

PyroGlu formation

Succinimide formation

Deamidation

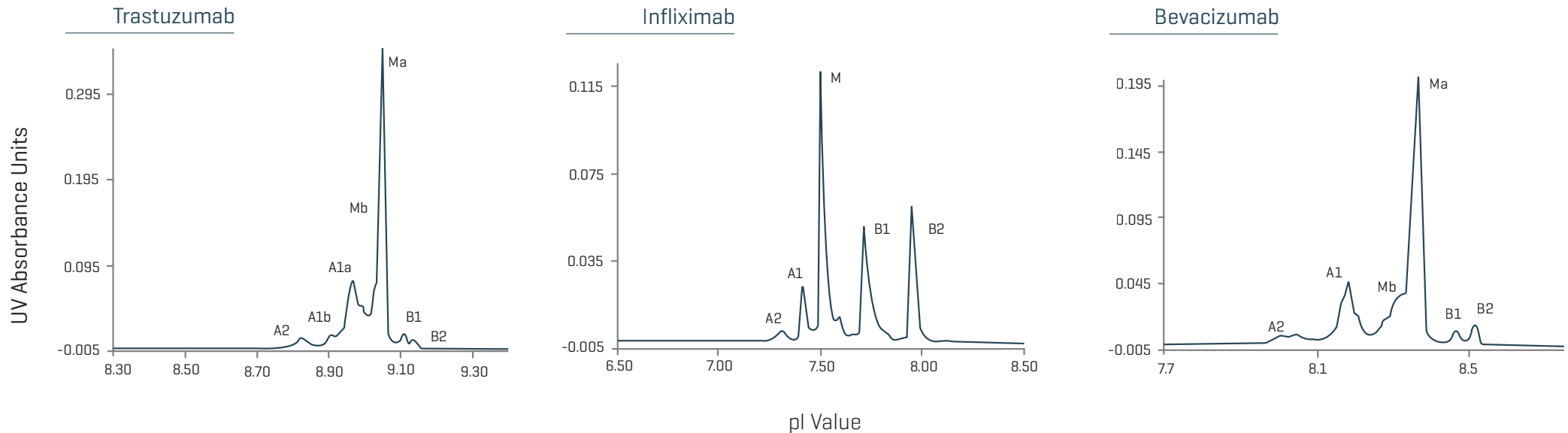
N-Glycosylation

- » Acquire charge variant separation profiles in minutes
- » Achieve highly confident CQA identification
- » Identify proteoforms that could impact product quality

Acquire mAb charge variant separation profiles in minutes

Support high-throughput analysis with 15-minute separation. Enable detailed characterization on charge variant peaks of multiple monoclonal antibodies, without redundant method development or fraction collection.

icIEF-UV profile



Separation profile of the charge variants of 3 mAbs acquired from Intabio ZT system.

Achieve highly confident CQA identification

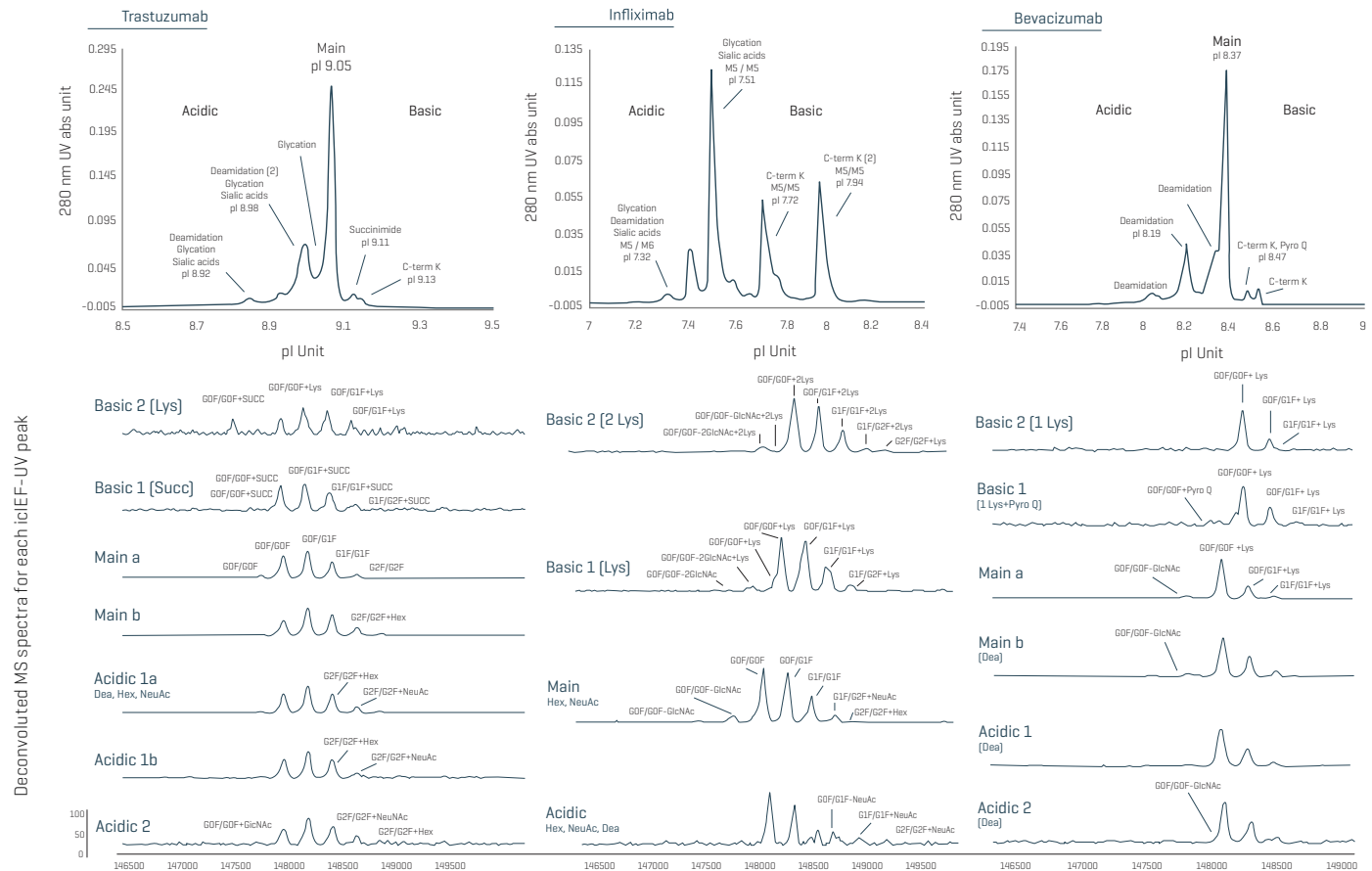
High-resolution separation and identification of proteoforms with as little as 0.02 pl value difference.

Identify common CQAs

- » C-terminal lysine variants
- » Glycosylation
- » High mannose
- » Sialic acids
- » Deamidation
- » Glycation



Scan for technical note



Deconvoluted MS spectra for each icIEF-UV peak

Charge variant separation of 3 different mAbs representing a wide pI range of 7.3-9.1. Charge variant peak ID was done with deconvoluted icIEF-MS results and proteoforms were assigned for each icIEF-separated peak using comprehensive mass and pI results.



Intabio ZT system



Scan here to request more information

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