

# ZipChip

## ACCELERATE YOUR MS CHARACTERIZATION

Rapid protein characterization and metabolomic analysis with microfluidic technology for highly efficient separations of complex samples.



CE-MS DEVICE

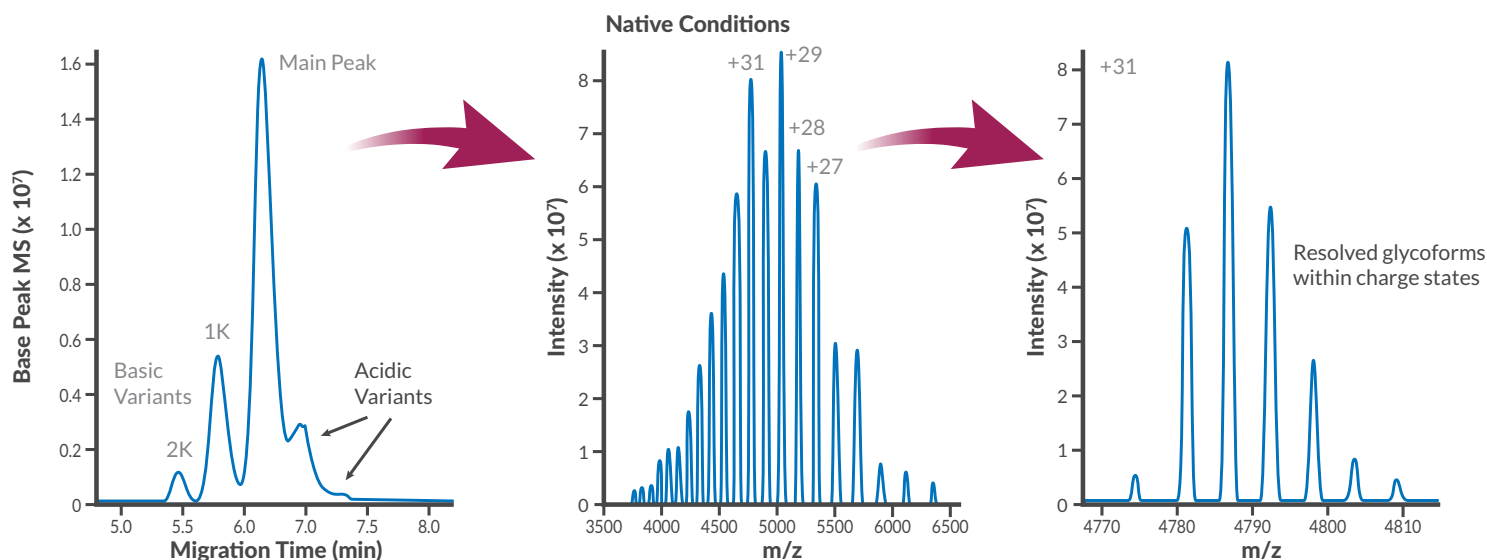
 **908devices**

# BIOLOGICAL CHARACTERIZATION IN MINUTES

## GIVE YOUR MASS SPEC SOME ZIP

The ZipChip® platform prepares and separates a wide range of biological samples, then electrosprays them into your mass spec for analysis. Just clip it on.

The process takes as little as a few minutes, and it results in better separation quality than most LCs in a fraction of the time. Simple workflows and multiple kit options cover a host of biotherapeutic, metabolomic, and proteomic applications.



## EASY ON SAMPLES

Now the kicker. ZipChip plays well with your mass spec and your proteins.

Gentle sample prep reagents preserve structural integrity without denaturing or unfolding proteins for fully native mass spectra. No need to remove detergents or desalt. Negative and neutrals are trashed. Only positive analytes head out for cleaner mass spectra and more identified peaks.





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ZipChip  
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ZipChip

# EFFICIENCY WITH ADVANCED MICROCHIP TECHNOLOGY

“WITH ZIPCHIP YOU GET THE DATA  
FASTER, AND BECAUSE OF THAT  
YOU CAN MAKE QUICK DECISIONS”

Associate Scientist at Amgen

## EASY AS 1-2-3

Pick an application, a chip, and a kit. After simply loading the premixed background electrolyte and sample into the autosampler, pop in a ZipChip, and hit run. Use vials or 96-well plates.

It's hands-off from there. Smart chips tell the system which method to use based on your preferences. Samples are automatically loaded, separated, and electrosprayed. Integrated software cues the mass spec to start analysis.

## EFFICIENT SEPARATIONS

Microfluidic technology integrates capillary electrophoresis (CE) and electrospray ionization (ESI) on the ZipChip. Junctions and dead volumes don't exist so analytical quality stays high, and no injection bias improves repeatability.

**1** Pick your application,  
kit, and chip



**2** Simple  
sample prep



**3** Load reagent  
and chip, then run







## IT'S ALL IN THE CHIP

A small sample plug is pressure-injected into the ZipChip

1

Sample migrates through microfluidic channel fulfilled with BGE and separates based on charge and size

3

Voltage is applied across the separation channel

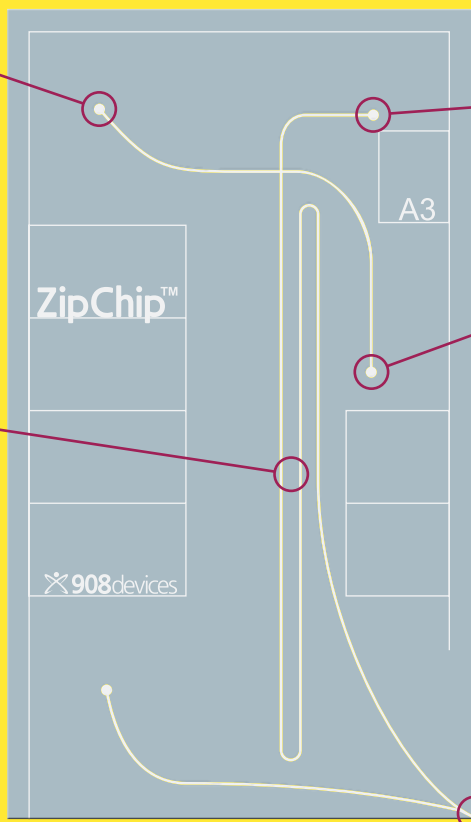
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Neutrals and negatives go to waste

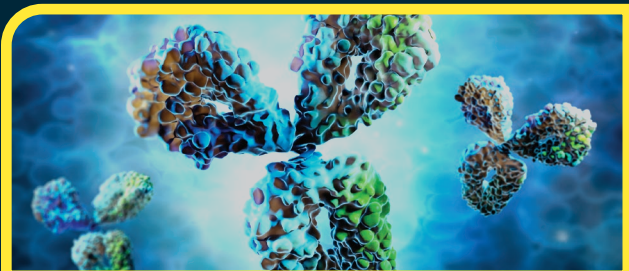
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Positive analytes are separated for electrospray into the MS

4



# FROM LARGE TO SMALL MOLECULES, **ZIPCHIP'S** GOT



## **Protein Characterization:**

ZipChip is a one-stop shop for CQAs—with streamlined CE-MS workflows for Charge Variant Analysis of basic and acidic species, Rapid Intact Mass Analysis, Subunit Analysis, and Peptide Mapping for deeper characterization.

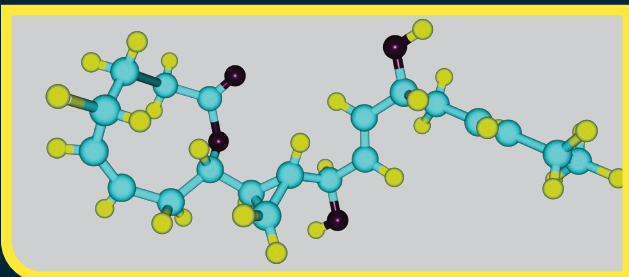


## **Oligonucleotides:**

The characterization of nucleic acid-based drugs like oligonucleotides isn't easy. ZipChip can offer some advantage over LC separations, such as no ion-pairing agents to contaminate the instrument.

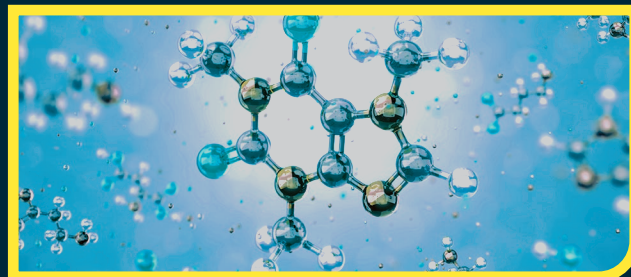
## **Small Molecules:**

Analysis is easy and fast with ZipChip. Simply dilute and shoot; there's no labeling or derivatization. Small polar analyte assays take as little as 2 minutes. Add internal standards for full quantitation on a variety of analytes.



## **Metabolomics:**

Detect, identify and quantitate small polar analytes from a variety of matrices like cell lysates or growth media and monitor dynamic levels of metabolites in real time. Sample prep is quick and easy and results are ready in minutes.





# YOU COVERED







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# ZipChip

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