Your mass spec’s sidekick

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 three minutes, and 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.
Crazy efficient

Pick an application, a chip and a kit. After that just two steps: Load 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.

The secret sauce

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 ups repeatability.

Here’s what happens:

- A small sample plug is pressure-injected into the ZipChip
- Voltage is applied across the separation channel
- Sample migrates through BGE and separates based on charge and size
- Positive analytes are separated for electrospray into the MS
- Neutrals and negatives go to waste

ZipChip is fast and easy to use. It’s changing our workflow in the lab.

Dana-Farber Cancer Institute
**Goes with the flow**

Run small molecules by day and large, complex proteins like ADCs by night. The switch over is simple. Change the ZipChip and be up and running in 30 minutes or less. After that, three-minute separations max out MS efficiency.

**Biotherapeutics.** Analyze multiple characteristics of protein molecules in their various states with one method, from native intact proteins to peptide mapping. Native and intact proteins stay structurally sound so lower charge states and separation of variants are easily seen.

**Metabolomics.** Detect, identify and quantify small molecules with high resolution from a variety of sources like cell lysates or growth media.

**Proteomics.** Run targeted bottom-up and top-down proteomic assays with fast, efficient separations of both peptides and intact proteins.

**MS Compatibility**

**THERMO FISHER SCIENTIFIC**
- Exactive
- Q Exactive Orbitrap
- LTQ-Orbitrap
- Fusion™ Lumos™
- Triple Quadrupole
- Altis Triple Quadrupole
- Endura Triple Quadrupole

**SCIEX**
- Triple Quad 6500+, 6500, 5500, 4500, 3500
- QTRAP® 6500+, 6500, 5500, 4500

**Chip Types**

<table>
<thead>
<tr>
<th>CHIP TYPE</th>
<th>SMALL MOLECULES</th>
<th>LARGE MOLECULES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic</td>
<td>ZipChip HS</td>
<td>ZipChip HR</td>
</tr>
<tr>
<td>Extended Life</td>
<td>ZipChip HSX</td>
<td>ZipChip HRX</td>
</tr>
</tbody>
</table>

**Assay Kits**
- Intact Antibody Kit
- Peptides Kit
- Metabolite Kit
- Native Kit