



## PRODUCTION SPECIFICATIONS



ZipChip system consumables

# Confidence and productivity for your Orbitrap mass spectrometer

## Benefits

- ZipChips and ZipChip Assay Kits optimized for your sample type
- Reduced preparation time, increased productivity
- Reduced operator error
- Prepackaged for minimal chemical waste
- Direct loading of ZipChip Autosampler

The 908 Devices™ ZipChip™ system uses microfluidic capillary electrophoresis (CE) to prepare, separate and electrospray a range of analytes from intact proteins and peptides through small molecules like amino acids and metabolites. When paired with premade ZipChip Assay Kits optimized for your specific samples, both ZipChip HR and ZipChip HS help to improve productivity, reduce the risk of user error, and minimize chemical waste.

## The chips

ZipChip HR and ZipChip HS require minimal or no sample preparation for a wide range of matrices including biopharma products, cell lysates, growth media, blood, plasma and urine. Our patented technology provides unbiased sample injections and allows for on-chip clean up of high salt concentrations, residual detergents, and other production chemicals; eliminating the need for typical pre-analysis processing. Each ZipChip consumes only a few nanoliters or less of sample per injection and has built-in capability for sample stacking or focusing which can increase your analyte LODs by an order of magnitude. A built-in chip recognition system allows the ZipChip system to automatically set appropriate operational parameters and track run conditions to ensure optimal performance.

ZipChip HS, with a short separation channel, is optimized for small molecule and peptide work. HS chips enable very fast analysis for intact protein samples that are relatively pure and do not require significant separation. ZipChip HR, with a longer separation channel, is optimized for intact protein analysis. Within 3 minutes, HR chips will provide charge variant separations of intact proteins, antibodies and antibody drug conjugates in near native conditions. Electrospray is integrated with both ZipChip types—no separate ESI unit needed.

## ZipChip specifications

	ZipChip HS	ZipChip HR
Separation Channel Length	10 cm	20 cm
On Chip De-salting	Yes	Yes
Integrated ESI	Yes	Yes
<b>Metabolite and Small Molecule Analysis</b>		
Recommended Use	Everyday analysis	Ultimate resolving power required
Separation Quality	Excellent	Incremental improvement
Analysis Time (typical)	~2 minutes	~9 minutes
<b>Peptide Mapping</b>		
Recommended Use	Everyday analysis	Extended run time for MS/MS analysis
Separation Quality	Excellent	Incremental improvement
Analysis Time (typical)	~3 minutes	~12 minutes
<b>Intact Protein Analysis</b>		
Recommended Use	Fast injection, relatively pure samples	Everyday analysis
Separation Quality	Moderate	Excellent
Analysis Time (typical)	<1 minute	~3 minutes

## Assay kits

Prepackaged ZipChip Assay Kits reduce risk of operator error and offer convenience for efficient sample analysis. Each kit contains both background electrolyte and sample diluent, packaged in individual bottles at correct volumes for 100 injections, 5 bottles per kit (500 total injections per kit). Individual bottles can be directly loaded into the ZipChip Autosampler and are matched to a 96-well plate run or can equivalently be used with manual measurements. Available assay kits include:

- ZipChip Metabolites Kit
- ZipChip Peptides Kit
- ZipChip Intact Antibody Kit

The ZipChip system provides unique microfluidic preparation and separation of biomolecules for any Q Exactive series, Exactive series and LTQ Orbitrap mass spectrometers.

- Direct interface to compatible MS instruments
- Fast analysis: typically 2–3 min per run
- Extremely low sample volume injection, nL scale
- Minimal sample preparation, on-chip de-salting
- Unique measurement capabilities: antibodies and ADCs
- Autosampler for unattended operation

## ZipChip Assay Kit specifications

Available Kits	ZipChip Intact Antibody Kit ZipChip Peptides Kit ZipChip Metabolite Kit
Capacity	500 sample injections capacity per kit
ZipChip Autosampler Compatibility	Individual bottles with 100 sample capacity can be directly loaded in autosampler (match to 96-well plate sampling)
Storage Conditions	Room temperature, 10–40 °C
Quality Standards	ISO 9001:2015, CE
Lifetime	6 months shelf storage at room temperature, consume immediately once opened
Weight	2.4 lbs.



Find out more at [thermofisher.com/zipchip](http://thermofisher.com/zipchip)

**For Research Use Only. Not for use in diagnostic procedures.**

The ZipChip Interface is a Class 1 Laser Product (complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to laser notice No. 50).

