

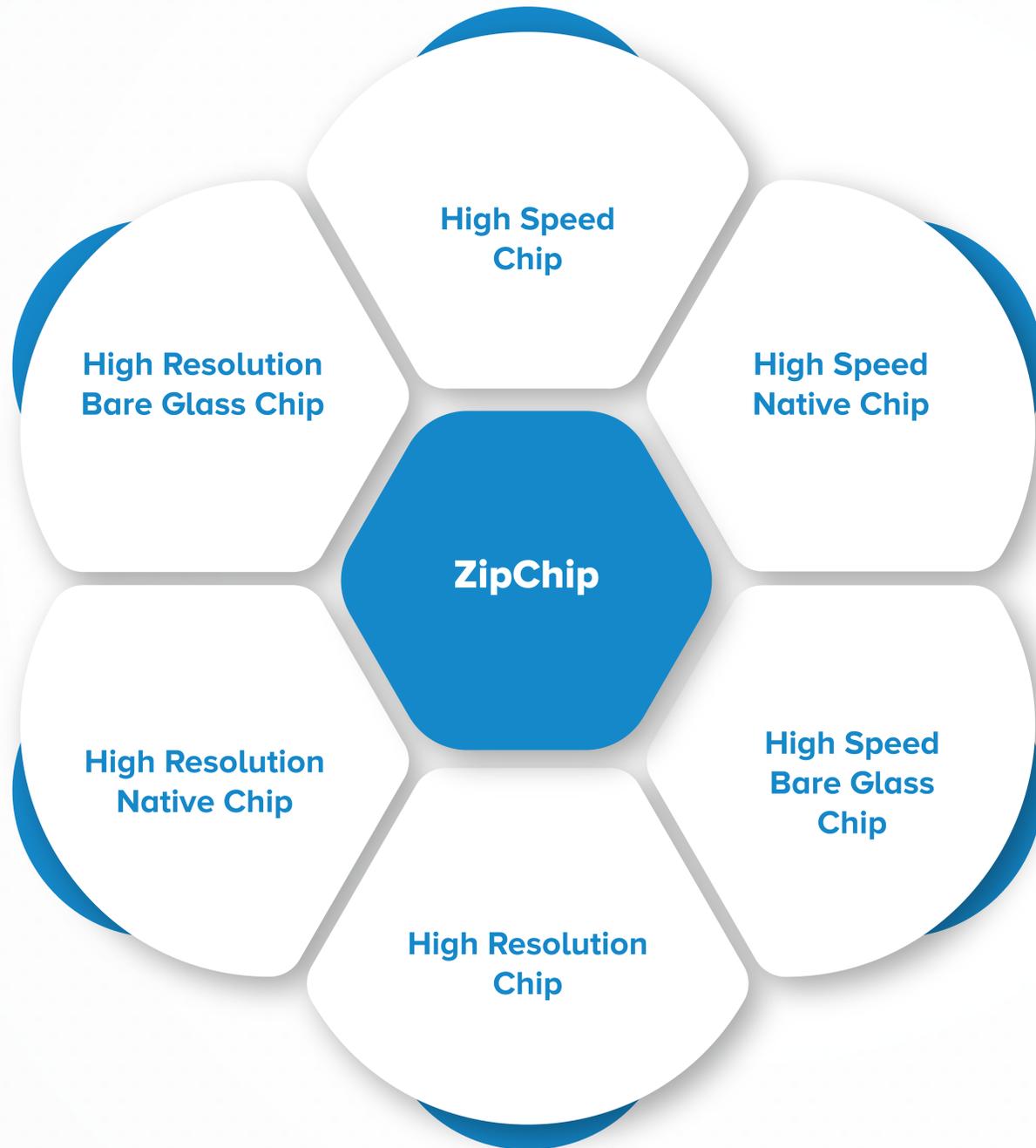
Veeda Biopharma's ZipChip Solutions for Advanced Biopharmaceutical Analysis

Peptides, Antibodies, Metabolites and Oligonucleotides



Overview

ZipChip is based on a microfluidic technology that integrates the capillary electrophoresis (CE) and electrospray ionization (ESI).



This external source is connected to high resolution mass spectrometers to offer seamless analytical data for:

- **Charge Variants**

Superior performance for native charge variant separations of intact antibodies interfaced with mass spectrometers.

- **Native Antibody**

Superior performance for native charge variant separations of intact antibodies interfaced with Orbitrap mass spectrometers.

- **Intact Antibodies**

For charge variant separations of intact antibodies using gentle, low pH conditions.

- **Peptides**

Designed for peptide analysis and peptide mapping. Additional uses may include intact mass analysis of proteins, subunit/reduced mAb analysis, and separations of small proteins.

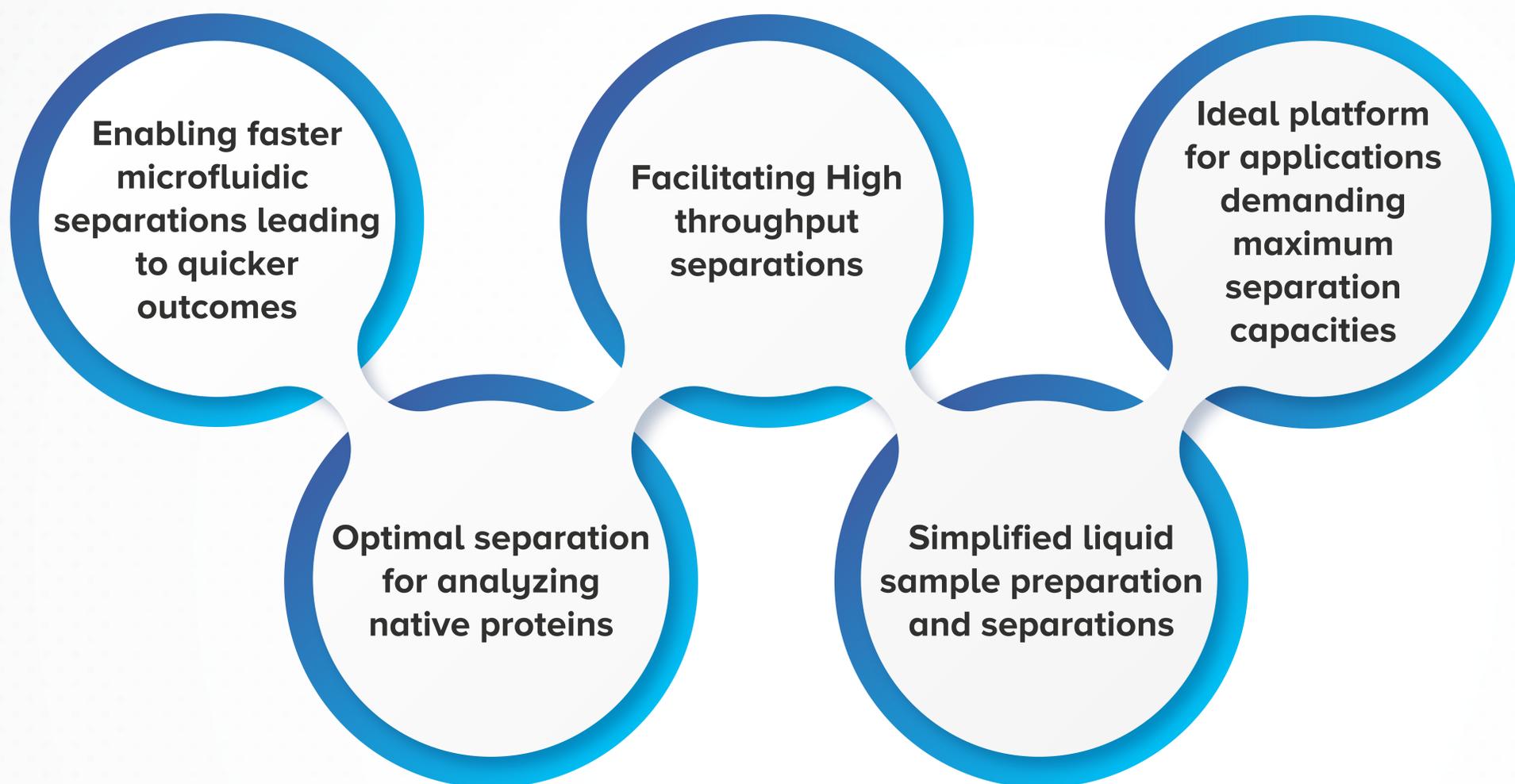
- **Metabolites**

Optimized for small molecule analysis. Additional uses may include intact mass analysis of proteins, peptide mapping, and subunit/reduced mAb analysis.

- **Oligonucleotides**

For high resolution accurate mass identification and quantitation of oligonucleotides

Platform Features



Easy Protein Characterization

ZipChip helps analytical scientists take a load off with simple solutions for different protein characterization workflows.

- **Intact mass Analysis** of Biotherapeutic proteins using mass spectrometry is a key characterization testing performed from upstream drug development to downstream product analysis. It is routinely used for sequence confirmation, clone screening, glycoform quantification, and to assess purity & heterogeneity during product quality control screening.
 - Matrix Friendly – High-quality spectra with NO desalting or removal of detergents.
 - Fast – Analysis times of <1minute for intact mass. Sample straight from your bioreactor
 - Easy – No method development and easy switching between methods
 - Only 10 uL of sample required (1 – 5 nL required for injection)
 - Virtually No Carryover – No ghost peaks or contamination from previous sample
 - Flexible – Multi-level characterization
- **Reduced/Subunit Analysis** matrix-friendly, domain-specific information with baseline-resolved mAb subunits in <5 minutes, plus glycoform resolution for Fc glycans. ZipChip makes things simple by letting you do multi-characterization (intact, reduced/subunit, mapping) with the same kit.
- ZipChip provides a **fast, accurate, and flexible** approach to **charge variant analysis**. Assay kits take the guesswork out of method development and come with background electrolyte and sample diluent that are optimized for each application, saving time from method development or extensive sample prep. On-chip desalting and removal of detergents means minimal sample prep. Switch molecules without having to change conditions or instrumentation. Queue it all up, ignore your salt & polymeric buffer components, and hit go.

- ZipChip is an out of the Box Solution for Fast and Easy **Peptide Mapping** including Multi-Attribute Monitoring (MAM). It is an ideal technique for separating tricky analytes like conjugated peptides, complex glycopeptides, isomerized residues, and degradants. Quickly resolve and get actionable information on critical quality attributes (CQAs) such as glycopeptides, deamidation, oxidation and other site-specific modifications in less than 15 minutes.
 - Near 100% sequence coverage and high-res peptide separation within 15 minutes
 - Easily resolve glycopeptides, deamidation, oxidation, and other site-specific PTMs
 - Enhanced throughput for MAM (up to 20x)
 - No method development with pre-optimized ready to use assay kits

Faster Data, Quicker Decisions

- Our integration of ZipChip and Thermo Scientific QExactive Mass Spectrometer ensures rapid, reliable results. Benefit from simplified processes, supported by proof-of-concept studies and orthogonality checks on IEX-LC platforms for charge variants. ZipChip guarantees confidence akin to gold standard ion exchange chromatography in just three simple steps, ushering in a quicker and more robust approach to achieving desired outcomes.



Veeda Clinical Research Limited (Biopharma Division)

No. P3-A, 1st Main Road, Peenya Industrial Area,
1st Stage Bengaluru 560058, India
info@veedacr.com | www.veedacr.com | +91 7967773000

• **Partners in creating a healthier tomorrow** •