FlashNote

Unlocking the Hidden Plasma Proteome with 4D-Proteomics

Deeper plasma biology. Same sample.

Plasma Has Been Hiding Its Most Important Signals

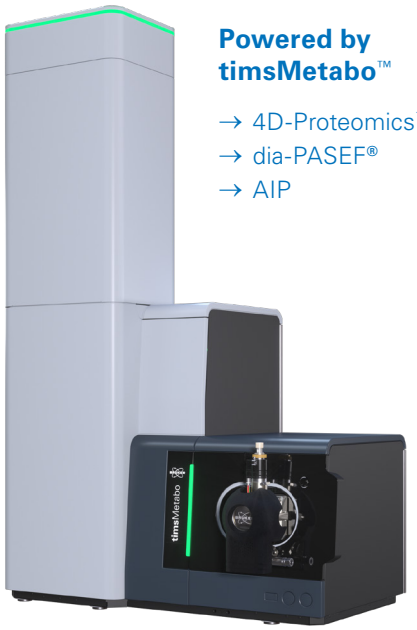
>99% of the proteome remains masked.

High-abundance proteins dominate, obscuring the low-abundance biomarkers critical for early detection and precision medicine.

Traditional workflows rely on complex sample preparation, yet still fall short in depth, reproducibility, and access to the clinically relevant proteome.

How It Works

- P2 enrichment reveals mid- to low-abundance proteins
- dia-PASEF® + 4D-Proteomics enable deep, high-confidence profiling
- AIP + extended mobility maximize ion utilization and deliver proven timsTOF robustness for scalable, deep plasma proteomics



Powered by timsMetabo™

→ 4D-Proteomics™
→ dia-PASEF®
→ AIP

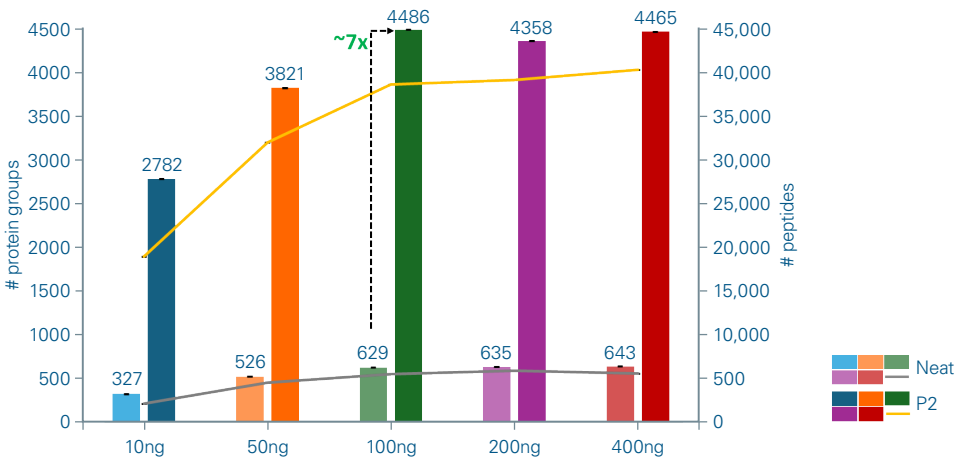


Figure 1. **Plasma proteomics on timsMetabo.**
Peptide and protein group identifications across different loading amounts of neat and P2-enriched plasma samples.

Consistent. Quantitative. Reliable.

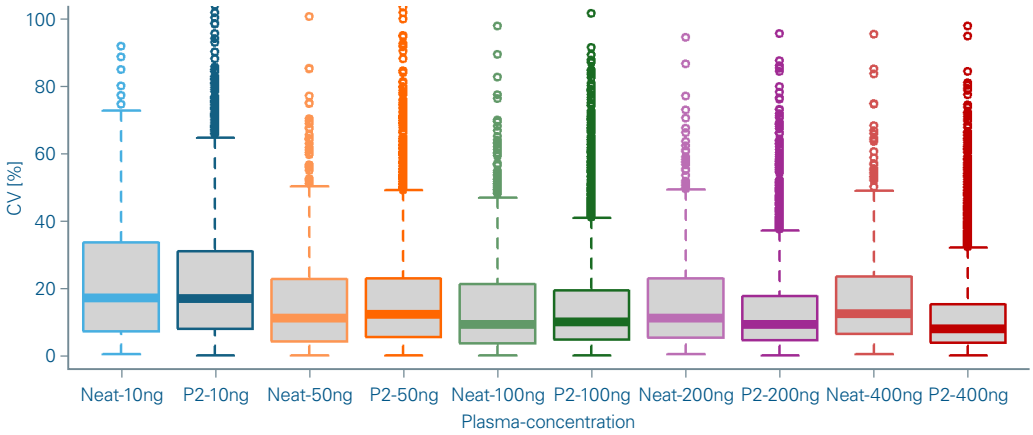


Figure 2. Distribution of protein CVs across different loading amounts for neat and P2-enriched plasma samples.

What This Unlocks

- **Depth Without Complexity**

  >7× deeper proteome coverage
  → Breaks plasma dynamic range barrier

- **Low Input. High Impact**

  Works from 10-400 ng
  → Ideal for limited or precious samples

- **True Proteome Resolution**

  >40,000 peptides identified
  → Protein IDs ~4,500
  → Deeper biological insight

- **Reproducible Quantitation**

  Low CVs across conditions
  → Confident biomarker discovery

» See What Plasma Has Been Hiding «

Bruker Daltonics is continually improving its products and reserves the right to change specifications without notice. © Bruker Daltonics 05-2026, FN-37, 1928559

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

Bruker Switzerland AG
Fällanden · Switzerland
Phone +41 44 825 91 11

Bruker Scientific LLC
Billerica, MA · USA
Phone +1 (978) 663-3660

info.ms@bruker.com – www.bruker.com

Learn more at **www.bruker.com/timsMetabo**