Collection and analysis of metabolic biomarkers

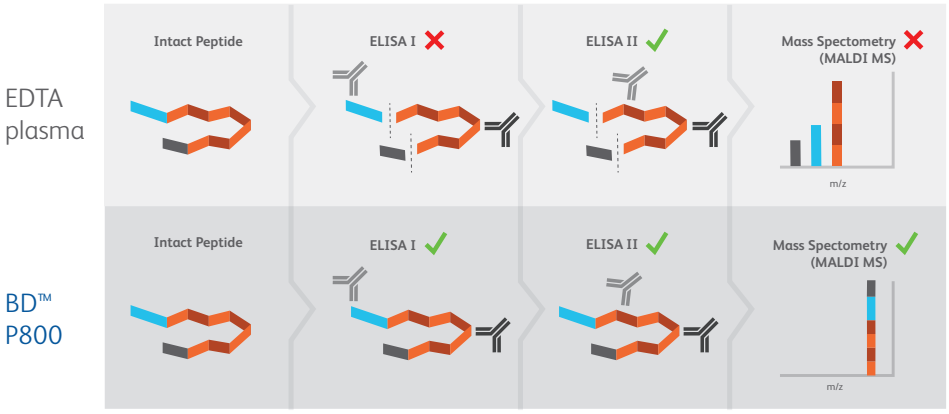
Protein and peptide sample integrity

Solutions for mitigating preanalytical challenges

Protein and peptide biomarkers in human blood plasma hold **incredible research potential**.

The study of certain biomarkers can be challenging because of the intrinsic proteolysis that can occur **within minutes** of blood collection, leading to rapid degradation of plasma proteins and peptides and potentially impacting downstream test methods.

Use of appropriate sample collection and handling materials and protocols can **minimise preanalytical variability**.



Stabilising at the point of collection helps prevent degradation products from resulting in inaccurate results.

The BD™ P800 tube contains inhibitors to ensure intact peptides when measuring markers commonly studied in diabetes research and other metabolic conditions.

What are your research goals?

Downstream test methods may be sensitive to processes used for sample collection and handling.
When considering testing methods, peptide instability and appropriate precautions to prevent degradation may need to be taken. For example, certain immunoassays may be sensitive to degradation products while others may not. Temperature control, such as placing samples on ice, may not be sufficient for the needs of particular assays. Stabilising these peptides at the **point of collection** helps diminish the opportunity for degradation that may cause inaccurate results.

EDTA, ethylenediaminetetraacetic acid; ELISA, enzyme-linked immunosorbent assay; MALDI, MS, matrix-assisted laser desorption/ionization.

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BD™ P800 preservation performance

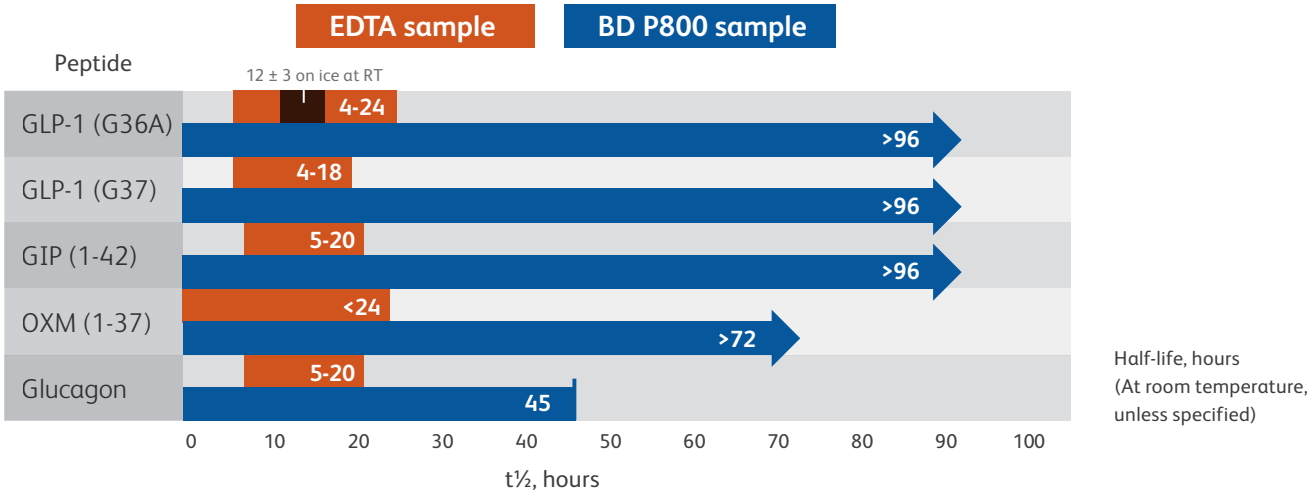
Stability of metabolic peptides in BD™ P800 and EDTA plasma samples

The BD P800 blood collection system consistently demonstrates immediate **stabilisation and preservation of metabolic biomarkers in plasma that lasts,** minimising errors and lowering risk of inaccurate sample analysis.

One tube, one process

The BD P800 is an evacuated blood tube containing a proprietary cocktail that includes a DPP-IV inhibitor, an esterase inhibitor and other protease inhibitors that are optimised for rapidly stabilising metabolic markers in plasma. The plasma obtained by processing the BD P800 tube can be used immediately, transported or stored frozen*.

*Using **BD P800** tubes will significantly prevent degradation in comparison to EDTA tubes on ice and at room temperature removing the need for post-collection temperature precautions.*



*BD P800 (Cat no. 366420 2.0 mL & 366421 8.5 mL) must be used with a 12" (305mm) blood collection set, such as a BD Vacutainer® Push Button blood collection set.
Unused BD P800 tubes are stable for 1 year at 2°C to 8°C.
For Research Use Only—Not for Clinical Diagnostics Use

Reference: Yi J, Warunek D, Craft D. Degradation and Stabilization of Peptide Hormones in Human Blood Specimens. *PLOS One*. 2015;1-21.

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