

BeatBox®

Tissue homogenization simplified

Fast, reliable, easy-to-use tissue homogenizer and cell lyser for efficient protein extraction.



www.preomics.com

The challenge

Consistent, high-quality protein extraction from tissue or cells is crucial for effective MS-based proteomics. Achieving maximum protein yield, even from small or challenging samples, is essential for subsequent sample preparation steps. Homogenates must be uniform across different tissue types while minimizing cross-contamination risks. For high-throughput applications, the ability to process large sample quantities with reliable reproducibility in a short time is key. Additionally, factors such as ease of use, lab space, the need for chiller units, and noise levels also affect the choice of instrument.

The solution

PreOmics' BeatBox is a semi-automated tissue homogenizer designed for rapid and efficient homogenization and cell lysis across various sample types. In just 10 minutes, BeatBox delivers high-quality homogenates with minimal cross-contamination and heat induction. Its compact design and quiet operation make it perfect for any lab setting. With scalable throughput (up to 96 samples), BeatBox ensures reliable results even for complex downstream analyses like LC-MS-based proteomics.

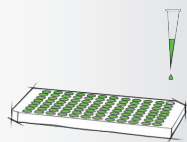
BeatBox benefits

- **Flexible input**
Suitable for 1-50 mg of tissue or up to 1e7 mammalian cells
- **Standardized results**
Reproducible protein extraction for consistent proteomic analysis
- **Remarkable versatility**
Compatible with most tissue and cell types, including challenging FFPE samples
- **High-throughput**
Processes up to 96 samples in parallel
- **User-friendly**
Ready-to-use kits, intuitive two-click touchscreen operation, and no maintenance needed
- **Sample integrity**
Minimized heat induction, sample loss, and cross-contamination
- **Compact and quiet**
Small footprint and low noise levels
- **Seamless integration**
Fully compatible with iST sample preparation workflows

How it works

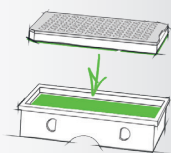
Step 1

Add tissue sample and iST LYSER buffer to the BeatBox Tissue Kit



Step 2

Place sample plate or tube on the adapter



Step 3

Insert the adapter into the BeatBox Garage



Step 4

Select homogenization level (low, standard, high)
Set the run time (10 min. as default; up to 40 min. for challenging samples)
Press Start



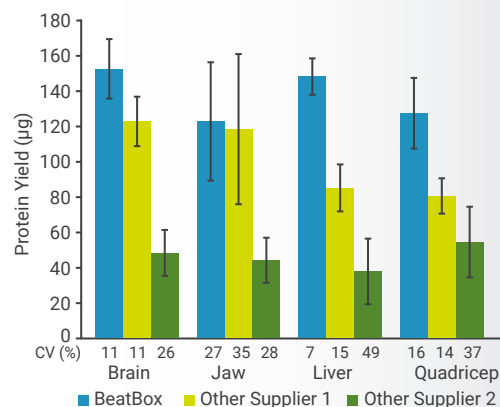
Step 5

Collect proteins
Proceed with the iST workflow



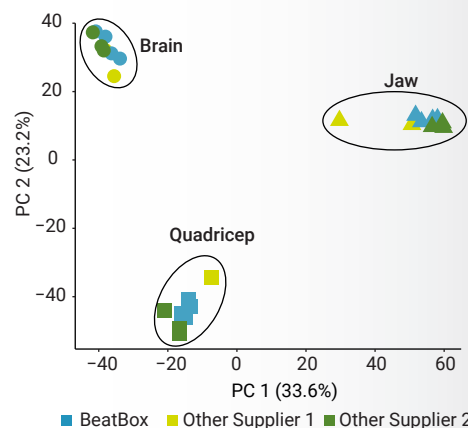
Data

- BeatBox homogenates show the highest protein yields
- Reproducibility of protein yields from different tissues was improved 2.5x using BeatBox



Functional enrichment analysis across tissue types:

- Identical biological function per tissue
- Protein subclasses groups based on tissue



BeatBox performance advantage

- Increased protein recovery even from small amounts of challenging tissues
- Highly reproducible protein yields across samples
- Reliable and efficient protein extraction for higher data integrity
- Comparable proteomics data beyond

Technical specifications

- **Formats:** Standard 96-well plate or 2 mL tube
- **Working range:**
1-5 mg tissue in 50-100 µL lysis buffer
5-50 mg tissue in 300-1000 µL lysis buffer
- **Compact benchtop footprint:** 26 x 26 x 40 cm;
16 x 10 x 10 in (H x W x D)
- **Processing time:** 1-40 minutes
- **User interface:** Predefined protocols and easy-to-navigate 7-inch touchscreen

Discover how BeatBox revolutionizes tissue homogenization for proteomics.

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