

# Meet BeatBox: PreOmics revolutionize tissue homogenization

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**Do you have a limited amount of tissue sample?**  
**Do you need high-throughput processing?**

**Smile! Meet PreOmics BeatBox**

PreOmics BeatBox completes tissue homogenization in a simple, fast and easy to use format. It processes 1-96 tissues in as little as 10 minutes with no cross contamination. The BeatBox is small, quiet and seamlessly integrates tissue preparation with PreOmics iST sample preparation workflows for Mass Spectrometry-based protein analysis. All in an automation friendly format.

**Materials & Methods**

- **Input:** 1 – 2 mg of tissues (brain, jaw muscle, liver, quadricep muscle)
- **Homogenization sample buffer:** iST LYSE buffer
- **Homogenization:** BeatBox in comparison to two different commercial methods
- **Protein quantification method:** BCA assay
- **Proteomic sample preparation:** iST kit
- **LC-MS analysis:** Easy nLC1200 and timsTOF pro, data analyzed by DiaNN software

**Results**

**Comparison between different homogenization methods**

**Protein amount in the sample**

BeatBox homogenates show highest protein yields

Reproducibility of the protein yields from different tissues were improved using BeatBox

Tissue	BeatBox (µg)	Supplier 1 (µg)	Supplier 2 (µg)
Brain	150	120	45
Jaw	120	115	40
Liver	145	85	35
Quadricep	125	80	50

**Proteomic analysis of homogenized tissue samples**

Equally high-quality proteomics data across methodologies

Protein subclasses are grouped based on tissue type, independent of methodology

**Discussion**

- BeatBox provides higher recovery of proteins from limited inputs of tissue samples, such as needle biopsies
- Proteomes are similar across different methodologies
- BeatBox showed extraordinary reproducibility across different tissues

**Key features**

- **Fast:** 1-96 samples in less than 10 minutes
- **Easy-to-use:** Select your settings in just two clicks
- **Flexible:** Homogenize everything from cell pellets to tough muscle tissue
- **Efficient:** 96 well format and can be integrated with PreOmics iST workflows
- **Revolutionary:** Small footprint and very quiet
- **High-throughput:** Compatible with available automations platforms