


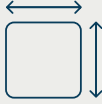




Singleron PythoN i™ Automated Tissue Processing System

The PythoN i instrument is a multi-functional tissue processor, which dissociates various types of tissue into viable single cell suspensions. It uses a combination of enzymatic digestion and mechanical rotation. The resulting cell suspension can be directly used in the GEXSCOPE® workflow or for applications such as cell culture and flow cytometry.

In addition, PythoN i offers enhanced capabilities, including single nuclei extraction and homogenization for DNA, RNA, and protein extraction. Its eight channels operate independently, enabling simultaneous operation of different functions.



Figure 1: The PythoNi® instrument

	Capacity 1-8 samples / run		Dimensions 360mm L x 230mm W x 210mm H		Time ~15 minutes / standard run
	Weight 10 kg		Flexibility 500 customizable programs		Temperature Room temperature or 37°C

PythoN i allows flexible, independent sample loading. The embedded heating module at the bottom of the tube holder ensures efficient and uniform heat transfer. As a closed system, with tubes placed inside the machine rather than exposed, it maintains stable heating temperatures and minimizes external fluctuations.



Figure 2: Close-up of a PythoN i channel with a tissue dissociation tube.

Single Cell Dissociation:

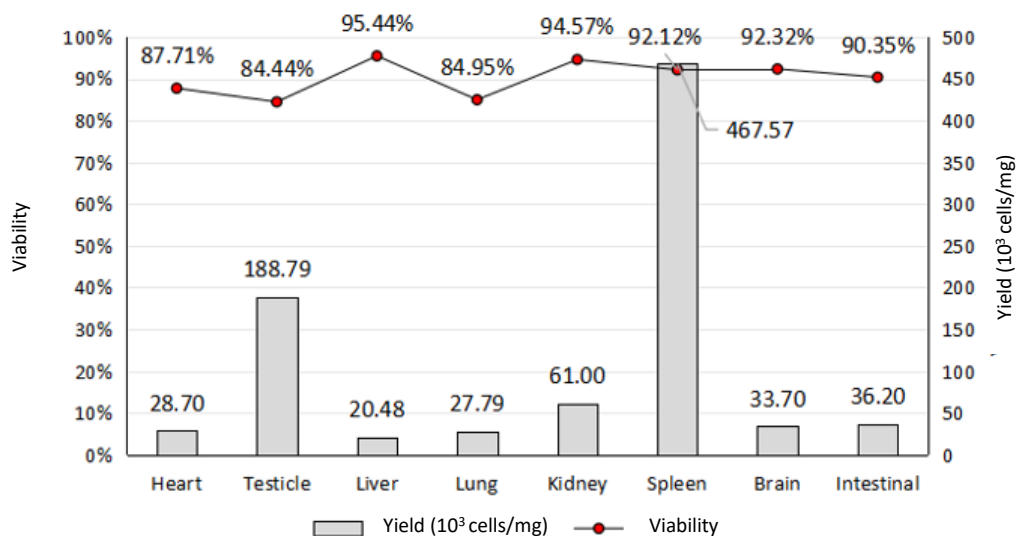


Figure 3: Single cell dissociation results from different mouse organs using PythoN i.

Single Nuclei Extraction:

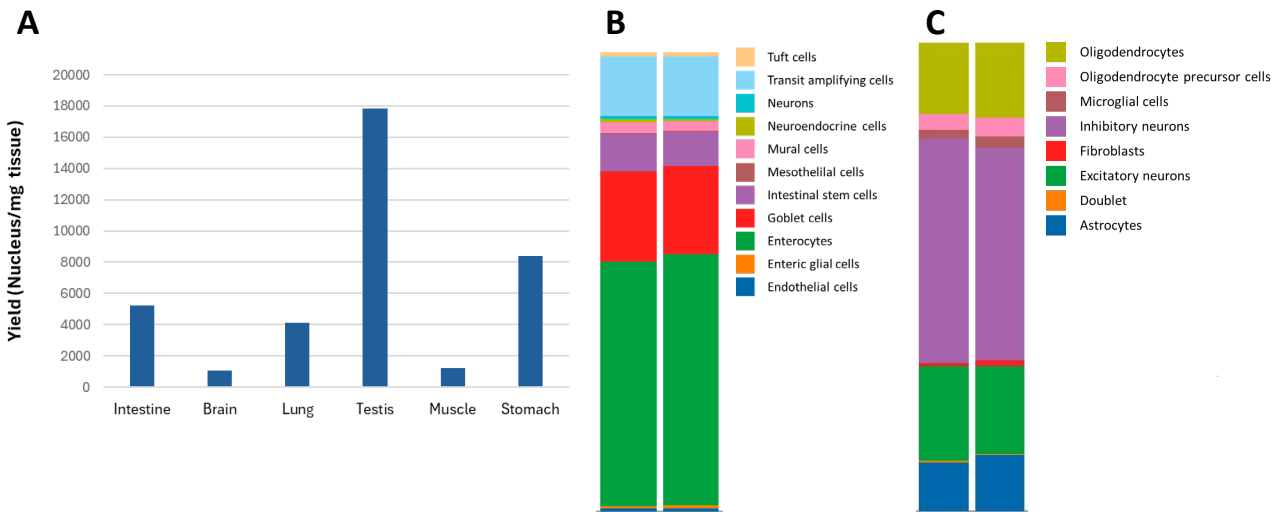


Figure 4: Single nuclei extraction data using PythoN i. (A) Yield of different mouse organs after dissociation with PythoN i and Singleron's single nucleus solution. The program durations range from 10-15min depending on the tissue. (B, C) Transcriptomic library construction using GEXSCOPE® single nucleus kit with the intestine (B) and brain (C) samples. Result of cell type annotation is shown.

Homogenization:

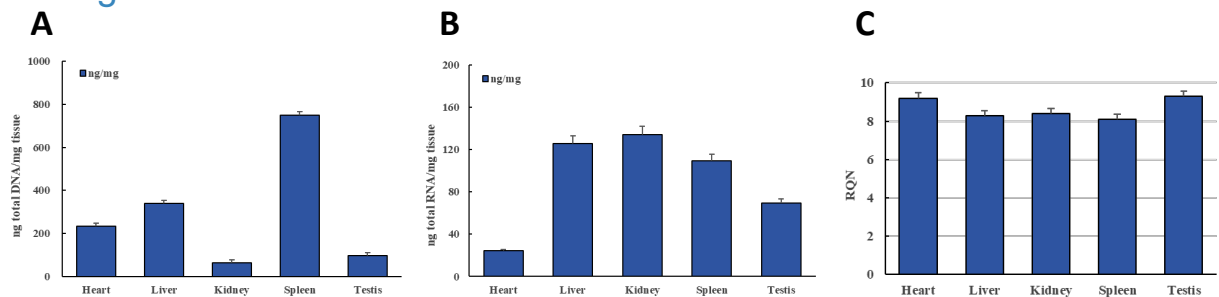


Figure 5: Homogenization results of five common mouse organs, focusing on DNA (A) and RNA (B) yield. PythoN i achieved high RNA Quality Numbers (RQN). The expected RQN is above 7.

For bulk molecular profiling, PythoN i also offers homogenization functions. This is ideal for studies on overall tissue physiology, biomarker discovery, or protein assays.

Ordering information:

Product	Reactions	Catalog Number
Singleron PythoN i Automated Tissue Dissociation System	N/A	MD1103001
Singleron PythoN Junior Tissue Dissociation Kit	24	11300603
Nucleus Separation Kit	24	1370063

