



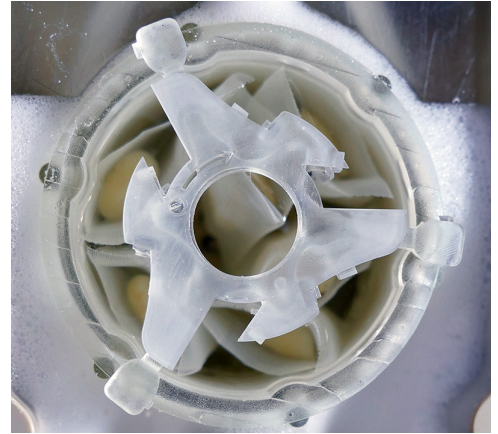
lifecanvas
technologies

Revolutionizing bioimaging
to elevate human health.

SmartBatch+

High-throughput system for rapid active tissue clearing and immunolabeling

SmartBatch+ combines active tissue clearing and immunolabeling into one turn-key batch tissue processing device – now you can clear and label up to 12 whole mouse brains, or 4 whole rat brains, in just one day. Clear+ tissue clearing provides maximum optical transparency with no tissue expansion; eFLASH and patented SE technologies then uniformly label whole organs.



With immunolabeling: ~1.5 weeks

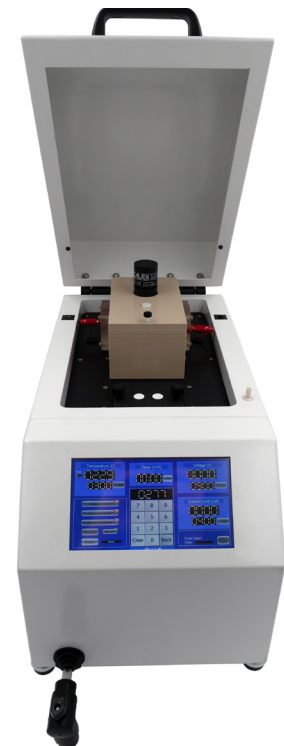


Without immunolabeling (e.g. endogenous fluorescence): ~1 week



FEATURES & HIGHLIGHTS

- **Multi-functional and high-throughput:** Easily switch between clearing and labeling modes by changing buffers. Actively clear or label up to 12 whole mouse brains, 4 whole rat brains, or comparably sized samples per batch.
- **Fast, uniform labeling:** Leverage eFLASH technology, which combines SWITCH with our patented stochastic electrotransport method, to uniformly label intact tissue volumes.
- **Cost- and labor-effective:** Use just 4-20 μg of antibody per target to label a sample the size of a whole mouse brain, with <12 mins hands-on time per sample.
- **Ideal for light sheet imaging:** Combined with SHIELD tissue preservation, SmartBatch+ protects fluorescent protein signal, antigenicity, and molecular and physical architecture through all tissue processing steps.



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TISSUE CLEARING

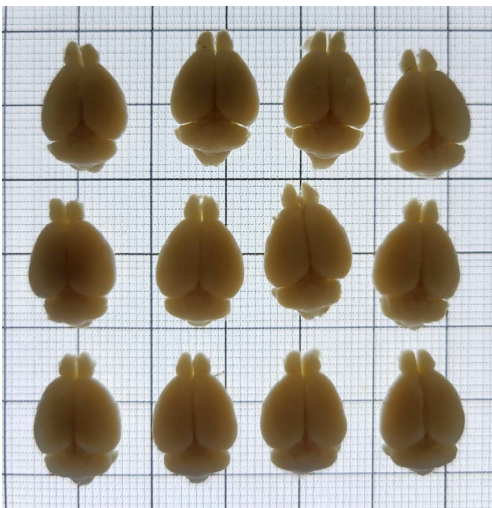
Combining electrophoretic clearing with our Clear+ tissue clearing method, a rotating electric field drives charged SDS micelles into samples for quick and uniform delipidation.

Clear+ is the only known technique to produce no change in sample morphology after clearing. Compatible with different tissue types and large intact samples, SmartBatch+ clearing takes minutes to set up and 1 day to complete.

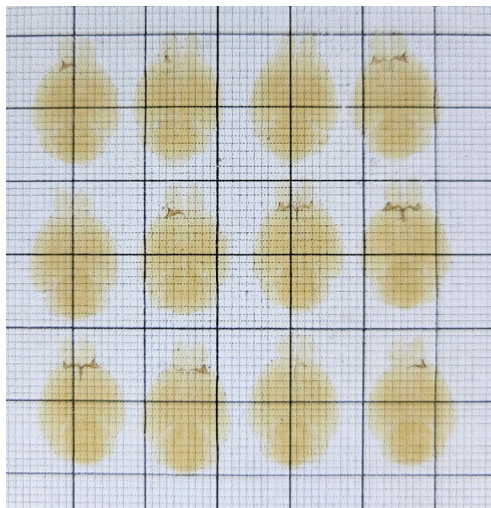
IMMUNOLABELING

Recently published advances on our patented SE method enable antibody diffusion without surface saturation throughout intact volumes. SmartBatch+ also uses an order of magnitude less antibody than passive clearing methods such as iDISCO and CUBIC.

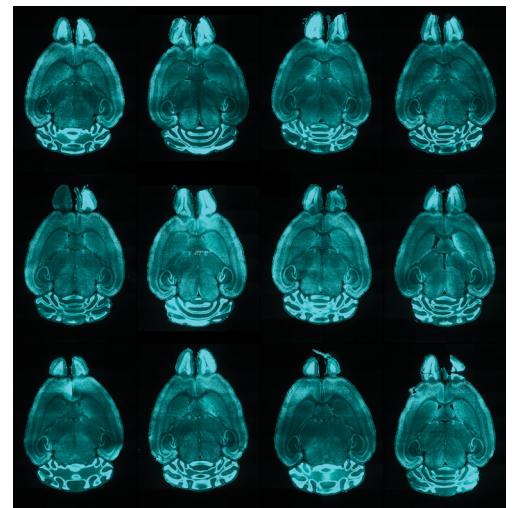
We have validated and optimized >50 antibodies, providing coverage of popular targets related to neuroscience, cancer, development, and disease.



Before delipidation



Delipidated + index-matched



Immunolabeled for NeuN

Sample-to-data solutions by scientists, for scientists:



*Advanced tissue
processing methods*



*High-resolution
light sheet imaging*



*AI-powered 3D
data analysis*

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