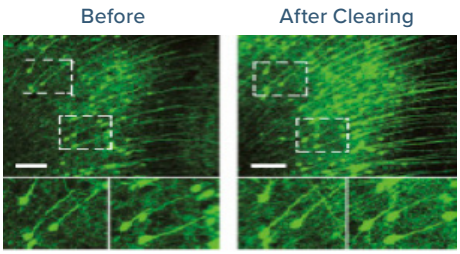
lifecanvas technologies

Illuminating life like never before

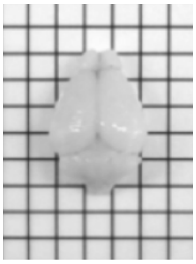
SMARTCLEAR II

The Active Clearing System You've Been Waiting For.

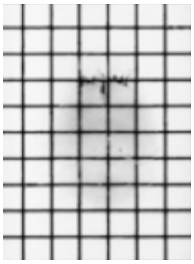
Powered by patent-pending Stochastic Electrotransport (Kim et al, PNAS, 2015) technology



FP is preserved well after clearing (Thy1-GFP mouse brain)



Whole Mouse Brain



Cleared Mouse Brain

Heart, kidney, and liver were also completely cleared with stochastic electrotransport in 3d. Lung and intestine took 2d and 1d, respectively.

SMARTCLEAR II SYSTEM

FAST, EASY, AND RELIABLE

Fast & Easy: Orders of magnitude faster than passive clearing. Our ready-to-use technologies bring plug-and-play options to clearing.

Reliable: Minimal tissue damage with stochastic electrotransport technology (Kim, PNAS) developed by the Chung Lab at MIT. No tissue contamination, tissue browning, black gunk formation or tissue deformation.

PERFECT CLEARING WITH MAXIMAL PRESERVATION OF FP SIGNAL

FP Signals: Maximum preservation of fluorescent protein (FP) signals.

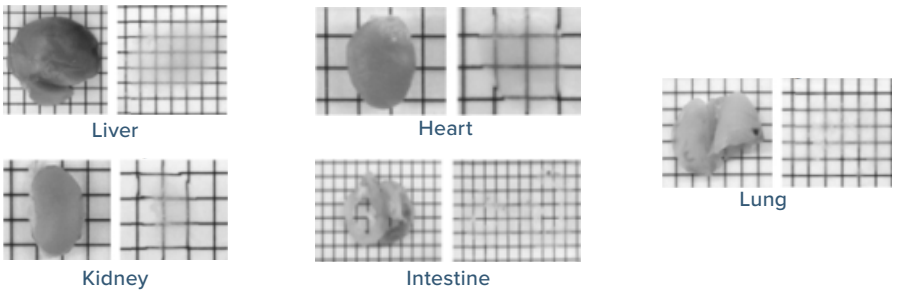
Optical Clarity: Minimum light scatter. Removes lipid best for best antibody diffusion. Optimal imaging and staining quality by completely removing lipids. Perfectly compatible with SmartLabel, our rapid staining system for intact samples.

COST-EFFECTIVE ACTIVE CLEARING

Cost-effective and Eco-friendly: New-generation buffer can be used for up to 10 samples and last up to 10 days without loss of its clearing power.

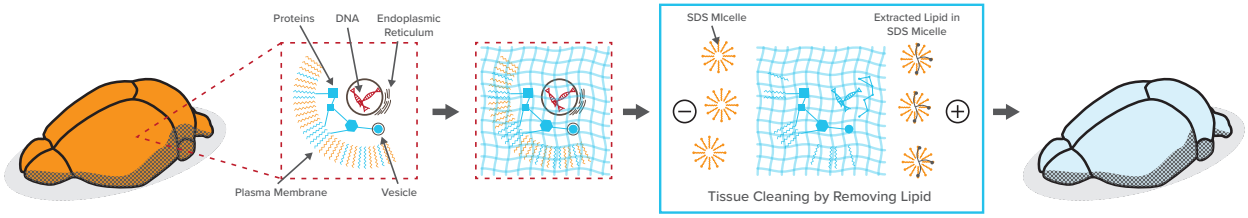
APPLICABLE TO VARIOUS SAMPLES

Can clear samples of various types and size including most organs



CLEARING PROCESS

CLARITY (Chung, Nature, 2013), SWITCH (Murray, Cell, 2015), MAP (Ku, Nature Biotechnology, 2016) use hydrogel-tissue hybridization technologies to maximally preserve tissue architecture and molecules.



Mouse Brain | Cell Structure | Hydrogel Hybridization | SmartClear II | Cleared Mouse Brain

SPECIFICATIONS

SmartClear II Module			
Physical Characteristics	Product Type		SmartClear II: Tissue Clearing System
	Product Dimensions		144”(W) x 14.8”(D) x 16.1”(H) 366mm(W) x 375mm(D) x 410mm(H)
	Weight		55 lbs (25 kg)
	Operating Power/Frequency		AC 100~120V / 50~60Hz AC 200~240V / 50~60Hz
	Electrical Input		100~120V(5A) or 200~240V(3A)
Clearing Part	Chamber	Dimension	103.5mm(W) x 162mm(D) x 71mm(H)
		Sample Rotation Speed	0rpm~10rpm
		Sample Protection Method	Specialized nanoporous membrane
		Control values	Current value Current upper limit Voltage value Voltage upper limit Electricity cycle Sample cup rotation speed/period Scheduling for sample cup rotation speed Polarity direction change (timer function) Electricity On/Off/Timer Buffer pump On/Off Temperature control
	Buffer Reservoir	Reservoir A	Buffer A for clearing tissue
		Reservoir B	Buffer B for cooling the electrode
		Reservoir Capacity	500mL each
	Cooling		Water circulation with hydraulic pump

Smart Box: SmartClear II Control Module		
Physical Characteristics	Product Dimensions	8.3”(W) x 14.8”(D) x 10.4”(H) 210mm(W) x 375mm(D) x 265mm(H)
	Weight	12 lbs (5 kg)
	Electrical Input	100`120V(15A)200`240V(8A)
Interface	LCD Monitor/Touch	RGB256 Color, 800 x 480 Pixel Resistive Touch
	Software	Beginner mode/Expert mode Fluorescent/Non-fluorescent preset

TISSUE PROCESSING/IMAGING PRODUCT LINEUP

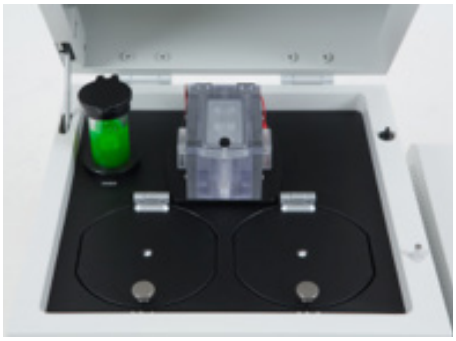
EASYGEL

EASYCLEAR

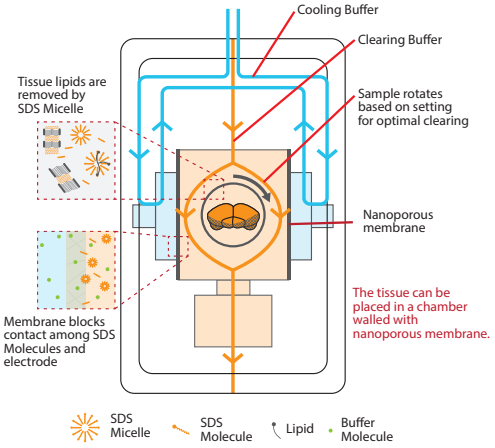
SMARTCLEAR II

SMARTLABEL

CHAMBER



CHAMBER DETAIL



Clearing Buffer

- Optimized for tissue clearing
- Long life time (up to 10 days)
- Eco-friendly

Optical Clearing Solution (RI=1.46)

- Formulated for best performance with CLARITY, SWITCH, and MAP.
- Cost-effective and convenient

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