

## Press Release

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# Accelerate your research with the X-CLARITY™ Tissue Clearing System

## The World's First Commercial Electrophoretic Tissue Clearing System

The new X-CLARITY™ Tissue Clearing System from the imaging specialists at Logos Biosystems provides an all-in-one solution for electrophoretic tissue clearing. X-CLARITY™ Tissue Clearing System is based on the groundbreaking CLARITY™ method, which provides unparalleled tissue samples for imaging. You can clarify a whole adult mouse brain in under 48 hours.

### What is CLARITY?

CLARITY™ is a novel technology that produces transparent tissues by forming a hydrogel network that supports the ultra-structure while allowing for the removal of lipids. Unlike other tissue clearing methods, the CLARITY™ uniquely enables the efficient labeling of tissues with macromolecules such as antibodies and nucleic acids, making high resolution imaging possible and allowing to generate unprecedented 3D images that show the relationship between structure and function. CLARITY™ overcomes the current limitation of light microscopy technology, which does not allow the imaging of tissues without first creating slices. The groundbreaking CLARITY™ method was developed by the Deisseroth Lab at Stanford University (Chung et al, Nature 2013, 497:332-337) is trademarked to the Stanford University.

### X-CLARITY™ : How it works

Combining an innovative electrode design and an integrated cooling system, the X-CLARITY™ Tissue Clearing System allows for faster and more consistent tissue clearing. Typical negative effects related with conventional electrophoretic tissue clearing methods include burning, melting, the formation of black precipitates, and bubble trapping. The main causes of these artifacts are due to irregular electric currents and poor temperature control during electrophoresis. The X-CLARITY™ dramatically reduces the negative effects associated with standard electrophoretic tissue clearing with a unique electrode design and an active cooling system.

A tissue sample is placed inside the X-CLARITY™ ETC Chamber where it undergoes electrophoresis to remove lipids. Clearing buffer is continually circulated through the chamber under temperature controlled conditions, minimizing the probability of artifacts arising due to poor temperature control.

### In Summary

Compared to other methods, the X-CLARITY™ Tissue Clearing System dramatically reduces tissue clearing time. A whole adult mouse brain may be cleared within 48 hours. One of the most exciting features of the technology is that it allows for the penetration of and labeling with macromolecules such as antibodies or oligonucleotides. Now you can generate unprecedented 3D images from whole tissue that show the relationship between structure and function.

Please contact us for detailed information!

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