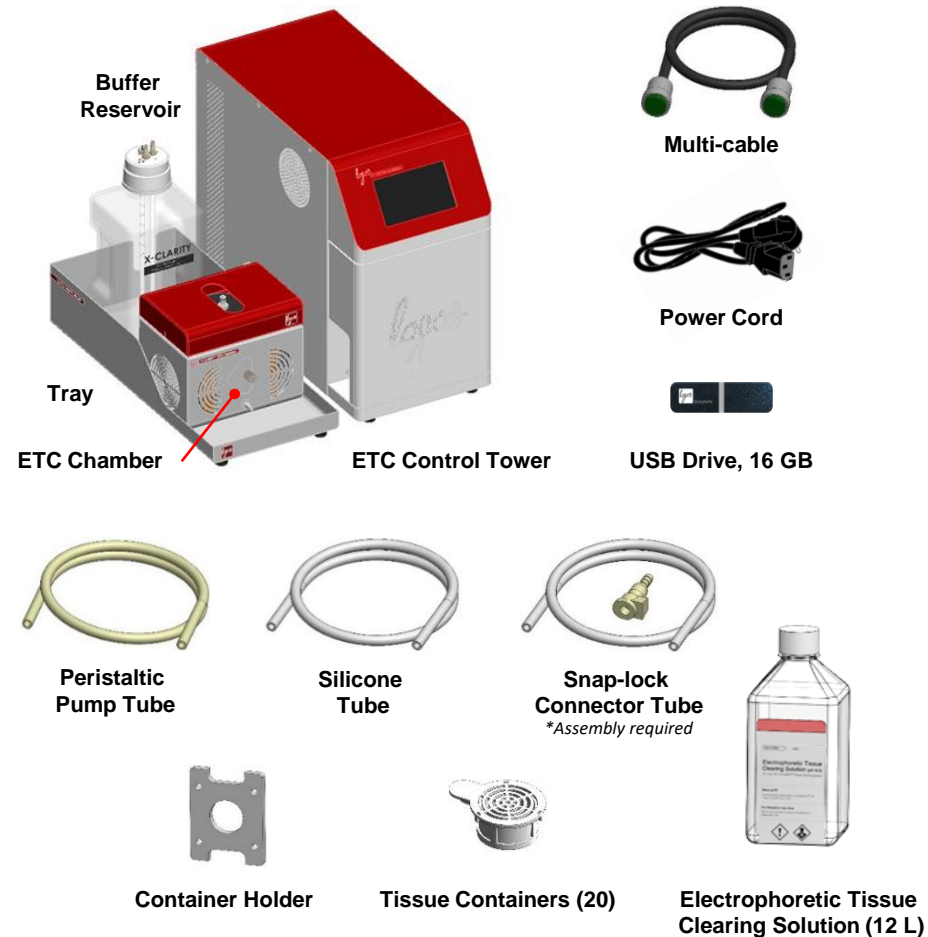


# X-CLARITY™ TISSUE CLEARING SYSTEM II INSTALLATION GUIDE



This Installation Guide provides instructions for installing the X-CLARITY Tissue Clearing System II. For detailed instructions, refer to the user manual in the supplied USB drive.

## COMPONENTS



## INTENDED USE

The X-CLARITY™ Tissue Clearing System II is a set of electrical laboratory instruments for scientific research use only. It is not a medical, therapeutic, or in vitro diagnostics device.

## GENERAL GUIDELINES

1. To ensure proper ventilation and prevent overheating, leave at least 5 cm (2 in) around the X-CLARITY™ ETC Control Tower. Do not block the air vents around the unit.
2. Make sure samples are prepared properly prior to clearing. Insufficient hydrogel polymerization can lead to inadequate clearing. Polymerization must be performed in a precisely controlled, oxygen-free environment with fresh ingredients. Use the X-CLARITY™ Hydrogel Solution Kit and X-CLARITY™ Polymerization System for optimal results.
3. Use fresh Electrophoretic Tissue Clearing Solution with each run. Reused clearing solution may have lowered buffering capacity, which reduces clearing efficiency. After prolonged use, the extracted lipids in solution may undergo electrolysis and turn tissue samples yellow.
4. Use the recommended volume of Electrophoretic Tissue Clearing Solution in the provided X-CLARITY™ Buffer Reservoir. Do not use organic solvents other than the Electrophoretic Tissue Clearing Solution from Logos Biosystems. Different solvents may cause permanent and irreparable damage.
5. When clearing a tissue type for the first time or using a different sample holder, check the sample every two hours to keep tabs on its progression.
6. Do not try to achieve absolute transparency. Placing cleared samples in an RI matching solution (X-CLARITY™ Mounting Solution, C13101) will achieve maximum transparency.
7. Operate the system in the conditions described below.

Operating Power	100 – 240 VAC, 2 A
Frequency	50/60 Hz
Installation Site	Indoor use only
Operating Temperature	10 – 30°C
Maximum Relative Humidity	20 – 70%
Altitude	≤ 2,000 m
Pollution Degree	2
USB Port	5 VDC, 500 mA

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## SAFETY PRECAUTIONS

Before using this system, read the user manual carefully to ensure that you know how to operate it safely and correctly. To protect yourself and others from personal injury or damage to property, it is essential that you read the warnings and information provided. Use the system as specified by Logos Biosystems.

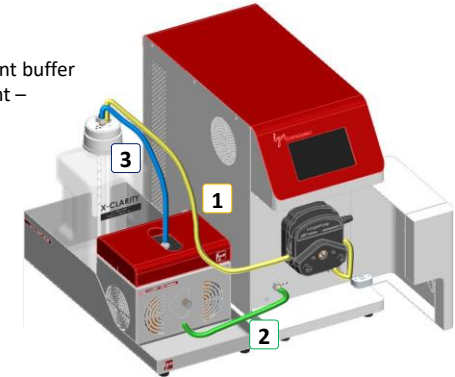
1. Read the user manual provided in the supplied USB drive.
2. Wear appropriate personal protective equipment (PPE) when handling reagents and samples to avoid exposure. We recommend that a lab coat, safety goggles, and gloves be worn at all times.
3. Leave at least 5 cm (2 in) around the X-CLARITY™ ETC Control Tower to ensure proper ventilation and prevent overheating. Do not block the air vents around the unit.
4. Use components provided or authorized by Logos Biosystems. If the proper combination of components is not used, product safety cannot be guaranteed.
5. Make sure tubes do not come into contact with the power cord.
6. Failure to connect the snap-lock connector properly can lead to buffer and pressure buildup within the ETC Chamber and potentially cause tubes to pop off their connections at high velocity. When attaching the snap-lock connector tube, press the stainless steel button on the side of the connector and push the connector firmly onto the chamber outlet until you feel and hear a click.
7. Tubes may become brittle or very soft after prolonged use. Check tubes on a regular basis and replace if necessary. Do not fold or bend tubes.
8. Do not disconnect tubes before draining them. Use the manual pump controls to drain tubes.
9. Always use the X-CLARITY™ ETC Control Tower to fill or drain the X-CLARITY™ ETC Chamber. Do not pour liquids in or out the X-CLARITY™ ETC Chamber directly.

## STEP 1: SET UP THE SYSTEM

1. Place the ETC Control Tower on a clean, flat surface and place the X-CLARITY Tray to its left. Place the buffer reservoir at the back of the tray. Place the ETC Chamber at the front of the tray.
2. Connect one end of the multi-cable to the ETC Chamber. Thread the free end through the hole at the back of the tray and connect to the ETC Control Tower.
3. Connect the power cord. Plug in the power cord to the ETC Control Tower and an electrical outlet.
4. Fill the buffer reservoir with 1.2 L Electrophoretic Tissue Clearing Solution. Screw on the cap.
5. Connect the temperature sensor attached to the reservoir cap to the ETC Control Tower.

## STEP 2: CONNECT THE TUBES

Tubes must be attached securely and properly to prevent buffer leakage. There are markings at each point of attachment – match up the markings for each tube.



1. **Peristaltic pump tube**  
● Buffer reservoir ● ↔ ETC Control Tower ●
2. **Silicone tube**  
● ETC Control Tower ● ↔ ETC Chamber ●
3. **Snap-lock connector tube**  
● ETC Chamber ● ↔ Buffer Reservoir ●

1. **Peristaltic pump tube:** Attach one end of the peristaltic pump tube to the buffer reservoir outlet. Open the ETC Control Tower door and pull the pump head lever to the left to open the compression block. Use the pump head clamp sliders to lift the clamps and load the peristaltic pump tube into the pump head.

**! IMPORTANT!** Make sure the tube is between the pump head rollers.

**! IMPORTANT!** Make sure the tube is between the clamp grooves and not pinched.

Pull the pump lever to the right to close the pump head. Attach the free end of the tube to the ETC Control Tower inlet.

2. **Silicone tube:** Attach one end of the silicone tube to the ETC Control Tower outlet and the other end to the ETC Chamber inlet.
3. **Snap-lock connector tube:** Assemble the snap-lock connector tube. Attach the labeled-end of the tubing to the snap-lock connector. Make sure there is a tight seal to prevent leakage.

With the ETC Chamber cap screwed on and safety cover closed, attach the snap-lock connector tube to the chamber outlet. Press the stainless steel button on the side of the snap-lock connector and push the connector firmly onto the chamber outlet until you feel and hear a click.

## STEP 3: TURN ON THE SYSTEM

1. Turn on the ETC Control Tower using the power switch on the rear panel.