



User Guidelines for

HYDROTECH  X100



General Information

Storage

HYDROTECH INX[®] X100 should be stored at 4 °C until use. Protect it from light. Expiry dates of the kit components are indicated on the vials. The products can be stored for a maximum of 3 months after opening and should be consumed before the expiry date. Always re-seal the resin vial with parafilm after use.

Intended Use

Research use only. This product is not intended for use in diagnostic or therapeutic procedures.

Safety Information

Work in a ventilated area and use suitable personal protective equipment. For more information, please refer to the material safety data sheet.

User Guidelines

Preparation

1. Warm up the resin vial by placing it into a pre-heated water bath (50 °C) using the supplied floater for 10 min.
2. Open the screw cap of the resin vial^a and gently pipette back and forth.
3. Draw \pm 0.1 ml resin and gently pipette onto a pre-silanized^b glass substrate. Avoid air bubbles.
4. Place the substrate onto a heated plate (70 °C) for 20 min for the removal of sacrificial solvent.
5. After heating, the resin is ready for printing process.

^a After use, promptly re-close the vial with the screw cap and seal with parafilm.

^b Recommended silanization protocol: Immerse the glass substrates in 3-(Trimethoxysilyl) propyl methacrylate (CAS: 2530-85-0) solution (1 v/v % in ethanol) for 45 min. Rinse thoroughly in ethanol and dry via a lens blower

Processing



HYDROTECH INX[®] X100 is only suitable for conventional printing methods.



The printing process must be completed within 6h after the resin is placed in the printer. The resin is not suitable for longer processing times.

The recommended processing parameters for 10x/0.4NA objective:

Pulse Duration	90 fs
Repetition Rate	80 MHz
Center Wavelength	780 nm
Hatching	0.5 μm
Layer Spacing	5 μm
Writing Speed	600 mm/s
Average Laser Power	> 50 mW

Developing

If present, wipe off the large part of the immersion oil from the bottom of the slide, clean remaining oil residue with a tissue and isopropanol.

Put the sample in a beaker filled with the supplied developer until full dissolution.

 Work in a fume hood with ventilation and use suitable personal protective equipments.

 Cover the beaker to prevent evaporation of the developer.

After developing, the sample can be stored at room temperature.

Imaging

The printed samples can be imaged using a scanning electron microscope or an inverted microscope using an excitation wavelength of 488 nm and a fluorescence emission wavelength of 507 nm.