



User Guidelines for

HYDROTECH  INX<sup>®</sup> X200



## General Information

### Storage

HYDROTECH INX<sup>®</sup> X200 should be stored at 4 °C. Protect 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.

### Intended Use

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

### Safety Information

Use suitable personal protective equipments. For more information, please refer to the material safety data sheet.

## User Guidelines

### Preparation

HYDROTECH INX<sup>®</sup> X200 resin vial should be warmed up in a water bath for 15 min at 50 °C before use. After warming up, pipette suitable volume<sup>a</sup> of resin droplet onto a pre-silanized<sup>b</sup> substrate.

<sup>a</sup> The volume can vary depending on the size of the target design. It is recommended to use minimum 50 – 100 µl resin for the conventional mode.

<sup>b</sup> *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<sup>®</sup> X200 can be processed using from 5x up to 40x objectives.

Recommended printing parameters using a 10x/0.4NA objective:

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

The resin does not contain volatile components and it is stable during long printing jobs.

### **Developing**

After printing, wipe off the large part of the immersion oil (if present) 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 (15 – 30 min).

After developing, store the printed structure in PBS.



To prevent detachment from the glass substrate, ensure that the printed structure remains adequately hydrated at all times. It is recommended to gradually replace the developer with PBS to avoid drying of the structure.

### **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.