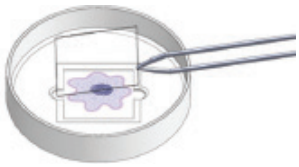
Quick Guide

TomoDish Sample Preparation

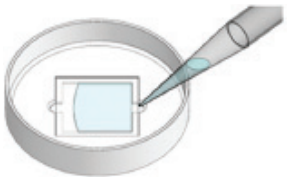
For adherent cells

- Seed cells onto coverslip area at the center of the plate.
- Seed cells aiming for around 50% confluency for best imaging quality.
- Allow the sample to stabilize (At least 12 hours, > 18 hours for DNA transfection

When using H or S model of HT



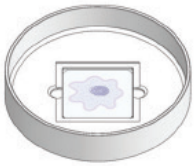
Remove medium from dish then insert a #1.5 H coverslip (20mm by 20mm) into the recess over the cells, to form a chamber.



Reintroduce medium or PBS through the spaces at the edge of the coverslip.

If using the H model, Place dish onto microscope and begin imaging remembering to add a water droplet onto the coverslip.

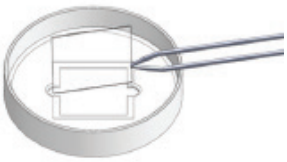
Alternatively when using the HT H model only.



Because the condenser lens is a water-immersion type, it is possible to do the imaging without removing the medium or adding the coverslip.

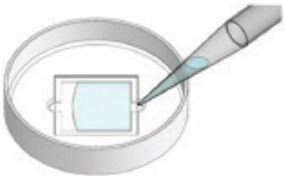
Provided the medium is shallow the water immersion lens can be dipped directly into the medium for imaging.

For suspension cells



No special preparation of the sample is required.

Take a Tomodish and place a #1.5 H coverslip (20mm by 20mm) over the cut-out recess in the center of the dish.



Using a pipette, introduce the sample (approximately 20 ㎕) through the side spaces.

The liquid will be drawn into the chamber. Allow the sample to stabilize.

Put onto the microscope and begin imaging.

Must know

Samples labeled with fluorescence markers can also be imaged.

3D fluorescence images and holotomography can be obtained simultaneously.

The use of membrane permeabilization is not recommended; movement of medium/cytoplasm in or out through the damaged membrane will reduce the imaging contrast.

Optimum imaging quality is obtained with a “sandwich” of coverslips.

The microscope is calibrated with coverslips of thickness 0.17 mm, so we recommend using a #1.5 H coverslip (thickness: 0.17 ± 0.005 mm) for the best performance.

When using dishes other than TomoDish, they should be of 50 mm diameter or more to allow for lateral objective scanning.

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