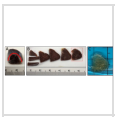

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Lightsheet Tissue Intake - Photodocumentation and Tracking

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1 Works for me dx.doi.org/10.17504/protocols.io.bef6jbre

Human BioMolecular Atlas Program (HuBMAP) Method Development Community

ABSTRACT

In order to track tissue position and orientation each sample is photographed when received for lightsheet microscopy (Figure 1, A). Large samples (>1 cm^3), such as the spleen in Figure 1, are cut into 2 mm sections (Figure 1, B) to facilitate tissue clearing, staining, and three-dimensional imaging. These tissues are batch processed and withdrawn from the lipid clearing pipeline as needed (Figure 1, C); at this time a novel identifier is assigned to the sample.

GUIDELINES

Photodocumentation, in our pipeline, occurs following tissue-hydrogel polymerization and multiple washes in PBS. This serves to remove trace fixatives for safer handling.

MATERIALS

NAME	CATALOG #	VENDOR
50 ml conical tubes		
Forceps (tweezers), 12.5cm, Blunt End	FC003.SIZE.1	Bio Basic Inc.
Razor blades	12-640	Fisher Scientific
Hexagonal Polystyrene Weighing Dishes	02202103	Thermo Fisher

SAFETY WARNINGS

Wash tissues of any fixatives, or other dangerous chemicals, prior to manipulating for photodocumentation.

1 Photograph whole tissue; capture from various angles if possible. A dissection ruler or grid should accompany each photograph.

2 Using a razor blade and forceps slice the tissue into sections approximately 2 mm wide. Try to slice in a continuous motion, while applying a gentle downward force.

3 Set aside tissue section and repeat Step 2 as needed. Maintain or keep track of slice order and orientation.

4 Photograph the sequential 2 mm slices, again using a dissection ruler or grid.

5 Retain all slices within one container for subsequent processing (lipid removal).

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