MuVi SPIM CS
PURE LIVE IMAGING

MuVi SPIM CS –
THE MULTIPLE-VIEW LIGHT-SHEET MICROSCOPE
FOR CLEARED SAMPLES

Luxendo's **MuVi** SPIM CS is an extension of the **MuVi** SPIM capabilities for 3D imaging of optically cleared samples. It brings together light-sheet fluorescence microscopy and tissue clearing techniques and provides new solutions in terms of sample mounting, sample size and optics to enable best-in-class fast, high-quality 3D imaging of cleared samples. The system features an exchangeable cleared sample octagon, a large chamber compatible with a broad range of clearing solutions and sample mounting from above. This enables simple maintenance and cleaning and easy accessibility and facilitates the handling of a great variety of samples. Flexible illumination and detection configurations further leverage the **MuVi** SPIM CS to meet your application needs. Complex experimental layouts can be easily set up due to the modular software concept.

The Cleared Sample Module of the **MuVi** SPIM CS consists of the optical core unit carrying illumination and detection objective lenses and the sample chamber, called the octagon, and the overhead 3D translation/rotation unit for sample mounting.

The **MuVi** SPIM CS is optimized for 3D imaging of intricate tissue structures, relevant to study the brain or the central nervous tissue in neuroscience, to analyze organ development or to investigate tumor structure and -genesis in oncology. It enables

› **Imaging of optically cleared tissues**
› **Compatibility with various clearing methods**
› **Imaging of large samples**
› **Large samples and large accessible volume**
› **High-speed image acquisition**
› **Highest sensitivity and minimal noise**
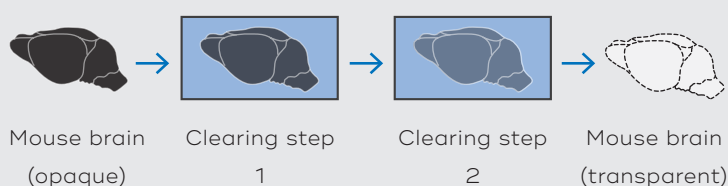
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MuVi SPIM CS
SPECIFICATIONS

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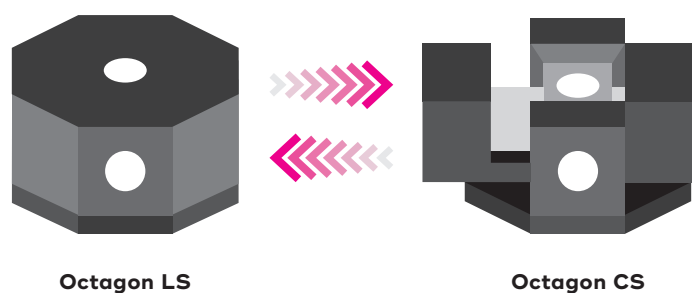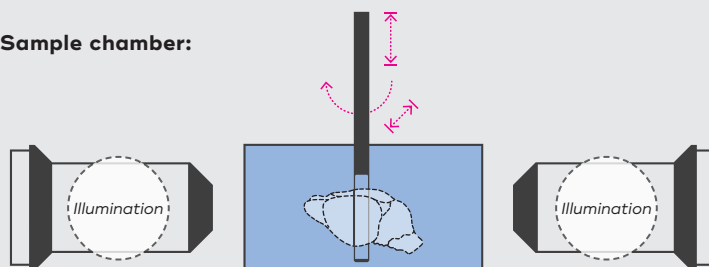P +49 6221 187 31 50 · F +49 6221 187 31 99
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CLEARED SAMPLE MODULE

› Octagon: core unit carrying illumination and detection objective lenses and the sample chamber
› Overhead 3D translation/rotation unit for sample mounting
› Sample chamber compatible with a broad range of clearing methods and solutions
› Design and travel range of the sample positioning and mounting unit suited for various mounting methods (e.g. hook, skewer, plate or cuvette)

Clearing technique:

Mouse brain (opaque) → Clearing step 1 → Clearing step 2 → Mouse brain (transparent)

Sample chamber:

Illumination   Illumination

EASY EXCHANGE

Octagon LS   **Octagon CS**

› Fast octagon exchange for easy transition between live-sample (LS) and cleared-sample (CS) imaging
› Sample positioning unit swivels out to facilitate access to octagon
› Octagon removal for easy maintenance and cleaning of objectives and chamber
› Alignment-free

FLEXIBLE CONFIGURATION

› Different configurations of detection lenses to match the properties of your samples
› Single- or dual-sided detection combined with dual-sided illumination
› Different sample chamber volumes available
› 10 × 10 mm volume accessible for imaging

a
Illumination
Detection   Detection
Illumination

b
Illumination
Detection
Illumination