

MINIMUM INFORMATION FOR YOUR MICROSCOPE METHODS

1. MICROSCOPE MAKE & MODEL

- Manufacturer: e.g. Nikon Ti2E
- Technique type e.g. Fluorescence, TIRF
- Inverted or upright
- Acquisition software: e.g. NIS Elements 4.11

2. OBJECTIVE LENS

- Manufacturer: e.g. Nikon
- Class: Plan-Apochromat
- Magnification, numerical aperture: 60x NA 1.4
- Immersion: Dry, Water, Oil (refractive index)

3. LIGHT SOURCE

- Transmitted light e.g. brightfield : LED, lamp
- Epifluorescence: LED, HXP lamp
- Laser: 488 – Argon, solid state

4. FLUORESCENCE FILTERS

- Excitation: Chroma 490/30nm
- Emission: Chroma 525/50nm
- Tuneable filter range: 495-550nm

5. STAGE & 3D Capture

- Number of slices
- Spacing between slices
- Multi-points

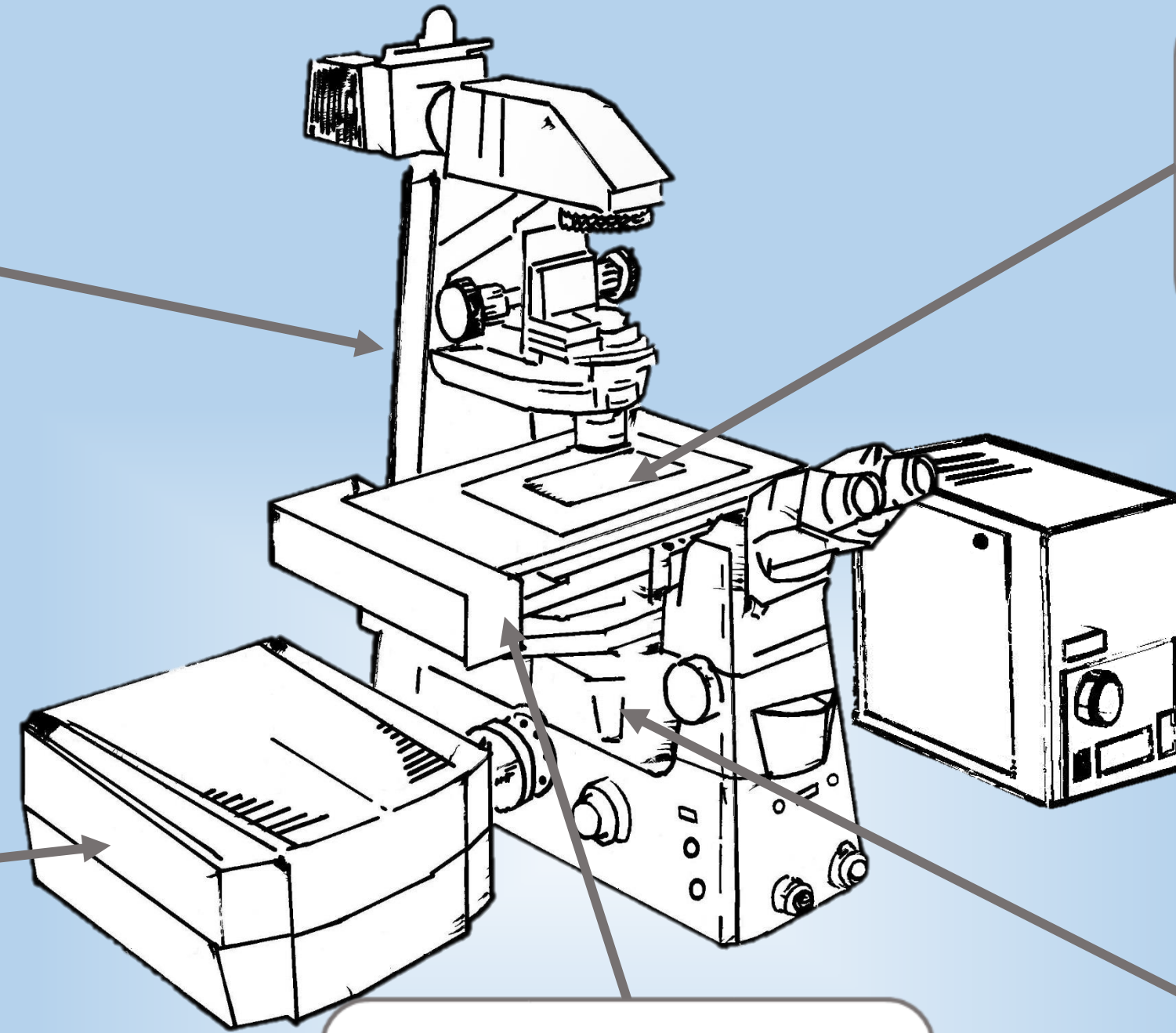
6. IMAGE DETECTION

Camera based

- Manufacturer: e.g. Hamamatsu Flash 4.0 sCMOS
- Exposure time: 300 milliseconds
- Camera pixel size: 6.5µm x 6.5µm
- Bit depth of images: 8bit, 12bit, 16bit
- Binning: 1x1, 2x2, 4x4

Point scanning

- Scan head: LSM 880, Leica SP8
- Detector type: PMT, GaAsP, HyD



Sample Information

- Sample mounted: #1.5 glass
- Fixation: PFA, Methanol etc.
- Antibodies & fluorophores: Primary and secondary
- Mounting medium

Live Imaging

- Temperature
- Media/Buffer
- CO₂ & O₂
- Imaging interval
- Autofocus

Point Scanning Confocal

- Scan speed (pixel dwell time)
- Averaging
- Voxel size
- Pinhole size/optical thickness

Other Imaging Techniques?

- Method and hardware modules
- Calibration
- Acquisition settings

(Image Processing)

- Image registration (e.g. ImageJ – plugin name)
- Deconvolution (software/plugin)