

Essential Metadata for 3D BRAIN Microscopy

Instrument Category

The Instrument category includes 12 metadata fields that describe the instrument.

Field Name	Definition	Allowable Values	Occurrence	Required for Brain Image Library Submission	Supports Digital Object Identifier (DOI)	DataCite (ID: Property)	OME (Element: Attribute)
microscopeType	Type of microscope used to capture the image (e.g., inverted, upright, light sheet, confocal, two photon).	Free text	1	Yes	No	None	Microscope: Type
microscopeManufacturerAndModel	Manufacturer and model of the microscope used.	Free text	1	Yes	No	None	Microscope: Manufacturer Microscope: Model
objectiveManufacturerAndModel	Manufacturer and model of the lens used.	Free text	1	No	No	None	Objective: Manufacturer Objective: Model
objectiveImmersion	Immersion medium for the lens. Suggested values: Air, Glycerol, Multi, Oil, Water, Water dipping.	Free text	1	No	No	None	Objective: Immersion
objectiveNA	Lens numerical aperture.	Free text	1	No	No	None	Objective: LensNA
objectiveMagnification	Lens magnification.	Free text	1	No	No	None	Objective: NominalMagnification
detectorType	Type of detector used. Suggested values: CCD, Intensified CCD, Analog video, PMT, Photodiode, CMOS, EBCCD, FTIR,	Free text	1	No	No	None	Detector: Type

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	spectroscopy, Lifetime imaging, Correlation spectroscopy, EMCCD, APD, etc.						
detectorManufacturerAndModel	Manufacturer and model of the detector.	Free text	1	No	No	None	Detector: Model Detector: Manufacturer
illuminationType	Type of illumination. Suggested values: Gas, Metal vapor, Solid state, Dye, Semiconductor, Free electron, etc.	Free text	1	No	No	None	Laser: Type
illuminationWavelength	Bandwidth of illumination light.	Free text	1	No	No	None	Laser: Wavelength Laser: WavelengthUnit
detectionWavelength	Bandwidth of collected light.	Free text	1	No	No	None	None
sampleTemperature	Sample temperature at capture.	Free text	1	No	No	None	ImagingEnvironment: Temperature ImagingEnvironment: TemperatureUnit

Occurrence

0-n = optional and repeatable

0-1 = optional, but not repeatable

1-n = required and repeatable

1 = required, but not repeatable