



Confocal Microscopy Core Facility

Brigham and Women's Hospital



Materials and Methods Information **Edited in February 2017**

According to Dr. Jennifer Waters of the Nikon Imaging Center (NIC) at Harvard Medical School:

“In order to critically read and understand your microscopy data, there are a few basics that should be included in a Materials and Methods section describing how you acquired your images. This information should always be provided, as it is necessary for estimating the resolution and sensitivity of your microscope, and therefore deciding whether you chose to use the appropriate equipment.

1. Make and model of microscope (and confocal, if used)
2. Type, magnification, and numerical aperture of the objective lenses
3. Imaging environmental conditions: chamber, media, temperature, buffer, etc.
4. Fluorophores
5. Filter sets (with peak transmission and bandwidth, or the manufacturer part number so the reader can look up spectra) and/or laser used
6. Camera make and model
7. Other motorized components used
8. Acquisition software
9. Any subsequent software used for image processing, with details about types of operations involved (e.g., type of deconvolution, 3D reconstructions, surface or volume rendering, gamma adjustments, etc.)”

The NIC is great resource for what should be included in your materials and methods section. More information can be found on the Nikon Imaging Center's website:

<https://nic.med.harvard.edu/equipment/materialsandmethods>.

If you are using images acquired in the Confocal Core Facility at BWH, please acknowledge the facility in your paper!



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Equipment list for the Confocal Microscopy Core Facility at Brigham and Women's Hospital

Microscope: Zeiss Axio Observer Z1 Inverted Microscope

Confocal: Zeiss LSM 800 with Airyscan

Confocal Acquisition Software: Zen 2.3 blue edition

Transmitted light detector (if you imaged DIC using our confocal system): Axiocam 503 Monochrome Camera

Lasers: Zeiss URGB (405, 488, 561, and 640 nm laser lines)

Objectives (list only the objectives you used for your data collection):

- Plan-Neofluar 10x/0.30 WD=5.2 M27
- Plan-Apochromat 20x/0.8 WD=0.55 M27
- Plan-Apochromat 63x/

Mention the following information if you are including any images acquired with our widefield system:

Widefield Fluorescence Lamp: Software controlled metal-halid light source HXP 120 V

Widefield Camera: Axiocam 503 Monochrome Camera

Widefield Acquisition Software: Zen 2.3 blue edition

Widefield Filters (excitation; emission):

- Filter set 10 (BP 450-490 nm; BP 515-565 nm), for Cy2, GFP, FITC, Alexa 488
- Filter set 20 (BP 546/12 nm; BP 575-640 nm), for Cy3, Rhodamine, TRITC, Alexa 555
- Filter set 49 (G 365 nm; BP 445/50 nm), for DAPI, Alexa 350



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