How To: Collect Calibration Images

This tutorial discusses considerations for collecting quality calibration images.

Terminology

The *voltage* across the gap between the anode and cathode is usually measured in kilovolts (kV). As the voltage is increased, the wavelength of the x-ray photons is decreased, and thus their energy is increased.

The *current* through the cathode filament is usually measured in milliamperes (mA). As the current is increased, the number of x-ray photons produced is increased, and thus the intensity of the beam is increased.

Determining Settings

To determine the proper voltage and current settings for the calibration images, first determine their proper values for the tissues being imaged. This will depend on many factors, including the size of the subject, the body part being imaged, the amount of soft tissue in the field of view, etc. Once they have been determined, use the same voltage for all calibration images (white, grid, and calibration object). For the current, lower the value until no pixels in the white image are saturated (at their maximum value). A good rule of thumb is to set the current so that the center of the white image is at about 75% of maximum intensity. Use this same mA value for all calibration images.

Also, any stationary objects that will be in the field of view during subject data collection (e.g., stands, tables, graduated filters) should be in place for the calibration trials as well.

See Also

Go back to an overview of CalibrateDSX tutorials.

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