



Rigaku Virtual Workshop Series X-ray Computed Tomography

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INSTRUMENT PROFILE

Rigaku nano3DX is a 3D X-ray microscope with selectable radiations and a high-power X-ray source. The combination enables fast, high-contrast, and high-resolution X-ray imaging.

SPECIFICATIONS

- 1200 W ultra-bright micro-focus X-ray source
- Variety of optical lenses (1.25X - 20X)
- High-resolution (max. 325 nm voxel size)
- High-speed (max. 30 seconds/scan)

QUICK REFERENCE

High-resolution CT Data Collection-2

SAMPLE MOVEMENT

Even a micron level of sample movement during data collection can affect high-resolution CT images and blur them. Always secure the sample carefully.

SIGNS OF SAMPLE MOVEMENT

Look for signs of sample movement when correcting the center/focus during the reconstruction process. No apparent focus, streaking, or doubled images are the sign of sample movement.

X-RAY ENERGY SELECTION

Select low energy X-ray anode such as Cu (8 keV) for low density materials and medium energy such as Mo (17 keV) for higher density materials. If you see beam hardening artifacts, consider switching to higher energy anode.

FOV AND SAMPLE SIZE

When imaging fragile samples such as porous materials, set the FOV moderately smaller than the sample size to avoid the surface potentially being damaged during sample preparation.