
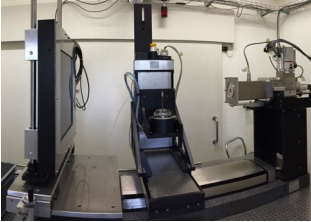
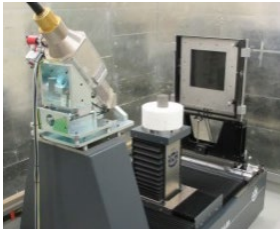

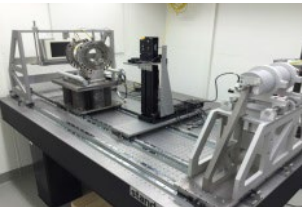


## CT equipment at the Center for X-ray analytics

Scanner	RX	Micro-CT	MicroDETECT	Linac-2D	PCI System
					
Type	Cone-beam (3D)	Cone-beam (3D)	Cone-beam (3D)	Fan-beam (2D)	Grating-based, multi-modal
X-ray source	100 kV nano-focus 230 kV micro-focus	160 kV Viscom micro-focus 225 kV Viscom macro-focus	300 kV Micro focus tube FineTec FOMR 300.03Y RT	4/6 MeV dual energy linear accelerator US Photon Pulstar PSL-6D	35 keV design energy
Focal spot size	Min. < 1 $\mu\text{m}$ (nano) Min. 5 $\mu\text{m}$ (micro)	Min. 3 $\mu\text{m}$	$\geq 5 \mu\text{m}$	2.0 mm	1 mm
Detector	<u>Flat panel Varian PaxScan 2520:</u> 3M pixs of 127 $\mu\text{m}$ size <u>XIMEA CCD:</u> 11M pixs of 9 $\mu\text{m}$ size	Flat panel, Perkin Elmer XRD 1621 pixel matrix: 2048 x 2048 pixel size: 0.2 x 0.2 mm	Flat panel, Perkin Elmer XRD 1611 CP3, CsI (Ti) pixel matrix: 4096 x 4096 pixel size: 0.1 x 0.1 mm	Linear detector, DetectionTechnology X-Scan iHE04, 10 mm CdWO4 detector width: 1500 mm pixels: 3828 pixs, pitch: 0.4 mm	Teledyne Dalsa Shadow Box Pixel size 50 $\mu\text{m}$
Detector collimator	no collimator	no collimator	no collimator	tungsten slit collimator, adaptable aperture	Grating interferometer
Max. sample dimensions and weight	diameter: 250 mm height: 800 mm weight: 90 kg	diameter: 250 mm height: 500 mm weight: 10 kg	diameter: 400 mm height: 400 mm weight: 50 kg	diameter: 700 mm height: 2000 mm weight: 1000 kg	FOV 50 x 50 mm <sup>2</sup>
Penetration	Au: 2 mm Al: 100 mm plastics: 300 mm	Au: 2 mm Al: 180 mm plastics: 300 mm	Au: 3 mm Al: 180 mm steel: 60 mm	W/Au: 40 mm steel: 300 mm Al: 900 mm	PMMA: 100 mm
Best spatial resolution	$\sim 0.6 \mu\text{m}$ for object $\varnothing < 1\text{mm}$ Larger objects: $\sim 1/1000^{\text{th}}$ object $\varnothing$	$\sim 2 \mu\text{m}$ for object $\varnothing < 3\text{mm}$ Larger objects: $\sim 1/1000^{\text{th}}$ object $\varnothing$	$\sim 15 \mu\text{m}$	$\sim 0.8 \text{ mm}$	$> 100 \mu\text{m}$