

X-RAY TOMOGRAPHY

- Radiographic images, tomographic scans.
- Use **stl-file** in 3D printing, or **compare** sample dimensions to CAD-file.
- Samples from **ant** to **basketball**.
- Penetration power as much as **3 cm steel** or **12 cm aluminum**.

Samples

- Wood, seeds, bone, tooth, implants, tablets
- Geological samples, small electronics, weldings
- 3D printed materials, composites

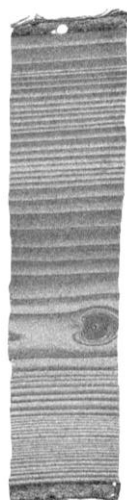
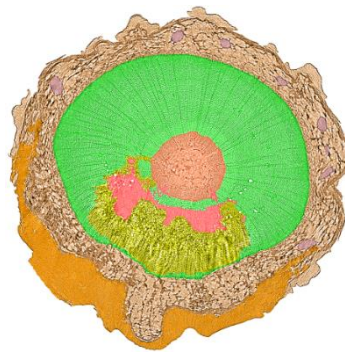
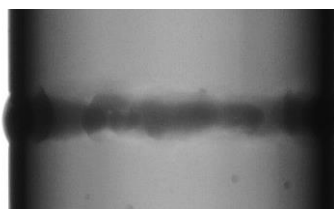
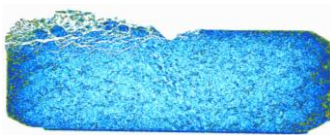
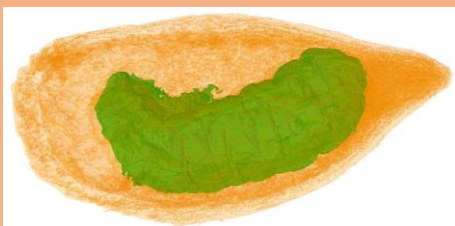
Better resolution means smaller sample, starting from 3 mm diameter.

Research questions

- Structure? Different materials inside the sample?
- Pore location and distribution? Cracks, defects?

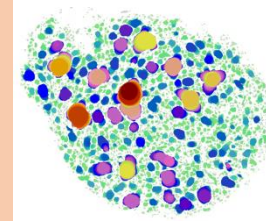
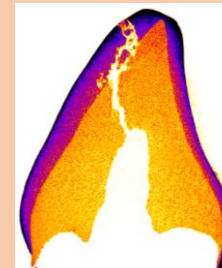
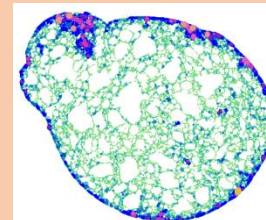
WORKFLOW

1. Fasten the sample to the manipulator
2. Voltage, current and filter optimization
3. Imaging
4. Reconstruction with optimal settings
5. Surface and region of interest determinations
6. Analysis
7. Visualization with colours and transparency



ANALYSIS

- Structures and structure defects
- Homogeneity
- Volume, surface area
- Pores, inclusions
- Fiber orientation



SIB LABS INFRASTRUCTURE



NIKON XT H 225

225 kV, 225 W
Detector 43 x 43 cm
2880 x 2880 pixels
Resolution 3 μ m

SKYSCAN 1172



100 kV, 10 W
Detector 34 x 18 mm, 4000 x 4000 pixels
Resolution 5 μ m

CONTACT

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