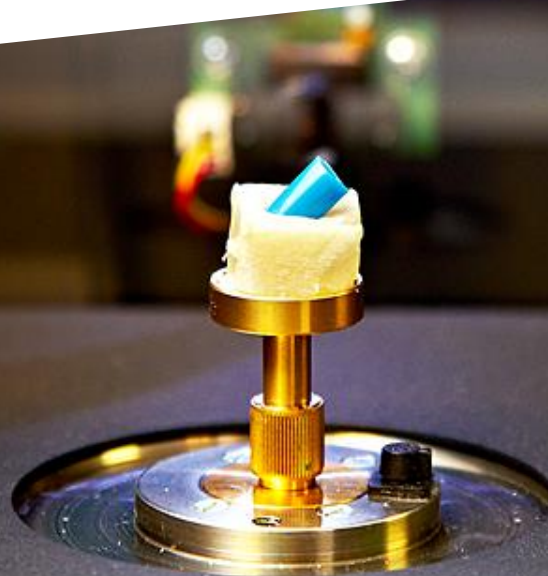




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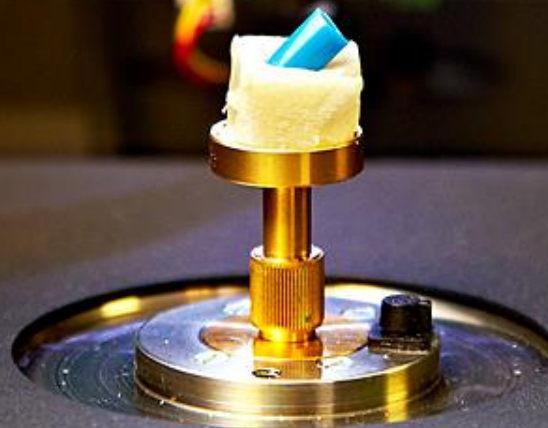
it's all about innovation





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μ CT Skanning – ERFA Maj 2013



μCT Skanning hos Kvalitet og Måling

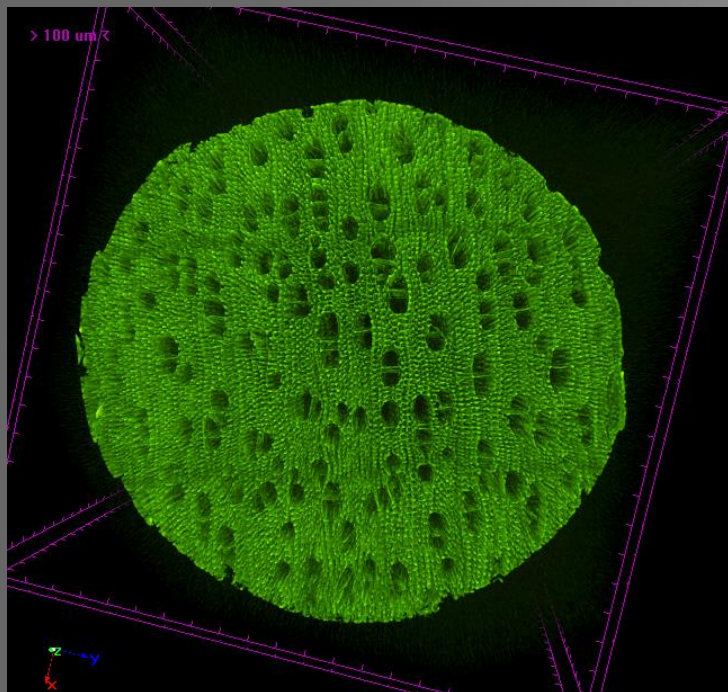
Bruker μCT, Skyscan 1172

X-Ray tube: 20-100 kV

Detector: 4000 x 2300 pixels

Sample size: Ø27mm (single scan) / Ø50mm (offset scan)

'Detectability': < 0.7 μm

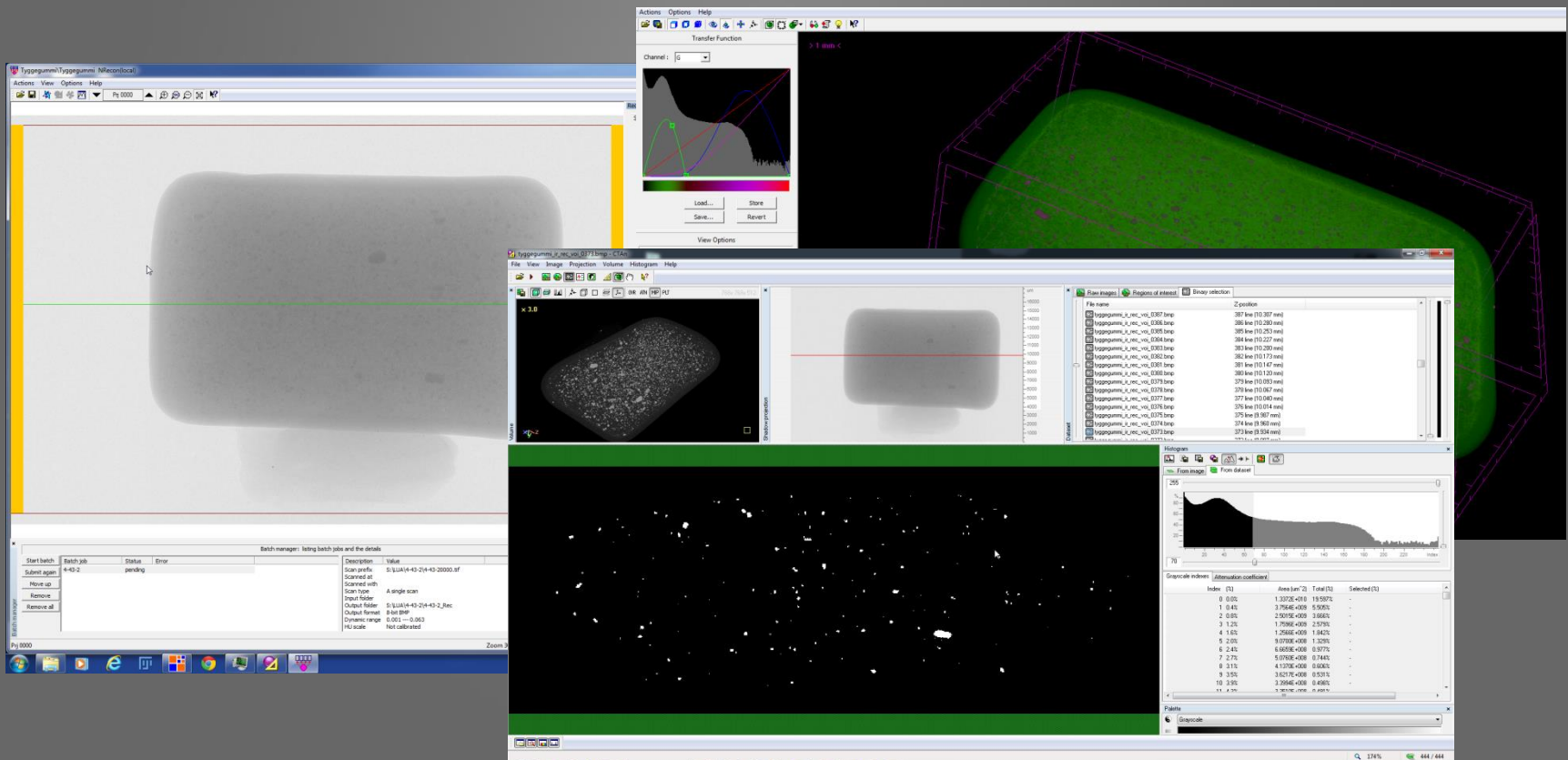


Skyscan Software



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- Reconstruction Software: Nrecon
- CTVox: Volume rendering - visualization
- CTAn: Analysis of micro-CT data



Parameters that can be measured in 2D and 3D:

- Object volume (pore, particle, etc.)
- Object surface
- Structure thickness
- Detailed analysis of porosity and object area/volume/surface/number
- Structure separation
- Euler number
- Degree of anisotropy
- Fractal dimension

Isolations Materiale 100 vs 300

Resolution = 4.26 μm
Voltage = 33 kV
Current = 204 μA



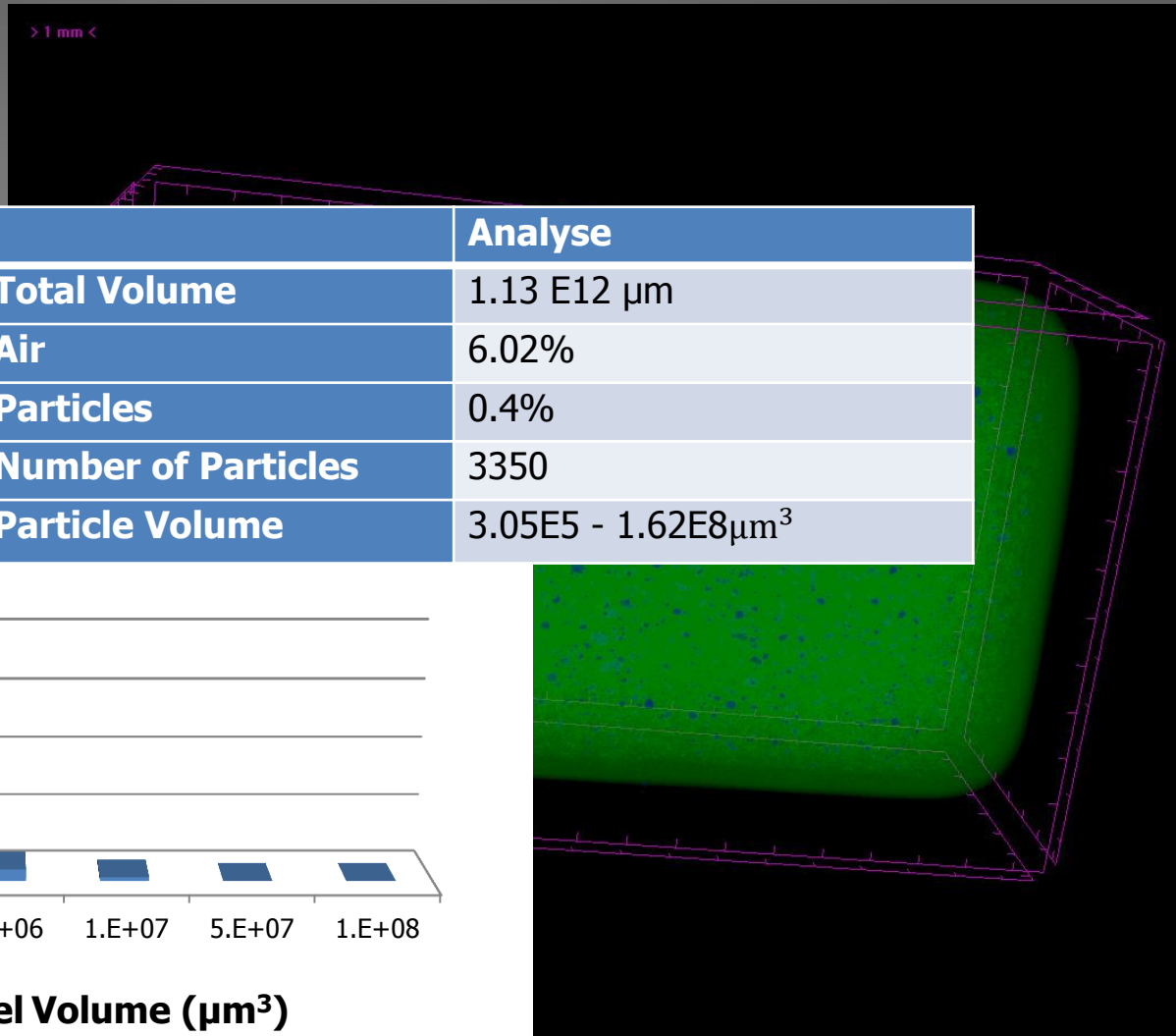
	Sample	Man Threshold	Otsu Threshold
Total Porosity	100	90.2%	92.0%
	300	95.1%	95.1%
Object Volume	100	8.9%	8.03%
	300	4.9%	4.9%

Tyggegummi



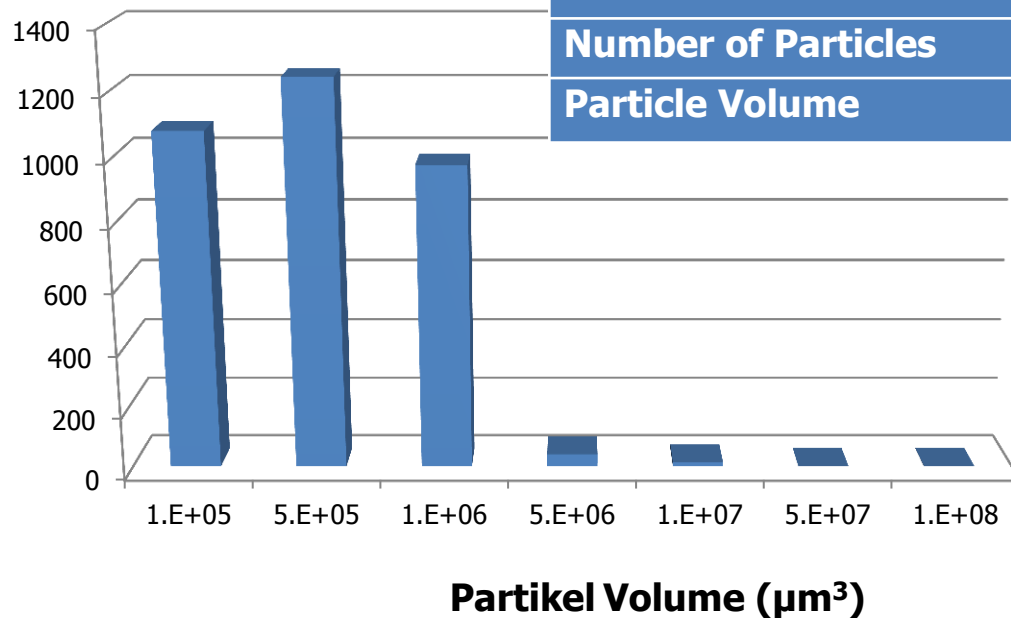
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Resolution = 6.66 μm
Voltage = 85 kV
Current = 118 μA
Filter = 0.5 Al



	Analyse
Total Volume	1.13 E12 μm^3
Air	6.02%
Particles	0.4%
Number of Particles	3350
Particle Volume	3.05E5 - 1.62E8 μm^3

Spredning I P



Fiber Prøve



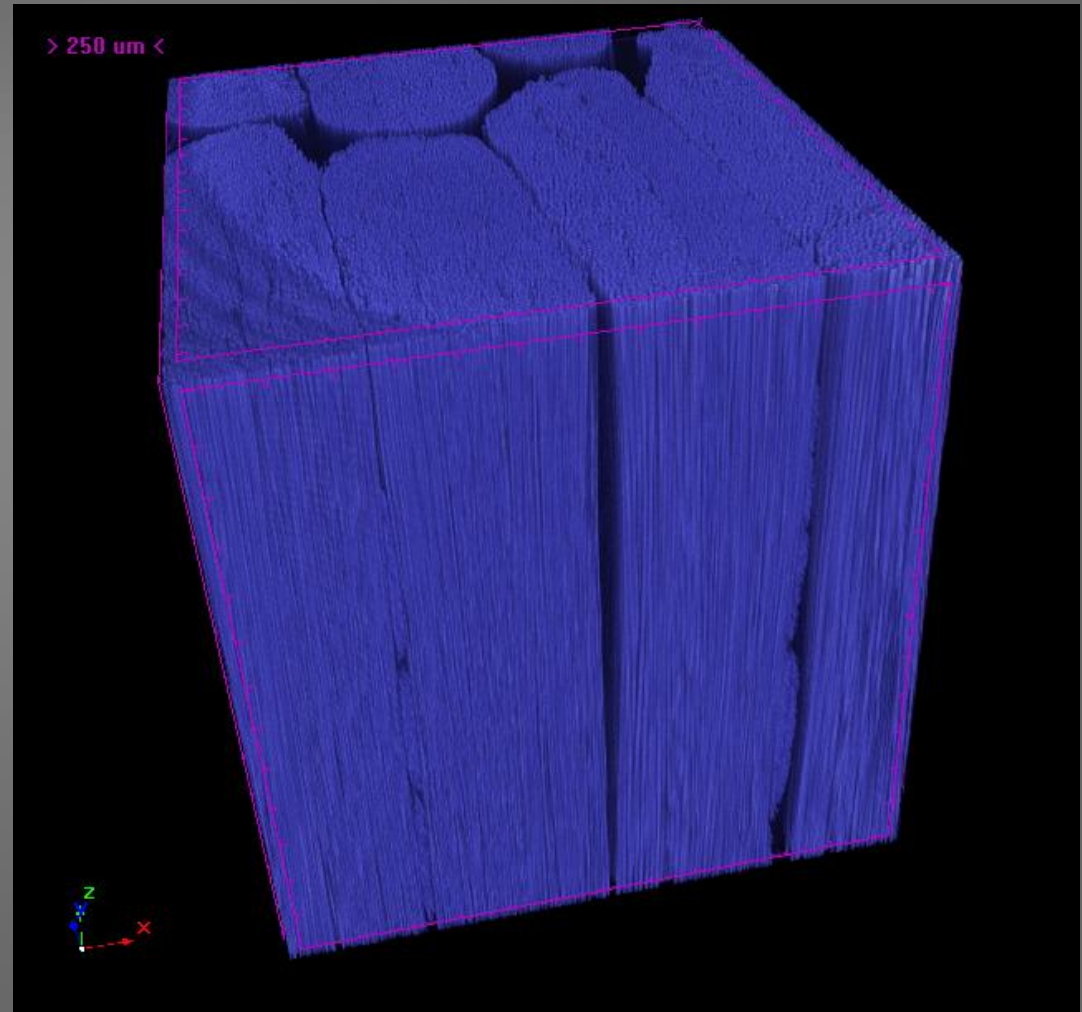
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Resolution = 1.60 μm

Voltage = 74 kV

Current = 133 μA

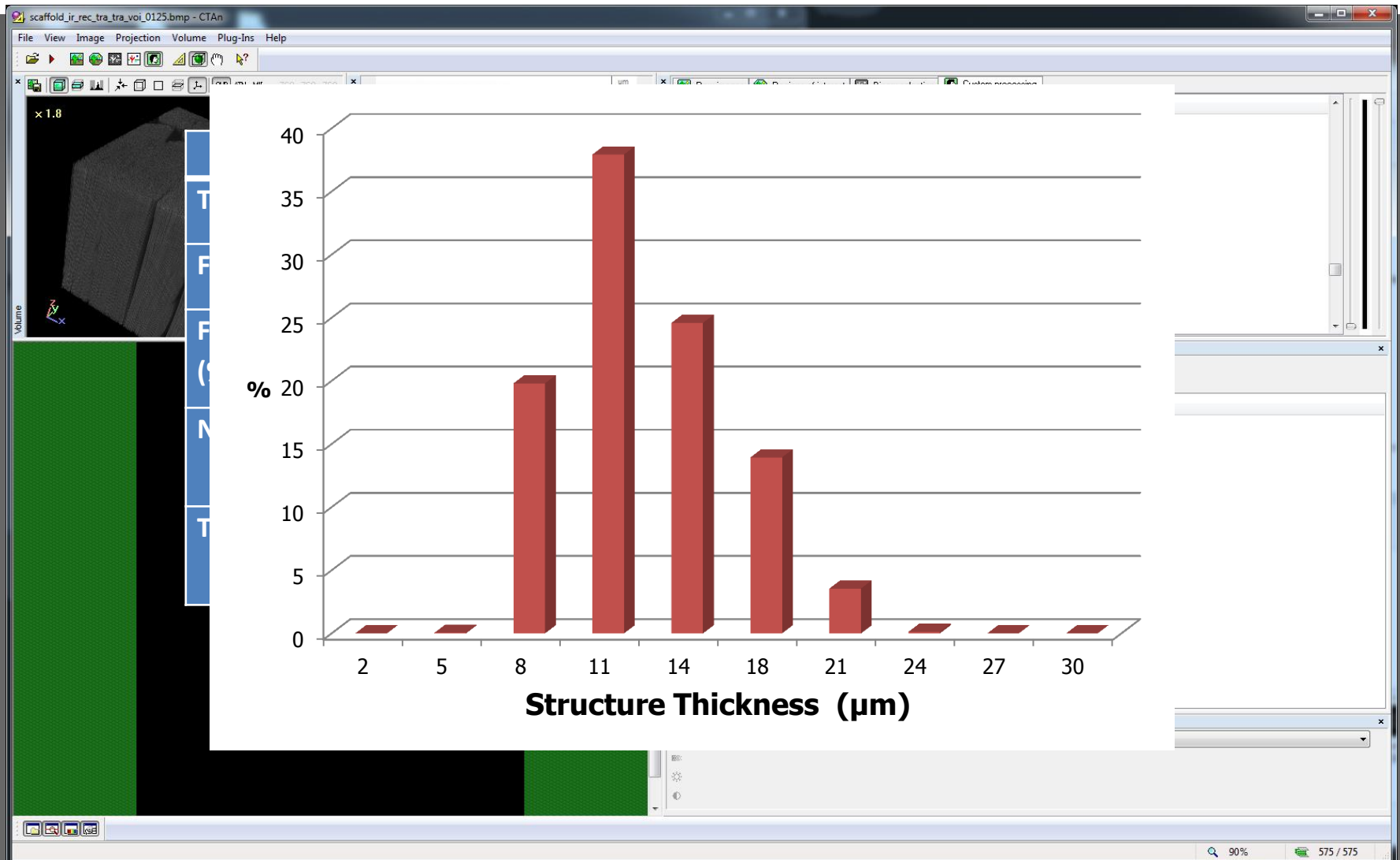
Filter = Al 0.5 mm



Fiber Prøve



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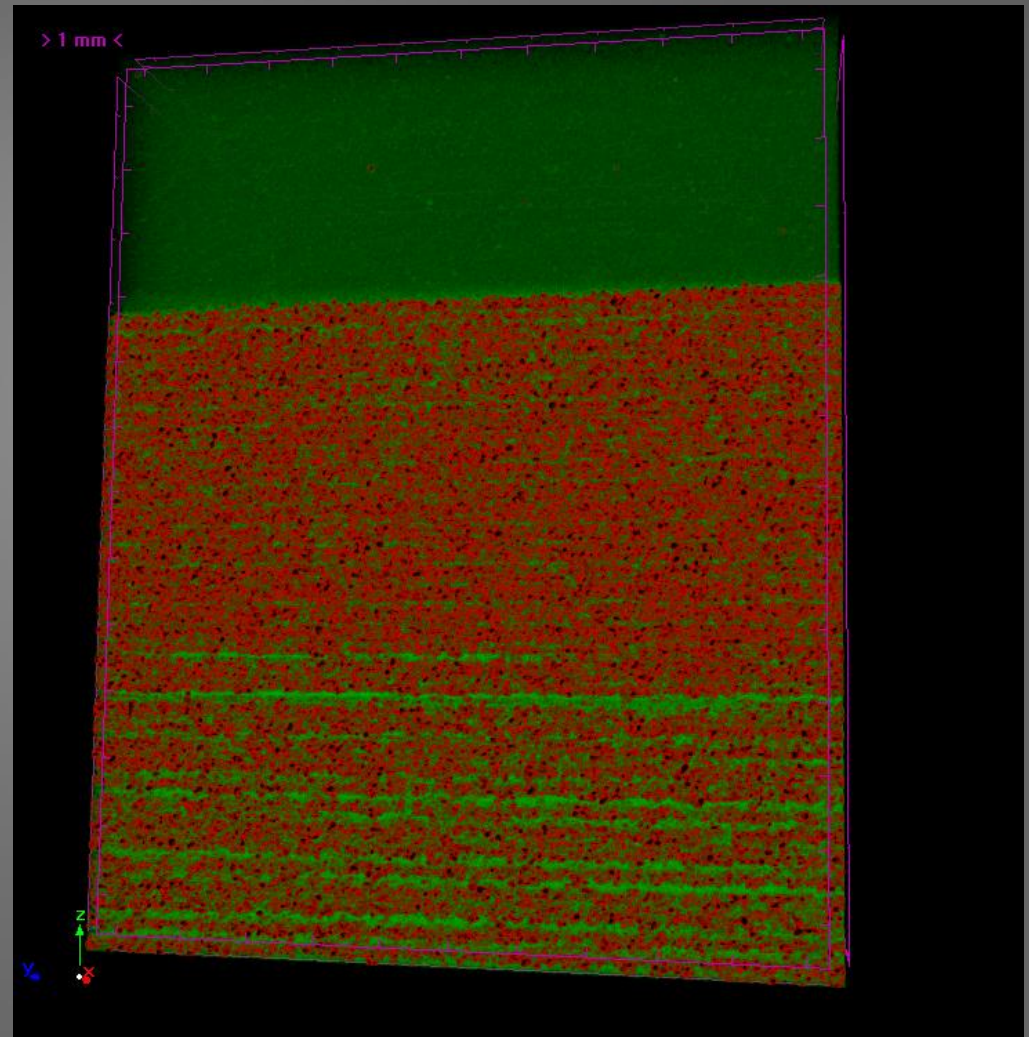
Polyamid (PA)/ Alumid



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Polyamide = 0.9 g/cm^3
Alumide = 1.36 g/cm^3

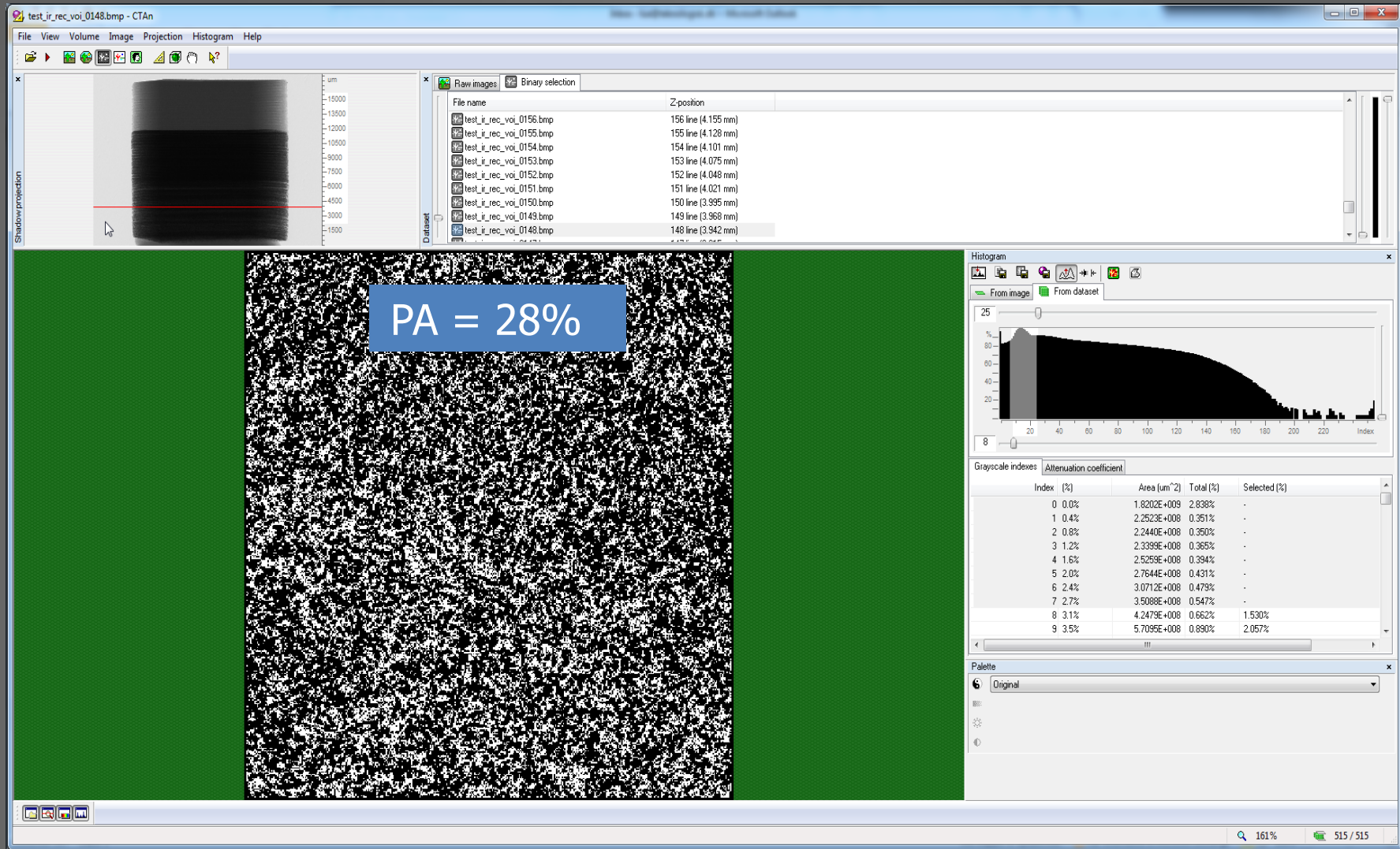
Resolution = $6.6 \text{ }\mu\text{m}$
Voltage = 48 kV
Current = $200 \text{ }\mu\text{A}$
Filter = 0.5 Al



Polyamid (PA) / Alumid



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Tandstik



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Resolution = $1.33 \mu\text{m}$

Voltage = 40 kV

Current = $250 \mu\text{A}$

Porosity = 65 %

