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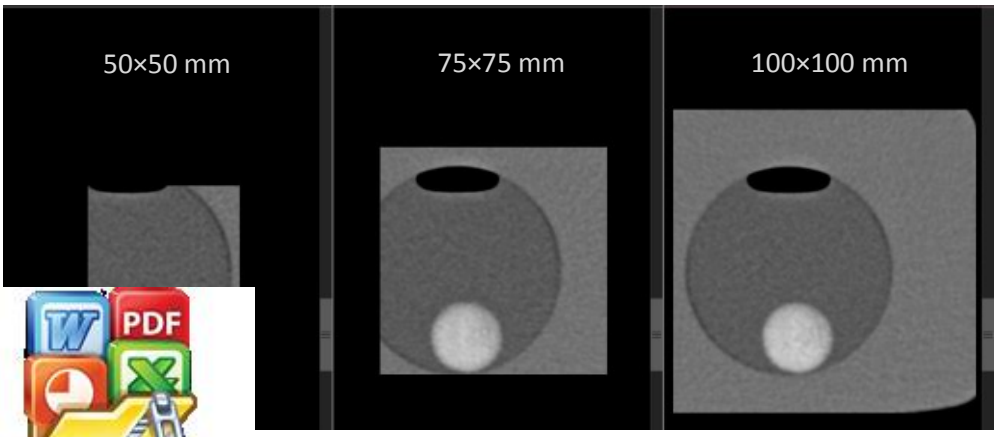
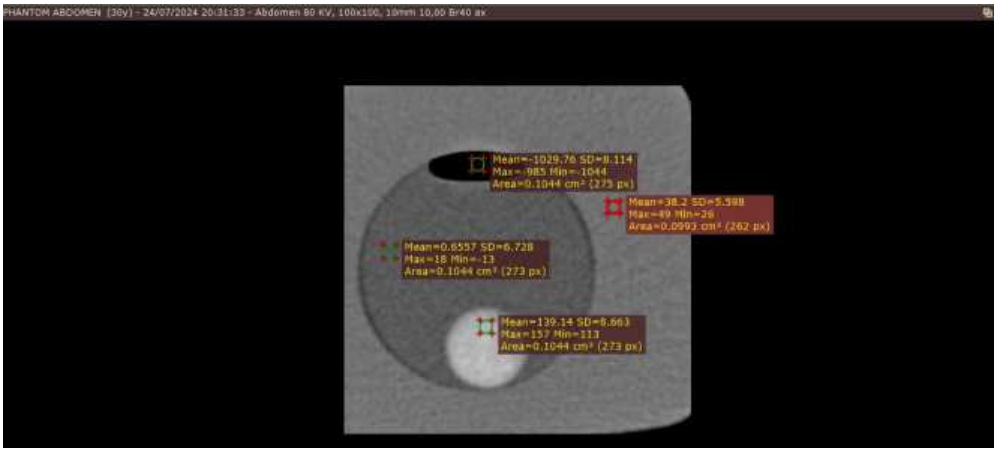
LAMPIRAN

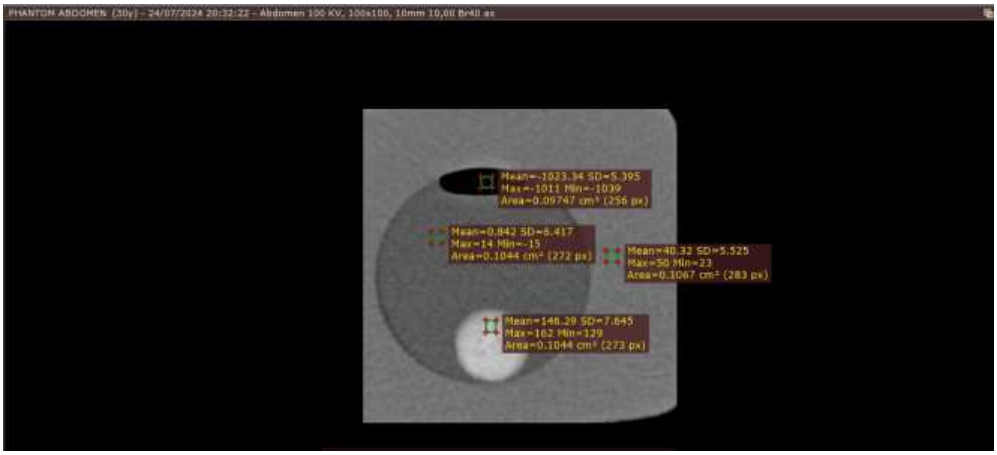
Lampiran 1. Proses scan Phantom pada CT Scan

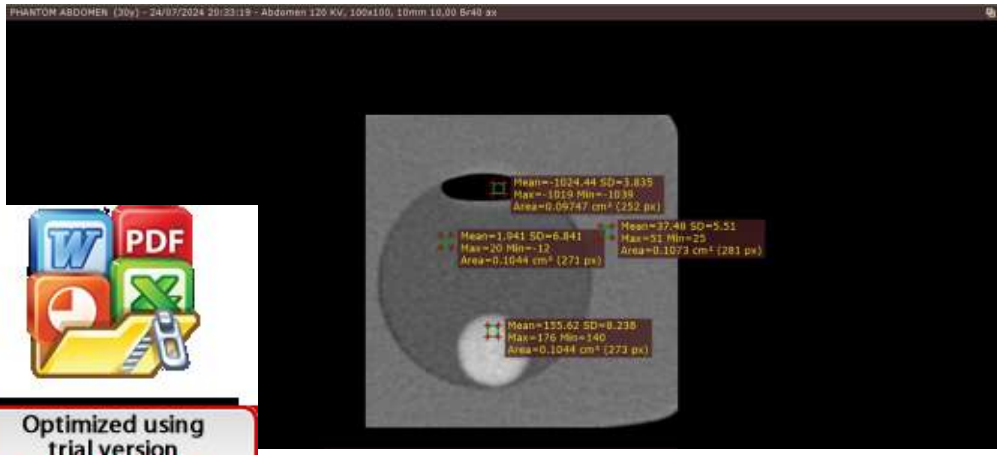
Lampiran 2. Hasil Profil Citra



Lampiran 3. Hasil penentuan Nilai CT Number pada *software* Radiant DICOM

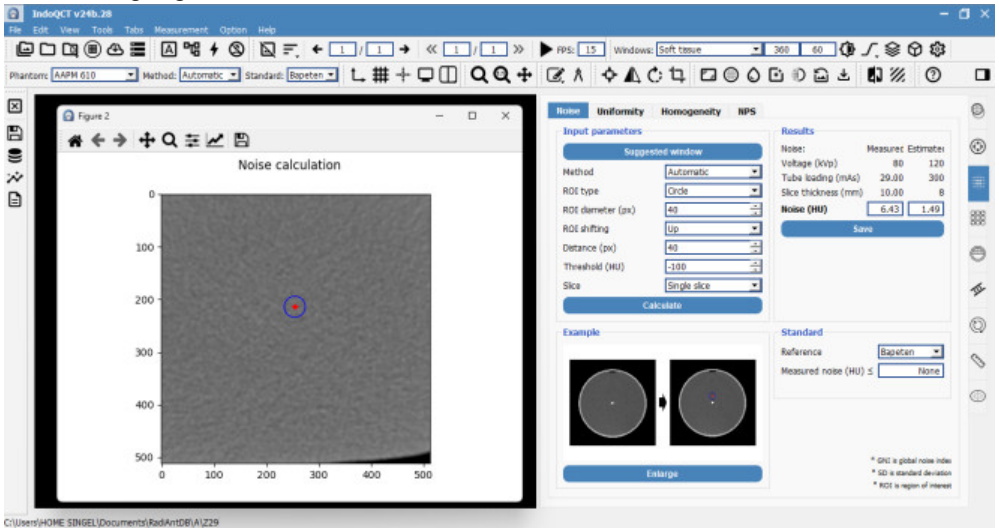




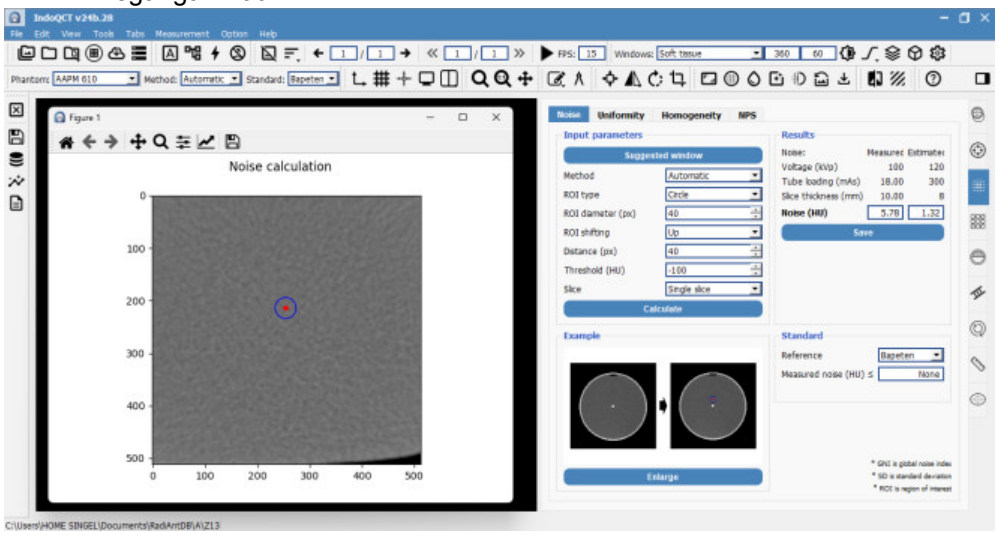


Lampiran 4. Hasil perhitungan *Level Noise*

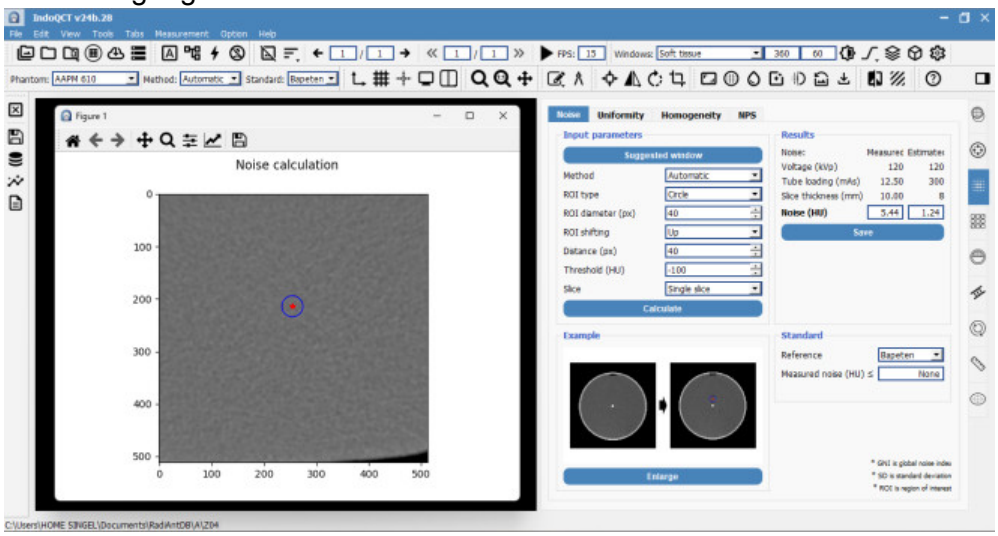
- Tegangan 80 kV



- Tegangan 100 kV

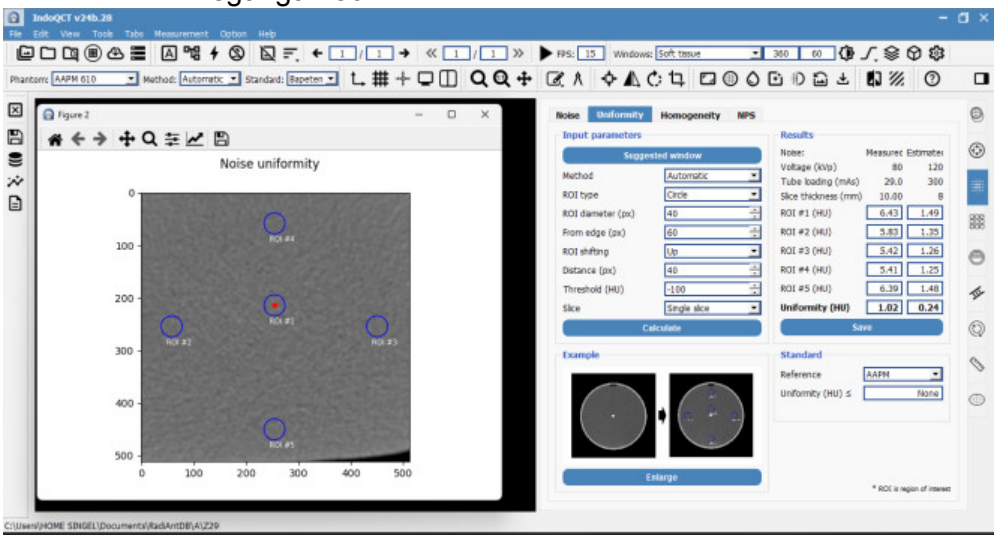


- Tegangan 120 kV

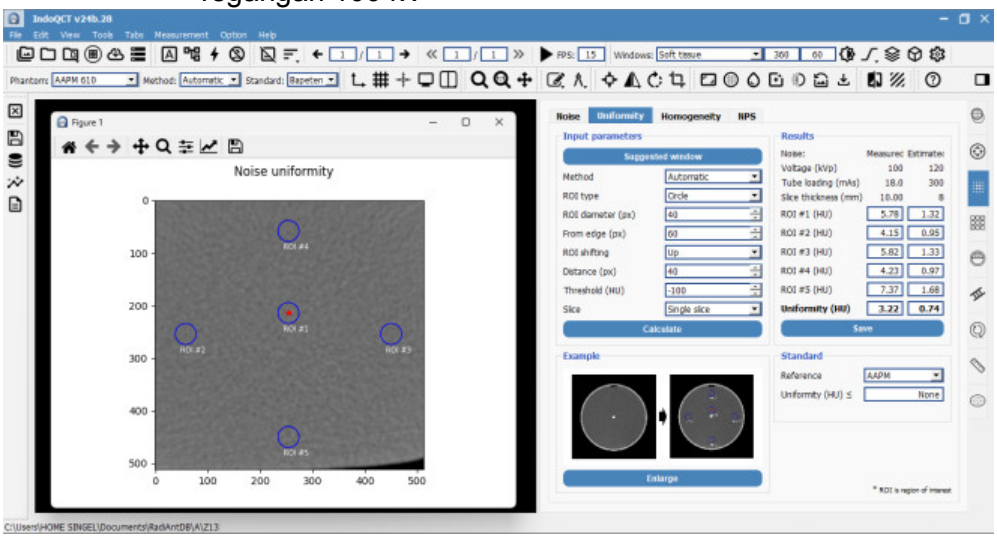


Lampiran 5. Hasil Analisis nilai Uniformity

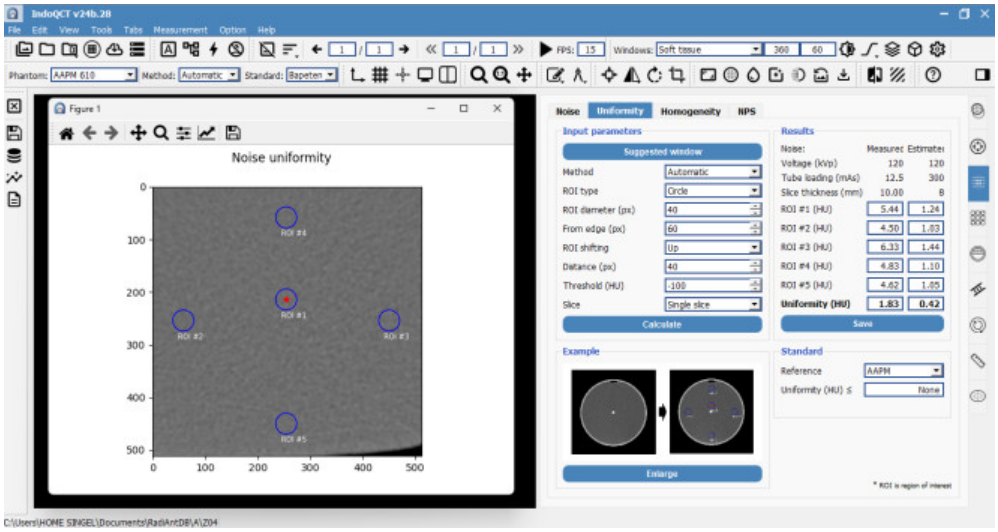
- *Uniformity* pada area *background*
  - Tegangan 80 kV



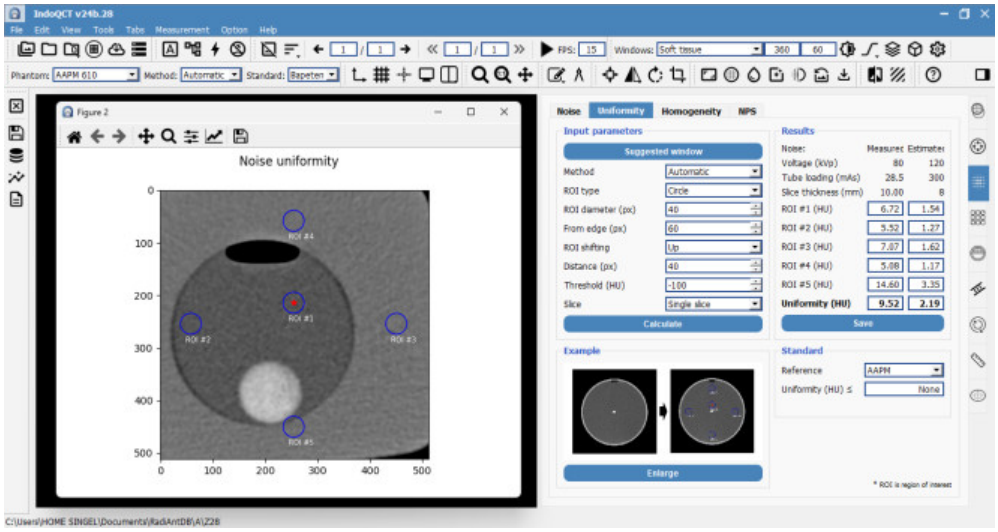
  - Tegangan 100 kV



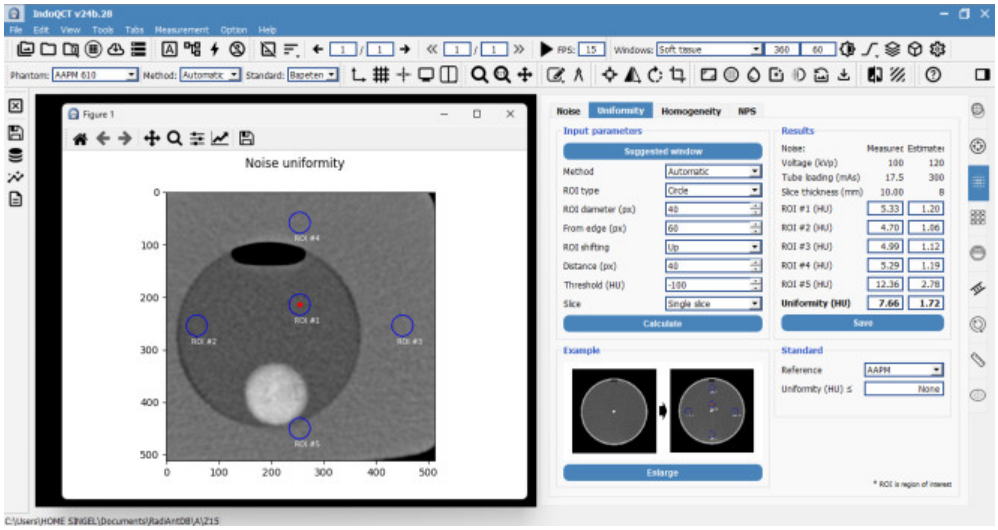
- Tegangan 120 kV



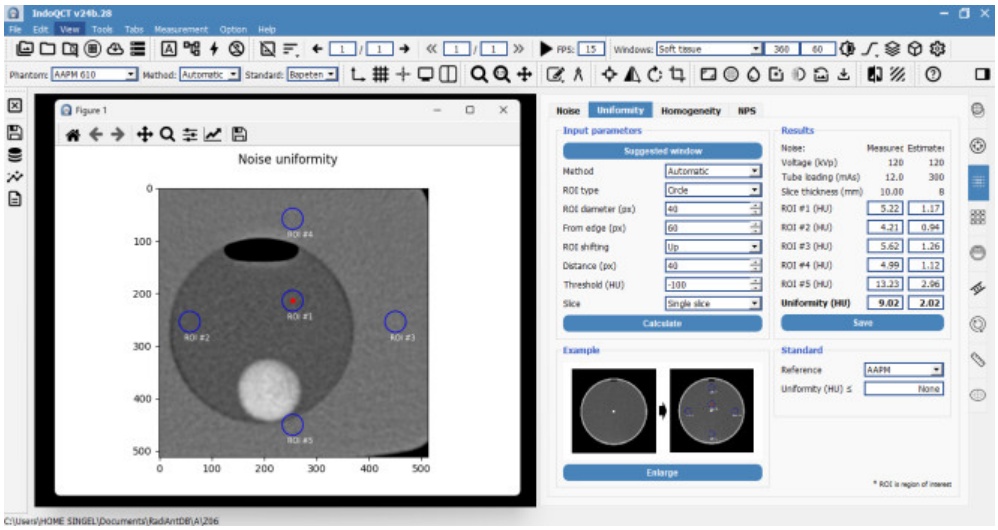
- *Uniformity* pada area yang memiliki Objek
  - Tegangan 80 kV



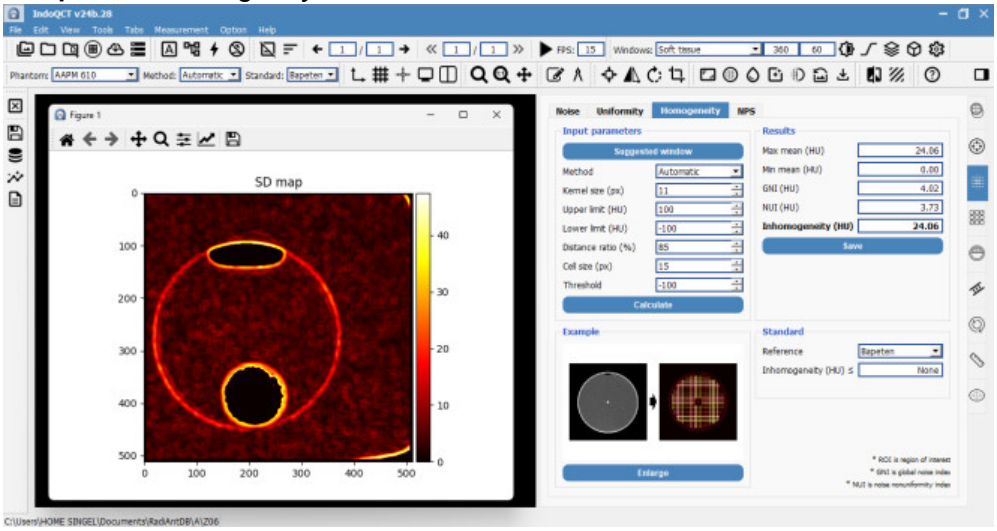
- Tegangan 100 kV



- Tegangan 120 kV

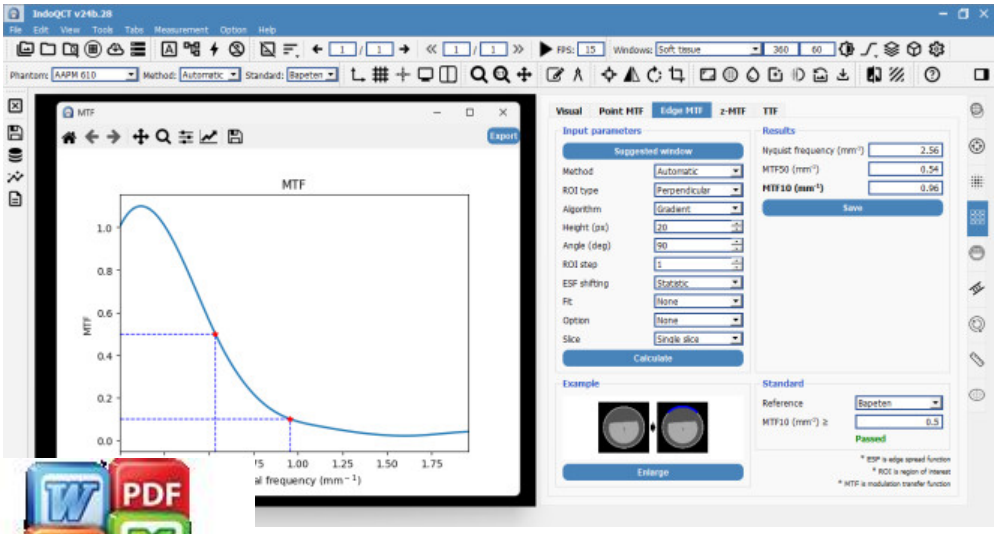


Lampiran 6. *Homogenity Noise*

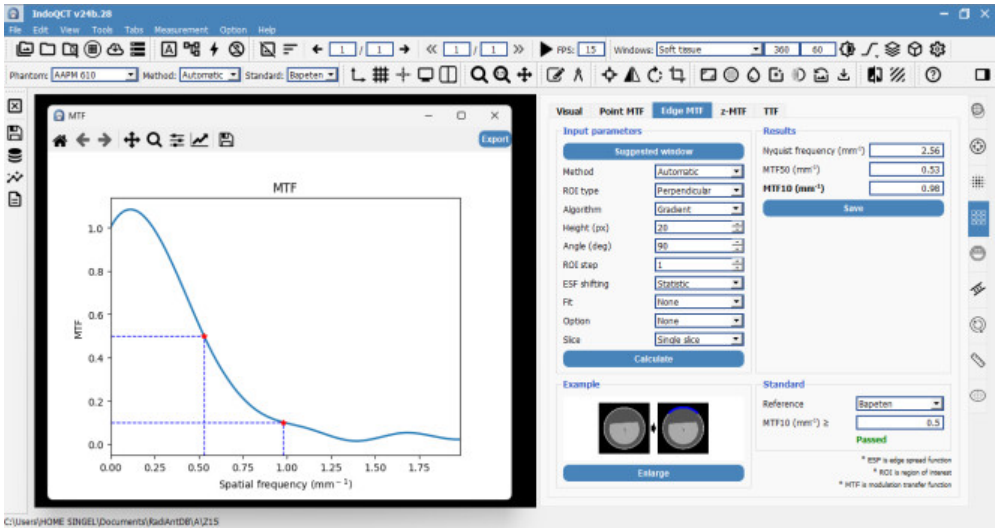


Lampiran 7. Grafik MTF

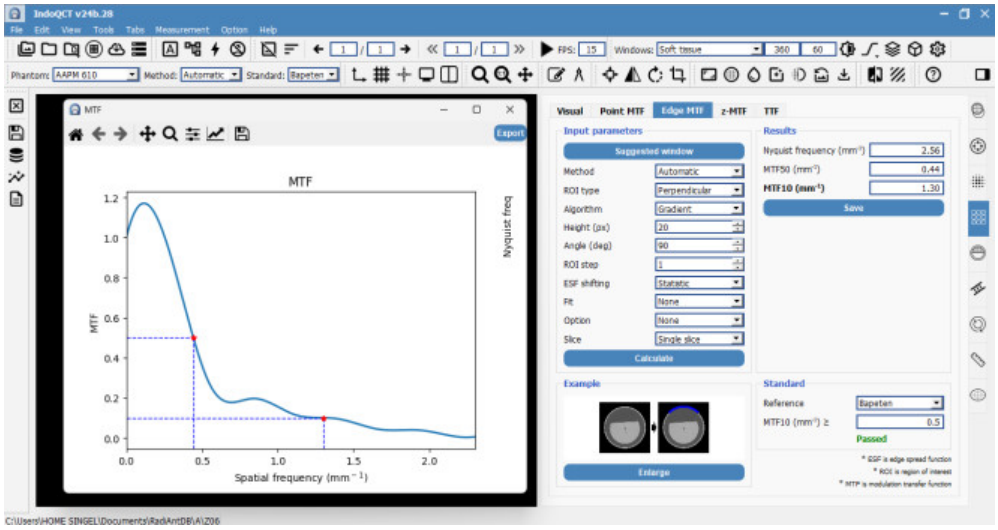
- Tegangan 80 kV



- Tegangan 100 kV



- Tegangan 120 kV



Hasil Pengolahan Data

1. Nilai CNR

$$CNR = \left|\frac{(Mean\ ROI_1)-(Mean\ ROI_2)}{SD}\right|$$

a. Tegangan 80 kV

- Objek 1

$$CNR = \left|\frac{0,65-38,20}{5,59}\right|$$

$$= 6,71$$

- Objek 2

$$CNR = \left|\frac{139,14-38,20}{5,59}\right|$$

$$= 18,05$$

- Objek 3

$$CNR = \left|\frac{-1029,76-38,20}{5,59}\right|$$

$$= 191,04$$

b. Tegangan 100 kV

- Objek 1

$$CNR = \left|\frac{0,84-40,32}{5,52}\right|$$

$$= 7,15$$

- Objek 2

$$CNR = \left|\frac{149,29-40,32}{5,52}\right|$$

$$= 19,19$$

- Objek 3

$$CNR = \left|\frac{-1023,34-40,32}{5,52}\right|$$

$$= 192,69$$

c. Tegangan 120 kV

- Objek 1

$$CNR = \left|\frac{1,94-37,48}{5,51}\right|$$

$$= 6,45$$

- Objek 2

$$CNR = \left|\frac{155,62-37,48}{5,51}\right|$$

$$= 21,44$$

- Objek 3

$$CNR = \left|\frac{-1024,44-37,48}{5,51}\right|$$

$$= 192,72$$

2. Nilai SNR

$$SNR = \frac{(mean\ ROI_1 - mean\ ROI_2)}{\sqrt{\frac{(SD\ ROI_1)^2 + (SD\ ROI_2)^2}{2}}}$$

a. Tegangan 80 kV

- Objek 1

$$SNR = \frac{(0,65-38,20)}{\sqrt{\frac{(6,72)^2 + (5,59)^2}{2}}}$$

$$= -6,07$$

- Objek 2

$$SNR = \frac{(139,14-38,20)}{\sqrt{\frac{(8,66)^2 + (5,59)^2}{2}}}$$

$$= 13,84$$

- Objek 3

$$SNR = \frac{(-1029,76-38,20)}{\sqrt{\frac{(8,11)^2 + (5,59)^2}{2}}}$$

$$= -153,33$$

b. Tegangan 100 kV

- Objek 1

$$SNR = \frac{(0,84-40,32)}{\sqrt{\frac{(6,41)^2 + (5,52)^2}{2}}}$$

$$= -6,60$$

- 2

$$SNR \frac{(146,29-40,32)}{\sqrt{\frac{(7,64)^2 + (5,52)^2}{2}}}$$

= 15,89

- Objek 3

$$SNR = \frac{(-1023,34-40,32)}{\sqrt{\frac{(5,39)^2+(5,52)^2}{2}}}$$

= -194,97

c. Tegangan 120 kV

- Objek 1

$$SNR = \frac{(1,94-37,48)}{\sqrt{\frac{(6,84)^2+(5,51)^2}{2}}}$$

= -5,72

- Objek 2

$$SNR = \frac{(155,62-37,48)}{\sqrt{\frac{(8,23)^2+(5,51)^2}{2}}}$$

= 16,86

- Objek 3

$$SNR = \frac{(-1024,44-37,48)}{\sqrt{\frac{(3,38)^2+(5,51)^2}{2}}}$$

= -223,80

3. Uniformity Noise

Uniformity Image Noise = σ_s maks - σ_s min

- **Uniformity pada area Objek**
  - Pada tegangan 80 kV

    Uniformity Image Noise = 14,60 – 5,08
    = 9,52
  - Pada tegangan 100 kV

    Uniformity Image Noise = 12,36 – 4,70
    = 7,66

tegangan 120 kV

Uniformity Image Noise = 13,23 – 4,21
= 9,02

pada area *Background*

tegangan 80 kV

Uniformity Image Noise = 6,43 – 5,41
= 1,02

- Pada tegangan 100 kV

Uniformity Image Noise = 7,37 – 4,15
= 3,22

- Pada tegangan 120 kV

Uniformity Image Noise = 6,33 – 4,50
= 1,83