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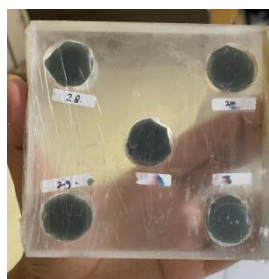
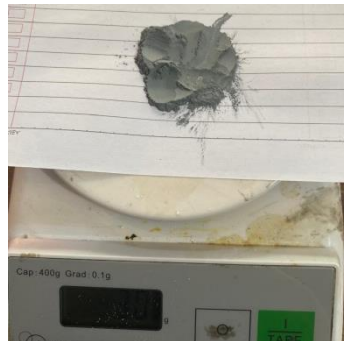
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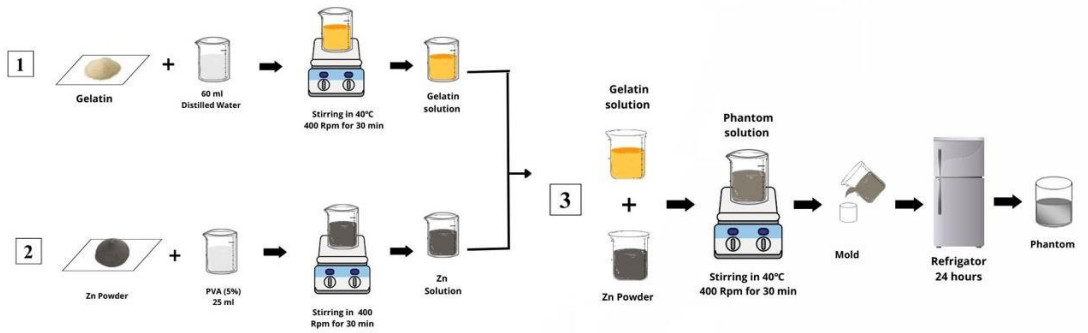
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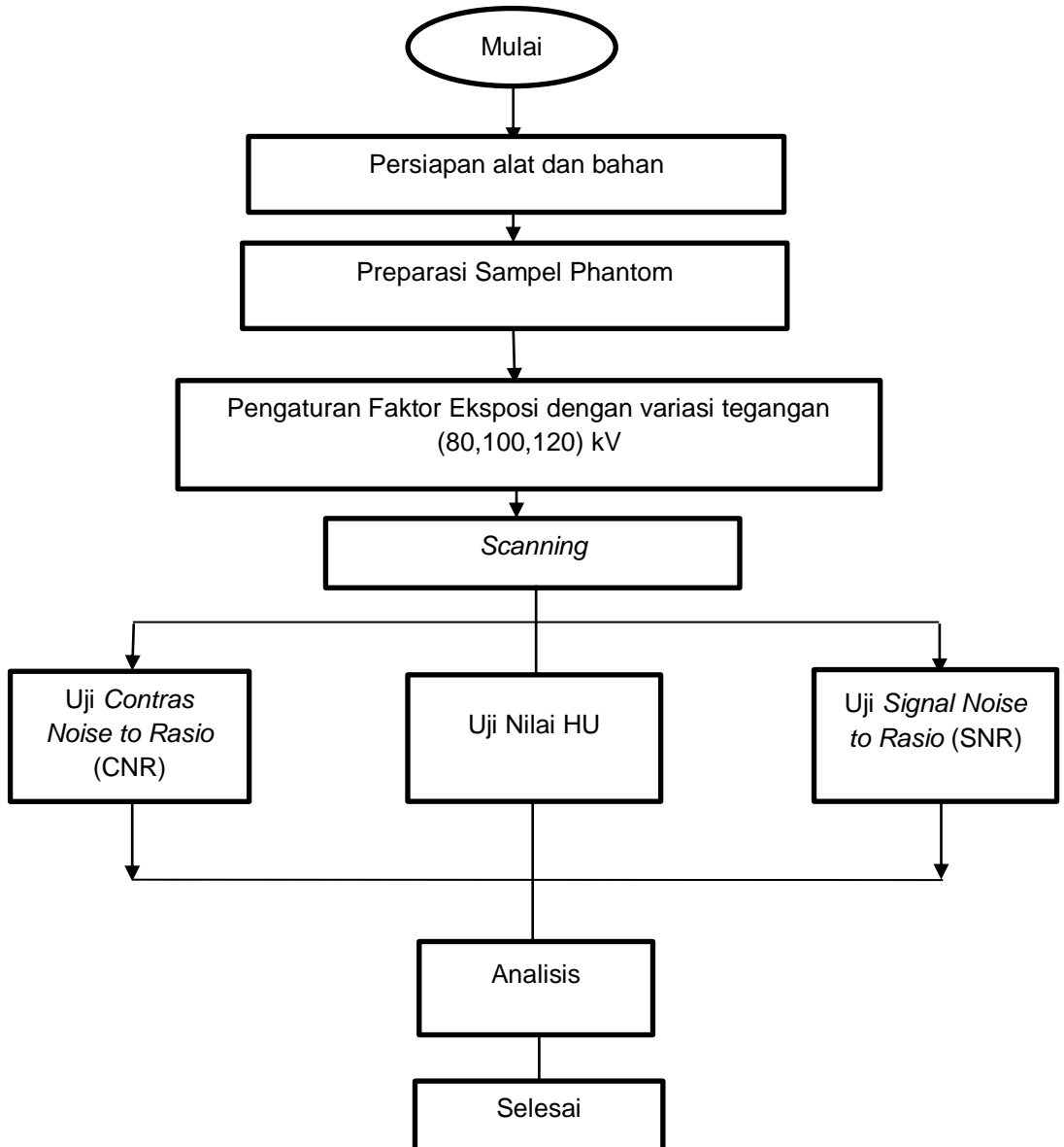
LAMPIRAN

Lampiran 1 Alat dan Bahan yang digunakan dalam penelitian.

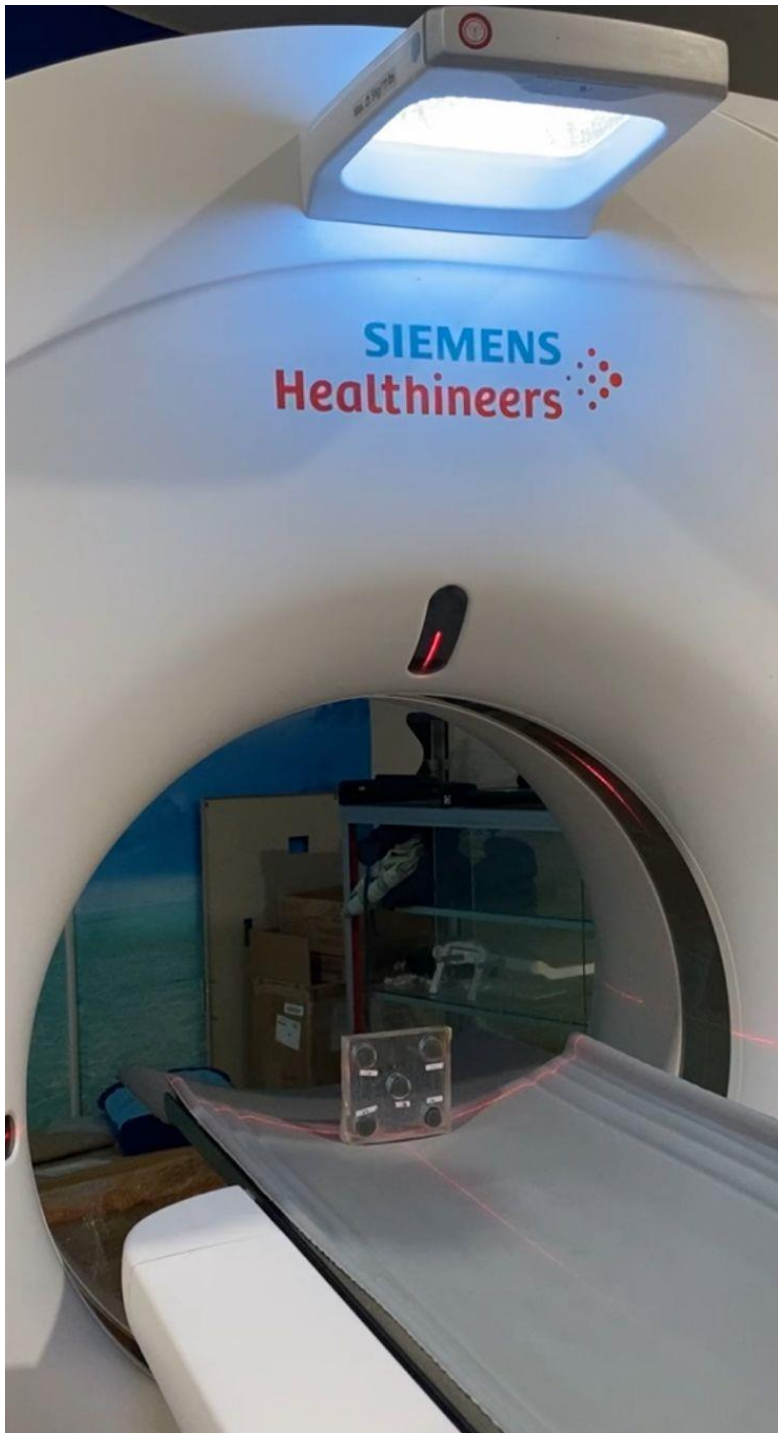


Lampiran 2 Prosedur Penelitian.

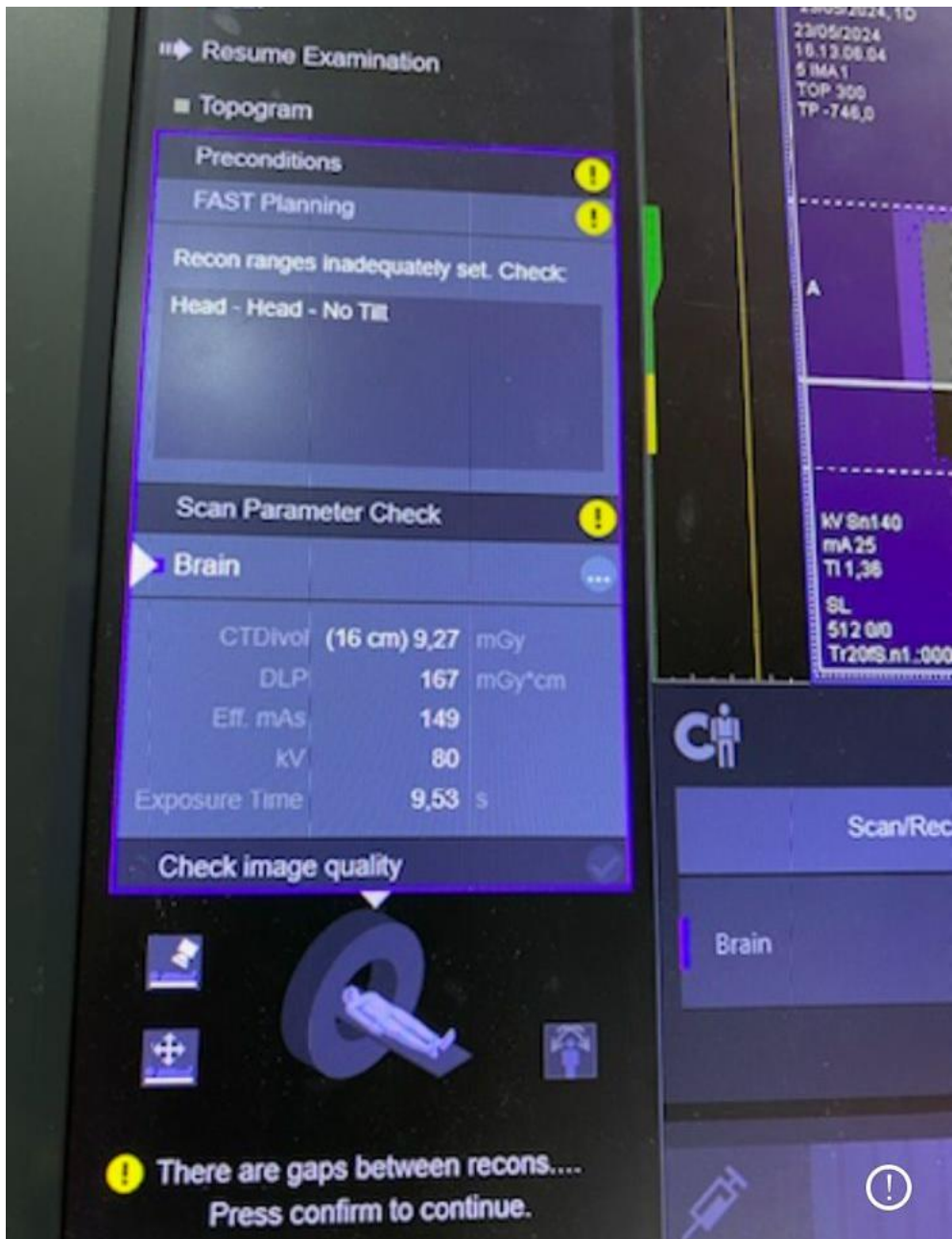
Lampiran 3 Bagan Alir Penelitian



Lampiran 4 Peletakan phantom di stand meja



Lampiran 5 Pengaturan variasi tegangan



Lampiran 6 Hasil pengukuran Radiant DICOM.



Lampiran 7 Analisis Data.

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

$$CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$$

Dimana:

ROI₁: ROI objek

ROI₂: ROI background

- a. Perhitungan nilai SNR dan CNR pada variasi gelatin 25 Gr dengan tegangan 80 kV

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

$$SNR = \frac{(262,52) - (-992,25)}{\sqrt{\frac{(194,91)^2 + (22,75)^2}{2}}}$$

$$SNR = \frac{(1.254,77)}{\sqrt{\frac{(37.989,90) + (517,56)}{2}}}$$

$$SNR = \frac{(1.254,77)}{\sqrt{19.253,73}}$$

$$SNR = 9,04$$

- $$CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$$

$$CNR = \frac{(262,52) - (-992,25)}{22,75}$$

$$CNR = 55,15$$

- b. Perhitungan nilai SNR dan CNR pada variasi gelatin 25 Gr dengan tegangan 100 kV

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

$$SNR = \frac{(276,2) - (-995,61)}{\sqrt{\frac{(40,27)^2 + (21,21)^2}{2}}}$$

$$SNR = \frac{1.271,81}{\sqrt{\frac{(1.621,67) + (449,86)}{2}}}$$

$$SNR = \frac{(1.271,81)}{\sqrt{1.035,76}}$$

$$SNR = 29,60$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(276,2) - (-995,61)}{21,21}$$

$$CNR = 59,96$$

c. Perhitungan nilai SNR dan CNR pada variasi gelatin 25 Gr dengan tegangan 120 kV

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

$$SNR = \frac{(278,96) - (-997,31)}{\sqrt{\frac{(13,14)^2 + (16,58)^2}{2}}}$$

$$SNR = \frac{1.276,26}{\sqrt{\frac{(172,65) + (274,89)}{2}}}$$

$$SNR = \frac{(1.276,26)}{\sqrt{223,77}}$$

$$SNR = 85,36$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(278,96) - (-997,31)}{16,58}$$

$$CNR = 76,98$$

d. Perhitungan nilai SNR dan CNR pada variasi gelatin 26 Gr dengan tegangan 80 kV

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

$$SNR = \frac{(174,76) - (-992,25)}{\sqrt{\frac{(93,05)^2 + (22,75)^2}{2}}}$$

$$SNR = \frac{(1.166,74)}{\sqrt{\frac{(8.658,30) + (517,56)}{2}}}$$

$$SNR = \frac{(1.166,74)}{\sqrt{4.587,93}}$$

$$SNR = 12,36$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(174,49) - (-992,25)}{22,75}$$

$$CNR = 51,29$$

e. Perhitungan nilai SNR dan CNR pada variasi gelatin 26 Gr dengan tegangan 100 kV

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

$$SNR = \frac{(175,28) - (-995,61)}{\sqrt{\frac{(49,06)^2 + (21,21)^2}{2}}}$$

$$SNR = \frac{1.170,89}{\sqrt{\frac{(2.406,88) + (449,86)}{2}}}$$

$$SNR = \frac{(1.170,89)}{\sqrt{1.428,37}}$$

$$SNR = 22,82$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(175,28) - (-995,61)}{21,21}$$

$$CNR = 55,20$$

f. Perhitungan nilai SNR dan CNR pada variasi gelatin 26 Gr dengan tegangan 120 kV

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

$$SNR = \frac{(176,92) - (-997,31)}{\sqrt{\frac{(19,12)^2 + (16,58)^2}{2}}}$$

$$SNR = \frac{1.174,23}{\sqrt{\frac{(365,67) + (274,89)}{2}}}$$

$$SNR = \frac{(1.174,23)}{\sqrt{320,23}}$$

$$SNR = 52,36$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(176,92) - (-997,31)}{16,58}$$

$$CNR = 70,82$$

g. Perhitungan nilai SNR dan CNR pada variasi gelatin 27 Gr dengan tegangan 80 kV

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

$$SNR = \frac{(156,2) - (-992,25)}{\sqrt{\frac{(66,78)^2 + (22,75)^2}{2}}}$$

$$SNR = \frac{(1.448,45)}{\sqrt{\frac{(4.459,56) + (517,56)}{2}}}$$

$$SNR = \frac{(1.448,45)}{\sqrt{2.488,56}}$$

$$SNR = 16,72$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(156,62) - (-992,25)}{22,75}$$

$$CNR = 50,48$$

h. Perhitungan nilai SNR dan CNR pada variasi gelatin 27 Gr dengan tegangan 100 kV

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

$$SNR = \frac{(169,21) - (-995,61)}{\sqrt{\frac{(66,84)^2 + (21,21)^2}{2}}}$$

$$SNR = \frac{1.164,82}{\sqrt{\frac{(4.467,58) + (449,86)}{2}}}$$

$$SNR = \frac{(1.164,82)}{\sqrt{49,58}}$$

$$SNR = 17,00$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(169,21) - (-995,61)}{21,21}$$

$$CNR = 54,92$$

i. Perhitungan nilai SNR dan CNR pada variasi gelatin 27 Gr dengan tegangan 120 kV

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

$$SNR = \frac{(167,73) - (-997,31)}{\sqrt{\frac{(3,22)^2 + (16,58)^2}{2}}}$$

$$SNR = \frac{1.165,04}{\sqrt{\frac{(10,36) + (274,89)}{2}}}$$

$$SNR = \frac{(1.165,04)}{\sqrt{142,62}}$$

$$SNR = 95,83$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(167,73) - (-997,31)}{16,58}$$

$$CNR = 70,82$$

j. Perhitungan nilai SNR dan CNR pada variasi gelatin 28 Gr dengan tegangan 80 kV

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

$$SNR = \frac{(185,47) - (-992,25)}{\sqrt{\frac{(158,10)^2 + (22,75)^2}{2}}}$$

$$SNR = \frac{(1.177,72)}{\sqrt{\frac{(228,01) + (517,56)}{2}}}$$

$$SNR = \frac{(1.177,72)}{\sqrt{372,78}}$$

$$SNR = 53,38$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(185,47) - (-992,25)}{22,75}$$

$$CNR = 51,38$$

k. Perhitungan nilai SNR dan CNR pada variasi gelatin 28 Gr dengan tegangan 100 kV

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

$$SNR = \frac{(189,56) - (-995,61)}{\sqrt{\frac{(9,02)^2 + (21,21)^2}{2}}}$$

$$SNR = \frac{1.185,17}{\sqrt{\frac{(81,36) + (449,86)}{2}}}$$

$$SNR = \frac{(1.185,17)}{\sqrt{265,61}}$$

$$SNR = 67,72$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(189,56) - (-995,61)}{21,21}$$

$$CNR = 55,88$$

l. Perhitungan nilai SNR dan CNR pada variasi gelatin 28 Gr dengan tegangan 120 kV

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

$$SNR = \frac{(169,87) - (-997,31)}{\sqrt{\frac{(8,9)^2 + (16,58)^2}{2}}}$$

$$SNR = \frac{1.167,18}{\sqrt{\frac{(79,21) + (274,89)}{2}}}$$

$$SNR = \frac{(1.167,18)}{\sqrt{177,05}}$$

$$SNR = 79,30$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(169,87) - (-997,31)}{16,58}$$

$$CNR = 70,40$$

m. Perhitungan nilai SNR dan CNR pada variasi gelatin 29 Gr dengan tegangan 80 kV

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

$$SNR = \frac{(195,71) - (-992,25)}{\sqrt{\frac{(71,86)^2 + (22,75)^2}{2}}}$$

$$SNR = \frac{(1.187,96)}{\sqrt{\frac{(5.163,85) + (517,56)}{2}}}$$

$$SNR = \frac{(1.187,96)}{\sqrt{2.840,70}}$$

$$SNR = 16,13$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(195,71) - (-992,25)}{22,75}$$

$$CNR = 52,22$$

n. Perhitungan nilai SNR dan CNR pada variasi gelatin 29 Gr dengan tegangan 100 kV

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

$$SNR = \frac{(198,73) - (-995,61)}{\sqrt{\frac{(6,09)^2 + (21,21)^2}{2}}}$$

$$SNR = \frac{1.194,34}{\sqrt{\frac{(37,08) + (449,86)}{2}}}$$

$$SNR = \frac{(1.194,34)}{\sqrt{486,94}}$$

$$SNR = 73,78$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(198,73) - (-995,61)}{21,21}$$

$$CNR = 56,31$$

o. Perhitungan nilai SNR dan CNR pada variasi gelatin 29 Gr dengan tegangan 120 kV

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

$$SNR = \frac{(171,5) - (-997,31)}{\sqrt{\frac{(4,01)^2 + (16,58)^2}{2}}}$$

$$SNR = \frac{1.168,81}{\sqrt{\frac{(16,08) + (274,89)}{2}}}$$

$$SNR = \frac{(1.168,81)}{\sqrt{145,48}}$$

$$SNR = 94,33$$

- $CNR = \frac{Mean ROI_1 - Mean ROI_2}{SD ROI_2}$

$$CNR = \frac{(171,5) - (-997,31)}{16,58}$$

$$CNR = 70,50$$