

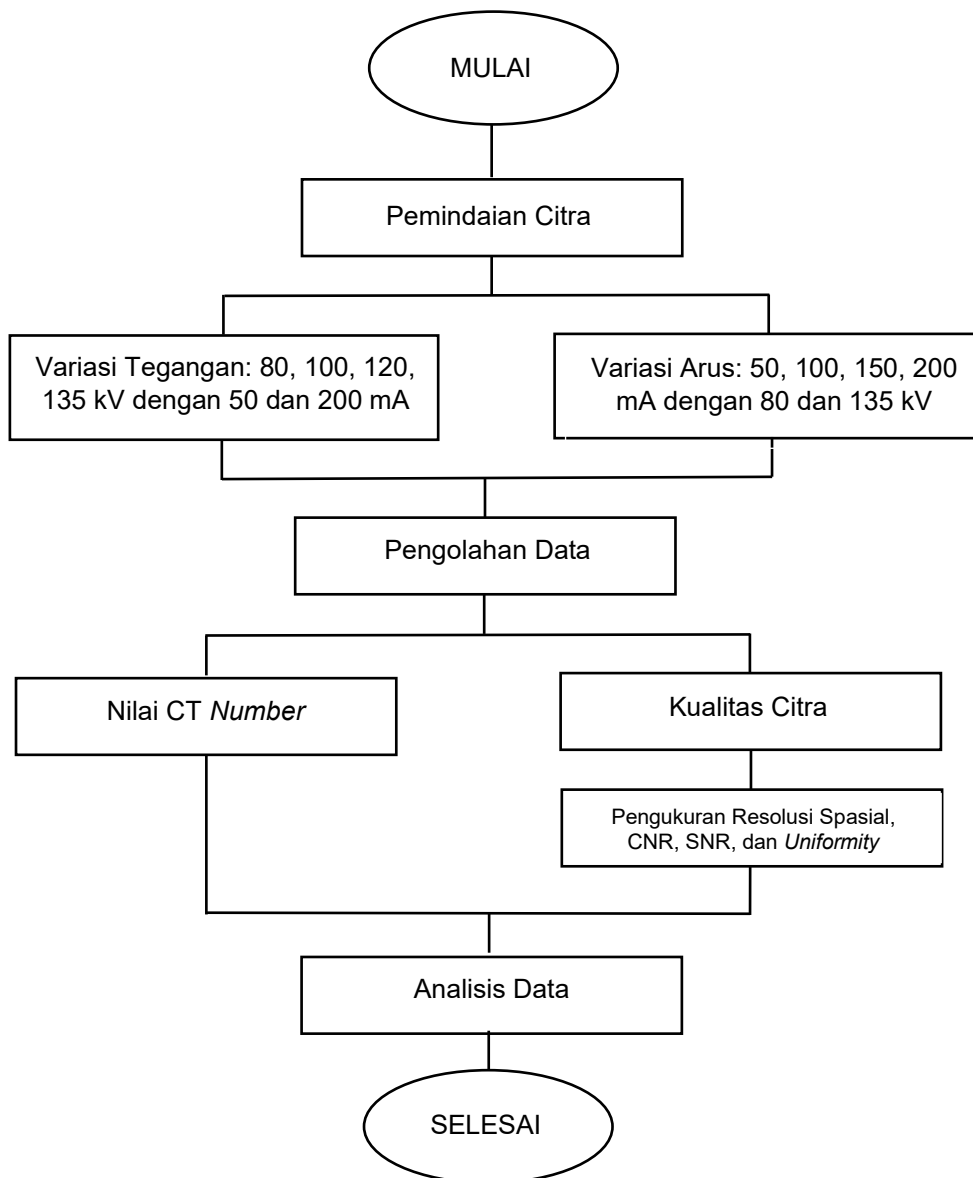
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## LAMPIRAN

Lampiran 1. Bagan Alir Penelitian



**Lampiran 2.** Hasil Data CTN Pada Setiap Material

Arus Tabung (mA)	Tegangan Tabung (kV)	Material	Irisan 1		Irisan 2		Irisan 3		Rerata
			L: -69,9 cm	SD	L: 69,6 cm	SD	L: 69,3 cm	SD	
50	80	PMP	-205,08	23,03	-201,92	24,48	-197,13	27,06	-201,38
		Air	-993,46	63,34	-994,45	58,64	-998,28	55,54	-995,4
		Teflon®	1101,47	78,63	1101,82	74,48	1099,77	77,05	1101,02
		Delrin®	370,3	34,39	371,66	35,72	372,06	38,84	371,34
		Bone 20%	291,05	29,57	288,3	30,26	282,45	33,02	287,267
		Acrylic	114,71	16,43	114,13	19,38	113,04	17,06	113,96
		Air	-988,38	83,59	-991,26	83,82	-995,23	67,78	-991,62
		Polystyrene	-61,34	16,55	-61,86	16,85	-61,9	17,29	-61,7
		LDPE	-115,89	16,52	-115,43	17,28	-113,19	17,97	-114,84
	Bone 50%	992,78	75,03	992,82	72,9	994,78	58,87	993,46	
	PMP	-182,59	31,03	-181,62	29,7	-178,69	31,18	-180,97	
	Air	-991,65	64,28	-990,07	67,63	-989,42	73,21	-990,38	
	Teflon®	1004,33	64,21	1003,85	66,08	999,51	67,57	1002,56	
	Delrin®	357,61	33,15	356,71	31,01	351,96	33,11	355,427	
	Bone 20%	233,29	22,53	230,05	18,06	224,42	17,19	229,253	
	Acrylic	124,37	11,99	121,99	13,47	119,56	11,77	121,973	
	Air	-995,74	57,79	-994,26	58,87	-989,29	58,42	-993,1	
	Polystyrene	-42,5	15,85	-42,96	18,13	-41,94	16,05	-42,467	
LDPE	-96,35	16,47	-98	16,41	-95,68	17,46	-96,677		
Bone 50%	776,03	58,64	772,43	59,25	770,94	61,72	773,133		
	100								

Arus Tabung (mA)	Tegangan Tabung (kV)	Material	Irisan 1		Irisan 2		Irisan 3		Rerata
			L: -69,9 cm	SD	L: 69,6 cm	SD	L: 69,3 cm	SD	
120		PMP	-172,76	14,59	-175,98	14,95	-174,18	14,49	-174,31
		Air	-989,13	51,7	-990,17	50,71	-990	52,73	-989,77
		Teflon®	931,36	49,3	929,94	52,91	926,67	55,86	929,323
		Delrin®	346,05	22,44	345,6	22,11	341,84	24,21	344,497
		Bone 20%	198,5	26,09	194,61	26,67	195,2	23,34	196,103
		Acrylic	130,83	8,381	129,65	9,678	127,59	9,099	129,357
		Air	-986,38	60,77	-986,15	61,21	-982,67	63,34	-985,07
		Polystyrene	-31,08	11,4	-31,15	11,4	-30,44	11,16	-30,89
		LDPE	-87,94	13,99	-87,29	13	-87,27	12,17	-87,5
		Bone 50%	653,52	38,26	654,41	38,1	651,71	36,25	653,213
		PMP	-168,31	14,87	-166,73	15,89	-168,45	14,49	-167,83
		Air	-989,13	50,26	-988,43	48,5	-987,06	50,34	-988,21
		Teflon®	873,55	52,58	873,47	56,57	870,73	59,94	872,583
		Delrin®	328,37	17,81	329,1	18,26	327,64	18,84	328,37
		Bone 20%	190,78	10,99	188,59	11,77	185,03	11,05	188,133
		Acrylic	132,6	9,697	132,02	9,852	128,58	9,509	131,067
		Air	-986,5	54,77	-986,79	50,26	-987,42	49,08	-986,9
		Polystyrene	-26,22	11,3	-26,23	11,63	-26,46	10,26	-26,303
LDPE	-82,23	13,32	-82,55	12,92	-83,44	12,93	-82,74		
Bone 50%	583,86	24,39	586,49	23,63	585,74	24,33	585,363		
100	80	PMP	-201,19	19,23	-201,08	19,16	-200,71	17,76	-200,99

Arus Tabung (mA)	Tegangan Tabung (kV)	Material	Irisan 1		Irisan 2		Irisan 3		Rerata
			L: -69,9 cm	SD	L: 69,6 cm	SD	L: 69,3 cm	SD	
135		Air	-1001,55	44,61	-1003,01	45,45	-1001,45	45,4	-1002
		Teflon®	1087,36	115,45	1087,56	122,84	1083,19	132,63	1086,04
		Delrin®	375,97	28,09	377,79	26,49	374,37	24,52	376,043
		Bone 20%	290,92	24,37	287,09	21,35	284,88	21,79	287,63
		Acrylic	111,23	11,95	111,6	13,87	109,74	14,34	110,857
		Air	-993,1	77,21	-992,97	72,52	-994,13	68,75	-993,4
		Polystyrene	-60,16	19,29	-58,64	21,46	-57,4	21,12	-58,733
		LDPE	-113,9	13,56	-114,6	16,85	-116,91	14,67	-115,14
		Bone 50%	991,99	74,46	993,69	82,22	988,72	84,86	991,467
		PMP	-168,55	14,8	-168,4	14,73	-169,38	14,37	-168,78
		Air	-987,17	52,68	-985,83	52,39	-986,69	56,44	-986,56
		Teflon®	875,99	41,84	875,09	43,3	872,39	45,96	874,49
		Delrin®	329,15	17,13	329,34	17,13	327,78	17,81	328,757
		Bone 20%	191,15	11,05	188,34	9,817	186,24	9,262	188,577
		Acrylic	131,78	7,39	131,69	7,532	132,03	6,648	131,833
		Air	-987,53	50,56	-987,02	49,51	-987,57	47,54	-987,37
		Polystyrene	-26,26	8,684	-26,06	8,523	-26,34	7,442	-26,22
		LDPE	-82,02	10,57	-80,91	11,78	-83,24	10,92	-82,057
		Bone 50%	583,83	26,1	585,93	26,83	584,69	29,17	584,817
		100	80	PMP	-199,42	27,22	-198,85	26,83	-198,76
Air	-997,96			56,26	-996,6	57,96	-995,24	59,31	-996,6

Arus Tabung (mA)	Tegangan Tabung (kV)	Material	Irisan 1		Irisan 2		Irisan 3		Rerata
			L: -69,9 cm	SD	L: 69,6 cm	SD	L: 69,3 cm	SD	
200	80	Teflon®	1098,74	72,91	1098,25	72,65	1097,38	72,79	1098,12
		Delrin®	372,33	39	370,42	37,84	369,68	38,29	370,81
		Bone 20%	292,67	26,3	284,52	25,24	283,38	24,16	286,857
		Acrylic	109,28	13,82	110,8	16,92	109,8	16,12	109,96
		Air	-993,42	67,01	-989,79	68,04	-987,02	73,89	-990,08
		Polystyrene	-61,88	13,69	-61,8	13,51	-62,49	15,76	-62,057
		LDPE	-114,69	13,79	-113,14	14,71	-115,49	15,17	-114,44
		Bone 50%	993,63	60,32	992,71	63,22	989,2	64,26	991,847
		PMP	-168,76	14,08	-169,11	13,42	-169,33	14,78	-169,07
		Air	-984,65	58,39	-983,71	63,41	-981,73	68,21	-983,36
		Teflon®	876,63	37,96	876,76	39,38	874,65	41,75	876,013
		Delrin®	329,61	12,98	330,24	13,56	328,04	12,79	329,297
		Bone 20%	191,28	7,499	187,69	9,297	186,77	9,431	188,58
		Acrylic	131,93	6,449	132,12	7,377	130,73	7,208	131,593
		Air	-988,12	47,52	-988,16	48,21	-987,88	49,68	-988,05
		Polystyrene	-24,35	9,49	-24,32	9,948	-25,02	9,583	-24,563
		LDPE	-82,26	13,13	-81,87	10,81	-83,17	11,08	-82,433
		Bone 50%	584,22	23,61	585,6	25,79	584,42	29,38	584,747
		PMP	-200,7	18,73	-200,48	20,71	-202,38	19,88	-201,19
		Air	-997,95	50,97	-997,07	54	-995,4	57,31	-996,81
Teflon®	1093,76	80,01	1093,46	86,73	1092,41	92,05	1093,21		

Arus Tabung (mA)	Tegangan Tabung (kV)	Material	Irisan 1		Irisan 2		Irisan 3		Rerata	
			L: -69,9 cm	SD	L: 69,6 cm	SD	L: 69,3 cm	SD		
100		Delrin®	374,05	24,59	377,97	22,53	376,08	11,61	376,033	
		Bone 20%	290,35	30,82	285,45	28,86	280,47	25,54	285,423	
		Acrylic	109,9	12,27	111,12	9,39	110,43	10,2	110,483	
		Air	-999,13	47,19	-998,13	46,62	-997,53	46,53	-998,26	
		Polystyrene	-58,27	15,85	-59,34	15,41	-59,63	15,52	-59,08	
		LDPE	-117,12	10,21	-117,62	11,72	-117,32	9,004	-117,35	
		Bone 50%	976,29	103,08	977,09	109,02	973,22	113,8	975,533	
		PMP	-184,58	19,63	-184,65	18,52	-184,44	17,62	-184,56	
		Air	-990,32	57,26	-989,11	59,78	-985,41	63,67	-988,28	
		Teflon®	994,67	73,1	995,38	70,66	990,52	66,44	993,523	
	120		Delrin®	357,99	20,32	356,89	20,69	338,95	20	351,277
			Bone 20%	229,67	16,11	229,71	14,53	215,33	14,54	224,903
			Acrylic	121,75	7,37	121,82	7,168	112,28	8,098	118,617
			Air	-992,43	46,47	-992,49	46,69	-965,26	48,16	-983,39
			Polystyrene	-44,08	7,97	-45,2	7,742	-43,17	8,944	-44,15
			LDPE	-99,68	7,65	-99,71	7,949	-98,48	8,093	-99,29
			Bone 50%	776,45	36,7	775,82	35,94	771,49	37,12	774,587
			PMP	-176,56	12,38	-176,1	11,89	-177,22	11,88	-176,63
			Air	-991,27	53,89	-991,11	51,82	-991,17	52,76	-991,18
			Teflon®	928,76	40,38	927,39	39,98	927,56	41,28	927,903
Delrin®	342,39	16,69	341,67	16,35	340,94	17,52	341,667			

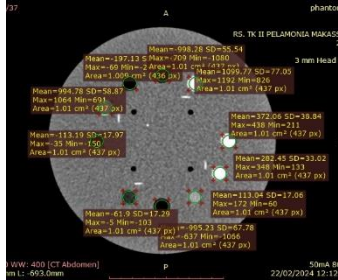


Arus Tabung (mA)	Tegangan Tabung (kV)	Material	Irisan 1		Irisan 2		Irisan 3		Rerata
			L: -69,9 cm	SD	L: 69,6 cm	SD	L: 69,3 cm	SD	
135		Bone 20%	205,13	8,588	202,56	10,07	200,65	10,6	202,78
		Acrylic	128,45	6,562	127,66	5,953	128,14	6,329	128,083
		Air	-991,23	51,93	-991,34	49,55	-991,56	48,05	-991,38
		Polystyrene	-30,75	10,23	-31,36	9,637	-31,97	9,981	-31,36
		LDPE	-88,51	14,98	-87,34	15,83	-87,57	15,97	-87,807
		Bone 50%	649,48	34,35	650,4	38,4	650,85	44,13	650,243
		PMP	-168,79	14,17	-168,68	13,5	-168,26	12,99	-168,58
		Air	-980,85	61,67	-979,47	66,83	-978,34	71,15	-979,55
		Teflon®	871,97	43,93	871,43	43,14	871,05	42,1	871,483
		Delrin®	327,46	17,17	328,05	16,64	326,04	17,39	327,183
		Bone 20%	187,87	15,27	185,4	14,16	184,68	13,11	185,983
		Acrylic	130,96	6,893	132,27	6,961	130,63	6,567	131,287
		Air	-984,91	48,71	-984,18	48,75	-984,08	50	-984,39
		Polystyrene	-25,35	8,104	-24,76	8,384	-25,83	8,104	-25,313
		LDPE	-83,56	10,26	-82,7	11,78	-82,77	11,67	-83,01
		Bone 50%	582,46	15,49	583,64	27,28	583,45	27,93	583,183

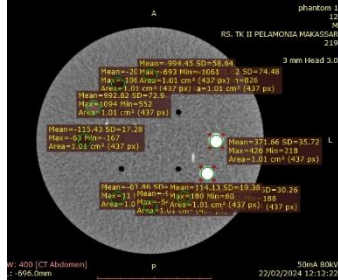
### Lampiran 3. Penempatan ROI Pada Setiap Citra untuk Hasil CTN Pada Setiap Material

1) 80 kV dan 50 mA

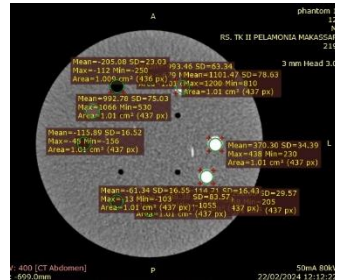
Irisan 1



Irisan 2

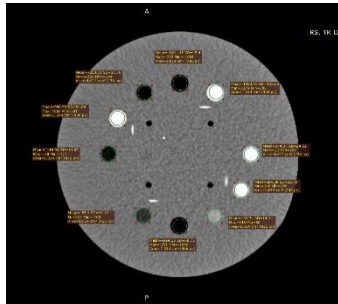


Irisan 3

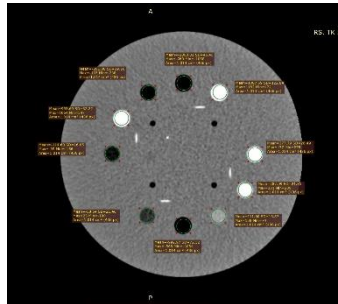


2) 80 kV dan 100 mA

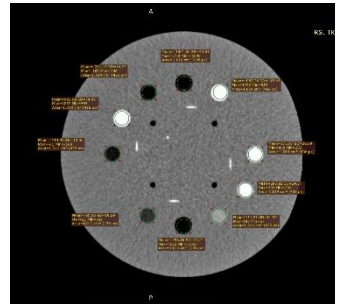
Irisan 1



Irisan 2

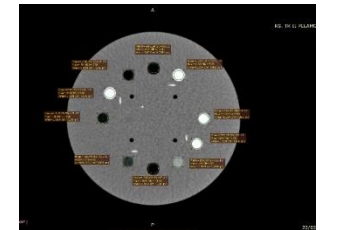


Irisan 3

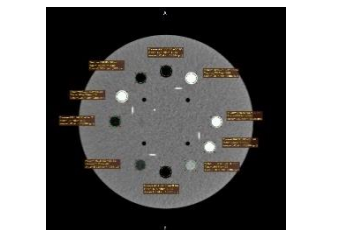


3) 80 kV dan 150 mA

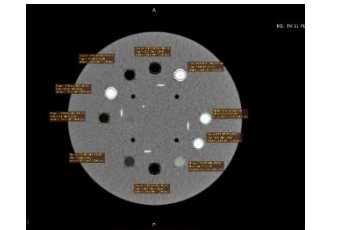
Irisan 1



Irisan 2

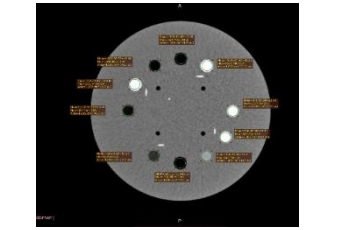


Irisan 3

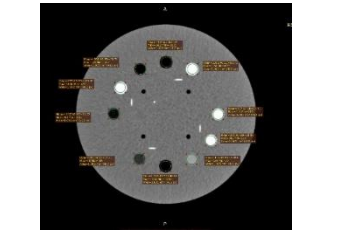


4) 80 kV dan 200 mA

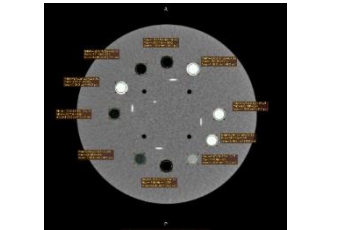
Irisan 1



Irisan 2

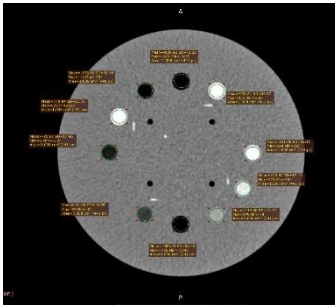


Irisan 3

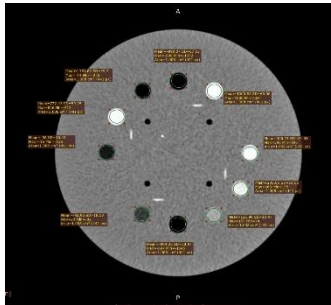


5) 100 kV dan 50 mA

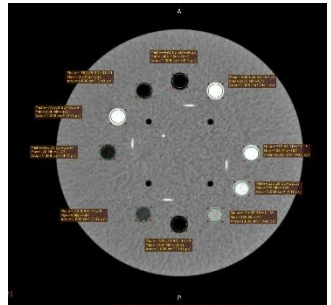
Irisan 1



Irisan 2

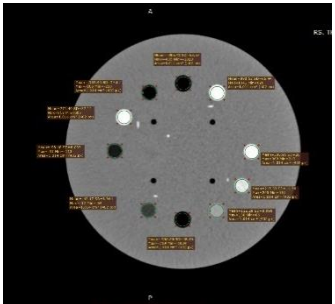


Irisan 3

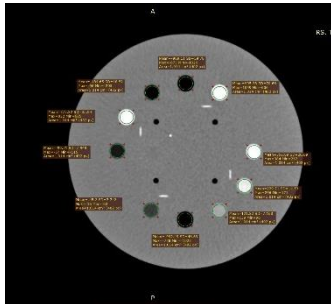


6) 100 kV dan 200 mA

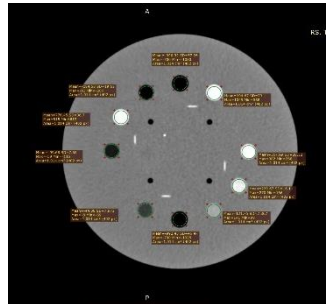
Irisan 1



Irisan 2

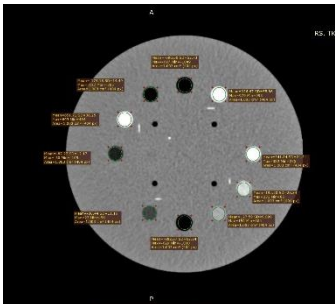


Irisan 3

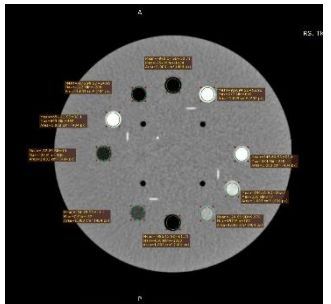


7) 120 kV dan 50 mA

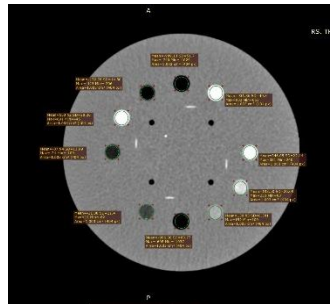
Irisan 1



Irisan 2

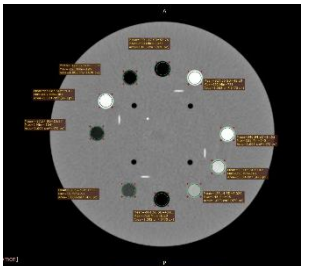


Irisan 3

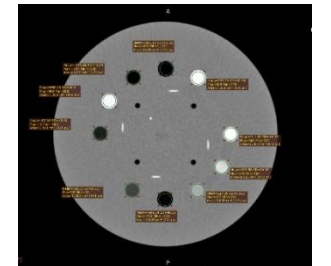


8) 120 kV dan 200 mA

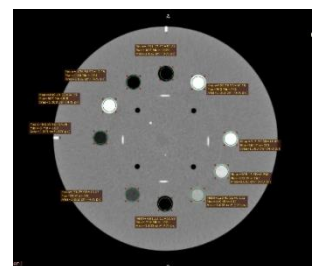
Irisan 1



Irisan 2

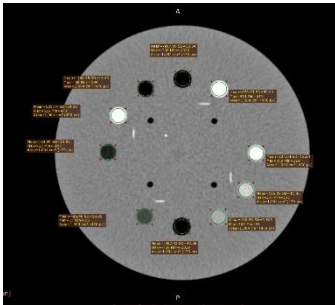


Irisan 3

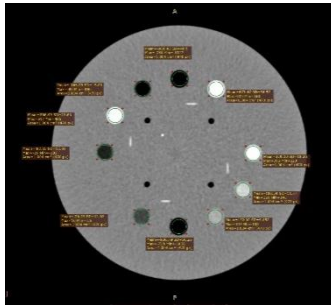


9) 135 kV dan 50 mA

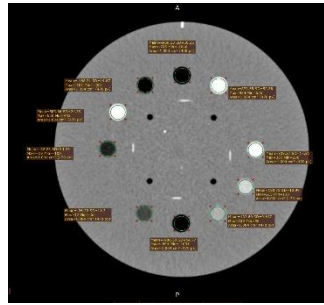
Irisan 1



Irisan 2

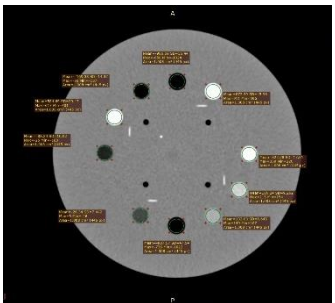


Irisan 3

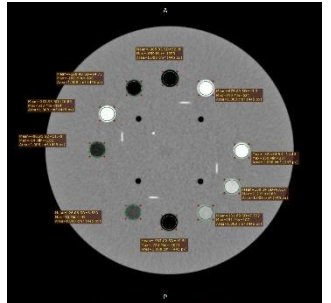


10) 135 kV dan 100 mA

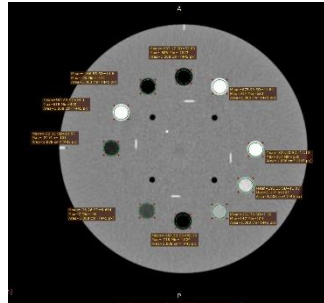
Irisan 1



Irisan 2

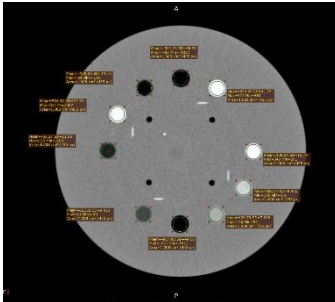


Irisan 3

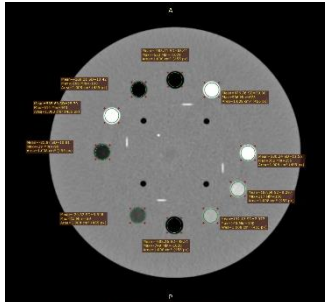


11) 135 kV dan 150 mA

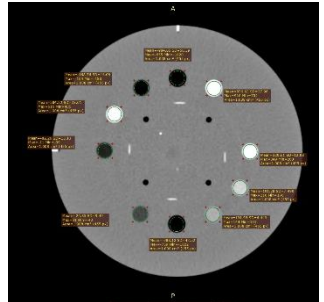
Irisan 1



Irisan 2

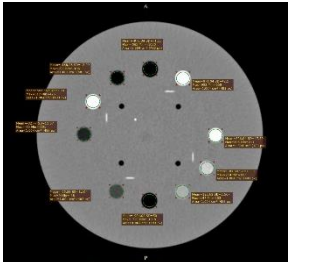


Irisan 3

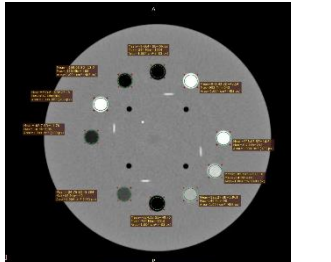


12) 135 kV dan 200 mA

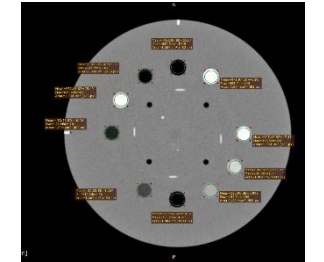
Irisan 1



Irisan 2



Irisan 3



**Lampiran 4. Hasil Data Resolusi Spasial**

## 1) Variasi Tegangan Tabung

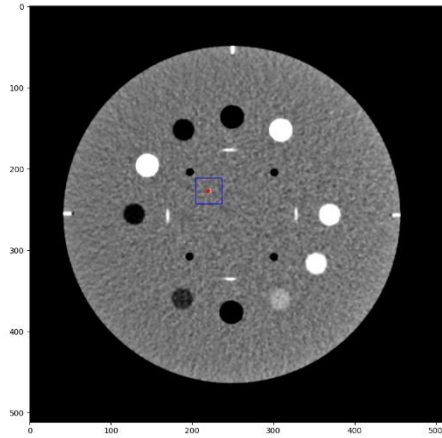
Tegangan Tabung (kV)		Arus Tabung (mA)				Rerata	SD
		50	100	150	200		
80	Frekuensi	1,04	1,04	0,98	1,01	1,02	0,03
	MTF 50	0,22	0,4	0,53	0,24	0,35	0,15
	MTF 10	0,46	0,58	0,73	0,52	0,57	0,12
135	Frekuensi	1,08	1,05	1,06	1,1	1,07	0,02
	MTF 50	0,27	0,25	0,12	0,37	0,25	0,1
	MTF 10	0,51	0,51	0,54	0,62	0,55	0,05

## 2) Variasi Arus Tabung

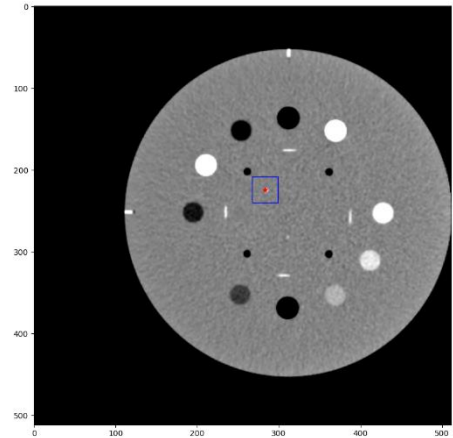
Arus Tabung (mA)		Tegangan Tabung (kV)				Rerata	SD
		80 kV	100 kV	120 kV	135 kV		
50	Frekuensi	1,04	1,05	1	1,08	1,04	0,03
	MTF 50	0,22	0,5	0,32	0,27	0,33	0,12
	MTF 10	0,46	0,56	0,61	0,51	0,54	0,06
200	Frekuensi	1,01	0,99	1,08	1,1	1,05	0,03
	MTF 50	0,24	0,31	0,4	0,37	0,33	0,1
	MTF 10	0,52	0,58	0,58	0,62	0,58	0,2

**Lampiran 5. Hasil Citra dan Penempatan ROI Pada Resolusi Spasial**

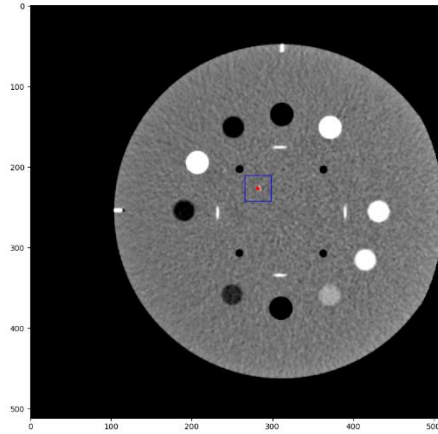
1) 80 kV dan 50 mA



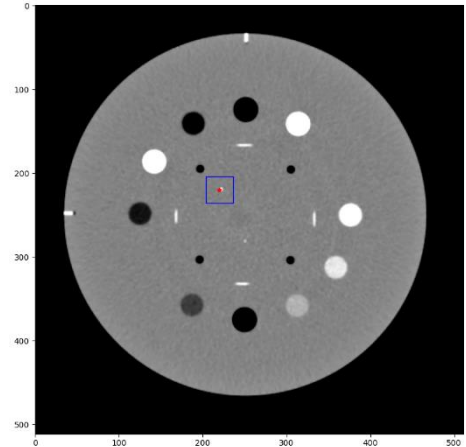
7) 120 kV dan 50 mA



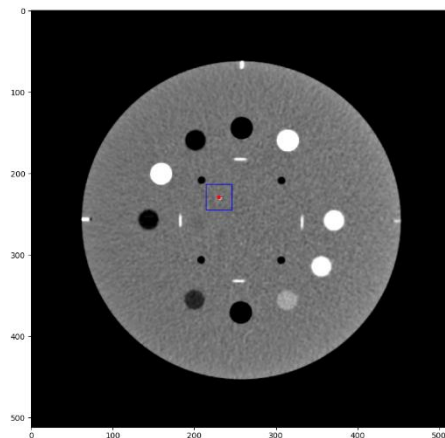
2) 80 kV dan 100 mA



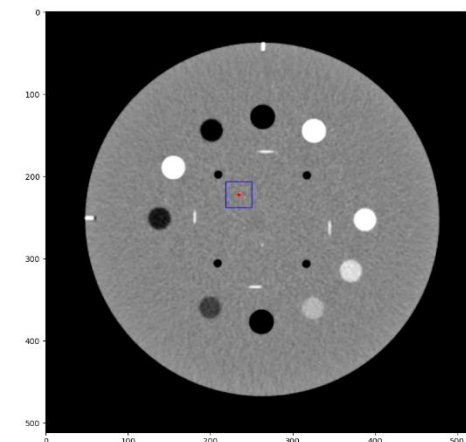
8) 120 kV dan 200 mA



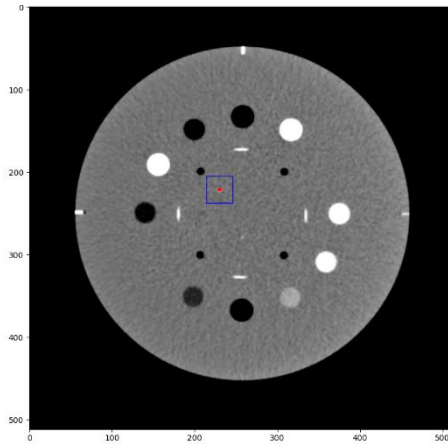
3) 80 kV dan 150 mA



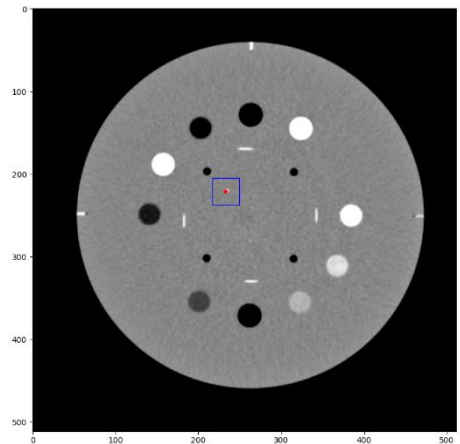
9) 135 kV dan 50 mA



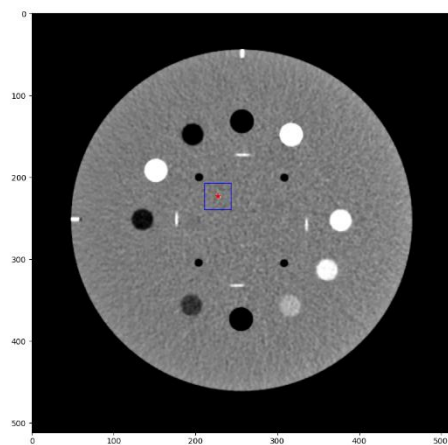
4) 80 kV dan 200 mA



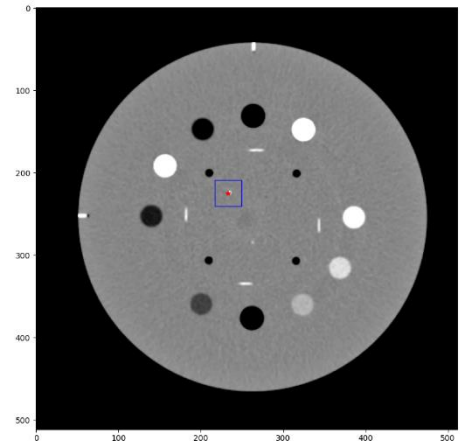
10) 135 kV dan 100 mA



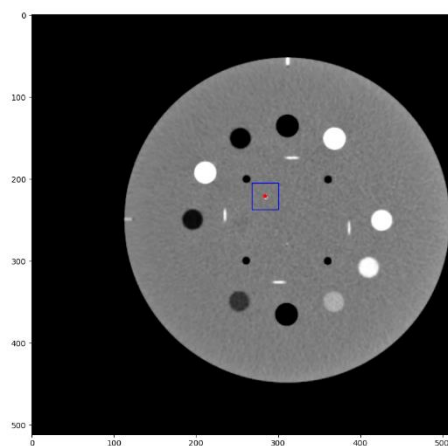
5) 100 kV dan 50 mA



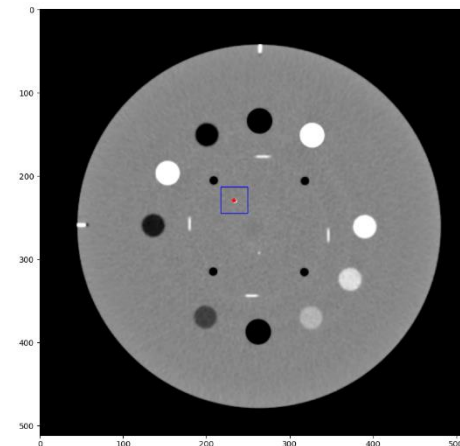
11) 135 kV dan 150 mA



6) 100 kV dan 200 mA

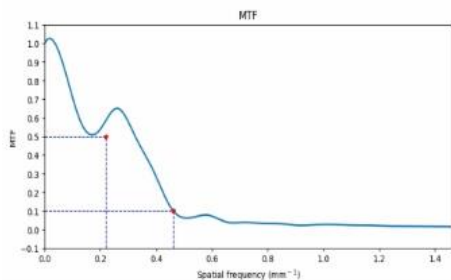


12) 135 kV dan 200 mA



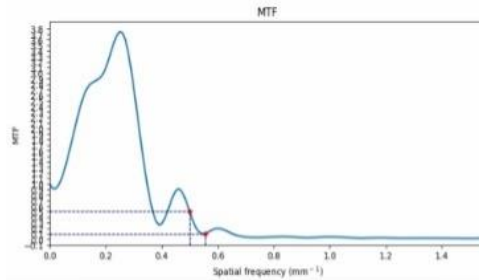
**Lampiran 6.** Hasil Grafik MTF Pada Variasi Tegangan dan Arus Tabung

1. Variasi Tegangan dengan Arus Tetap Sebesar 50 mA



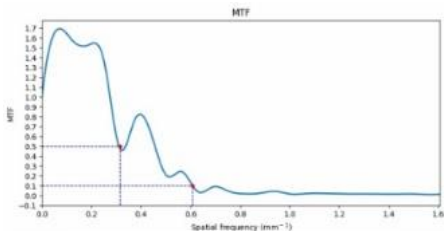
MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

(a) 80 kV



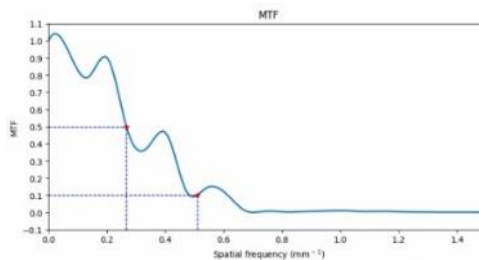
MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

(b) 100 kV



MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

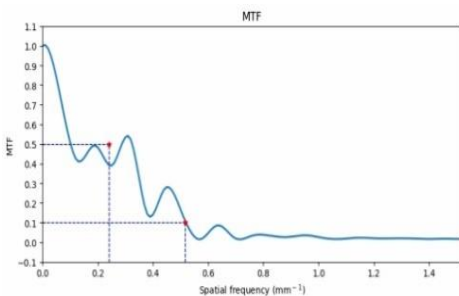
(c) 120 kV



MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

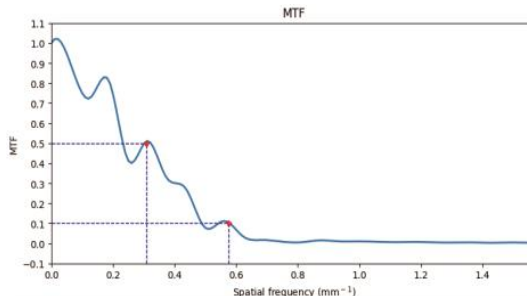
(d) 135 kV

2. Variasi Tegangan dengan Arus Tetap Sebesar 200 mA



MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

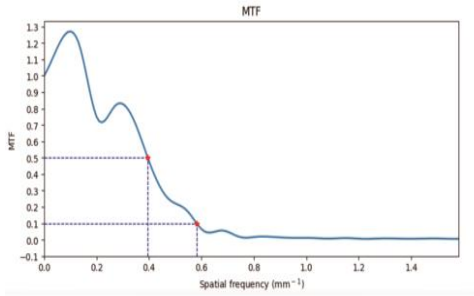
(a) 80 kV



MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

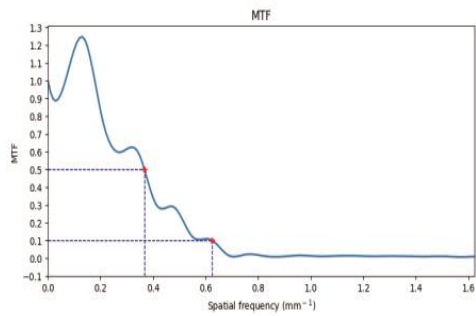
(b) 100 kV





MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

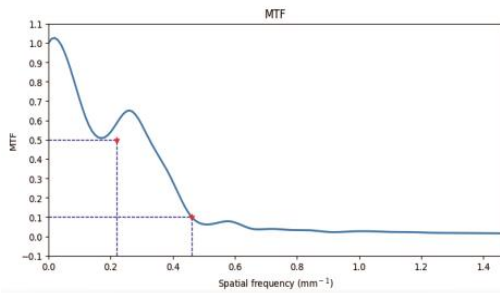
(c) 120 kV



MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

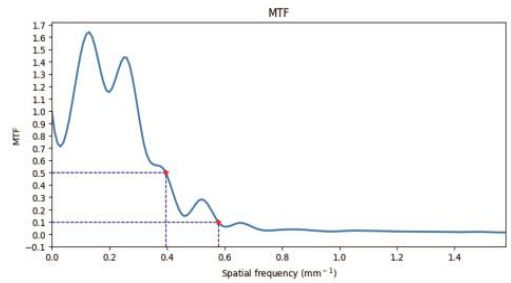
(d) 135 kV

3. Variasi Arus dengan Tegangan Tetap Sebesar 80 kV



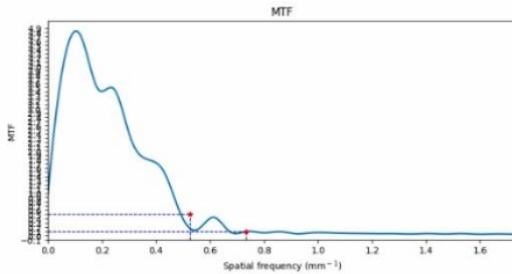
MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

(a) 50 mA



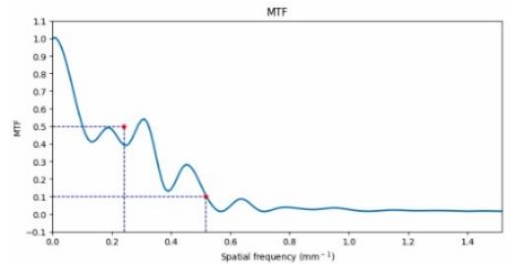
MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

(b) 100 mA



MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

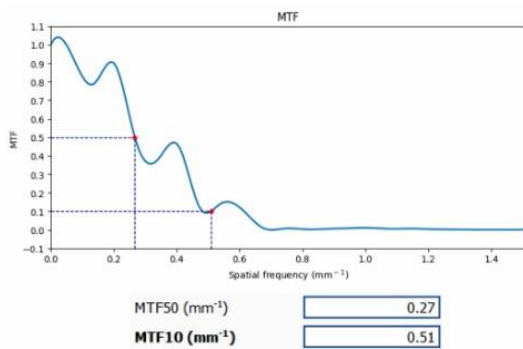
(c) 150 mA



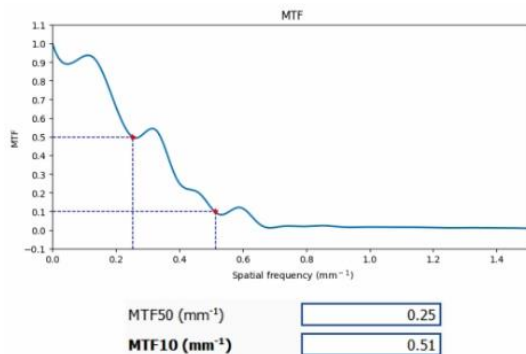
MTF50 (mm<sup>-1</sup>)   
 MTF10 (mm<sup>-1</sup>)

(d) 200 mA

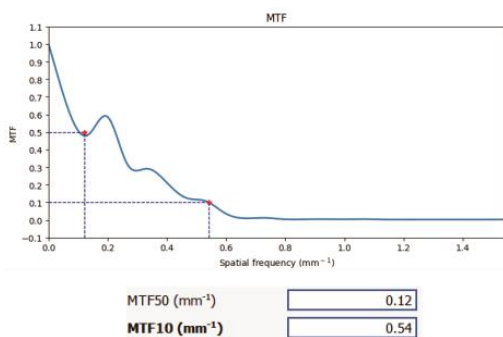
## 4. Variasi Arus dengan Tegangan Tetap Sebesar 135 kV



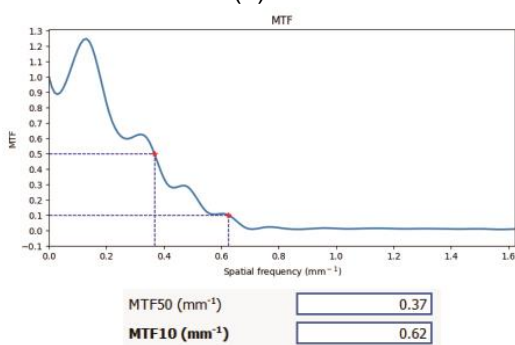
(a) 50 mA



(b) 100 mA



(c) 150 mA



(d) 200 mA

**Lampiran 7. Hasil Data *Uniformity***

1) Variasi Tegangan Tabung

Arus Tabung (mA)	Tegangan Tabung (kV)	ROI 1	ROI 2	ROI 3	ROI 4	ROI 5	Rerata (ROI 2 s/d ROI 5)	Rerata Keseluruhan
50	80	41,97	45,31	52,6	45,13	41,64	46.17	45,33
	100	53,76	57,9	63,59	58,63	53,89	58,5025	57,554
	120	63,12	66,81	74,44	68,05	63,75	68,2625	67,234
	135	68,3	73,06	74,55	73,88	73,34	73,7075	72,626
200	80	39,45	43,93	50,32	45,7	38,79	44,685	43,638
	100	52,5	56,61	64,07	58,81	53,82	58,3275	57,162
	120	63,28	69,5	69,88	69,95	69,17	69,625	68,356
	135	67,45	74,07	74,82	74,36	73,29	74,135	72,798

2) Variasi Arus Tabung

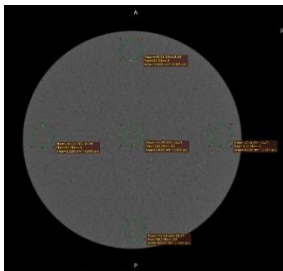
Tegangan Tabung (kV)	Arus Tabung (mA)	ROI 1	ROI 2	ROI 3	ROI 4	ROI 5	Rerata (ROI 2 s/d ROI 5)	Rerata Keseluruhan
80	50	40,55	44,31	49,93	44,97	41,7	45,2275	44,292
	100	40,81	44,51	50,78	45,28	42,06	45,6575	44,688
	150	40,39	44,73	55,11	45,41	42,43	46,92	45,614
	200	39,2	45,2	55,69	45,96	42,76	47,4025	45,762
135	50	68,04	71,3	70,77	71,42	70,47	70,99	70,4
	100	68,6	71,99	71,37	71,82	71,5	71,67	71,056
	150	68,72	72,05	71,63	72	72,07	71,9375	71,294
	200	68,96	72,33	72,12	72,03	72,45	72,2325	71,578

**Lampiran 8.** Hasil Citra dan Penempatan ROI Pada *Uniformity*

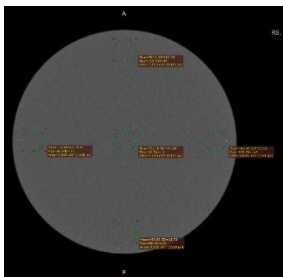
## 1. Variasi Tegangan Tabung

Arus Konstan: 50 mA

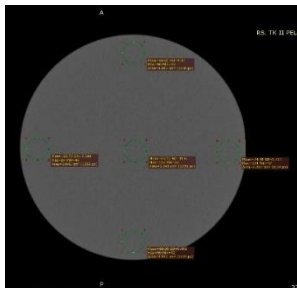
a. 80 kV



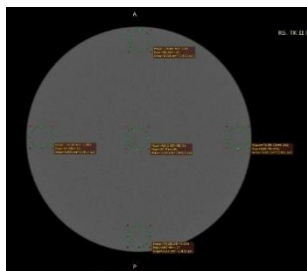
b. 100 kV



c. 120 kV

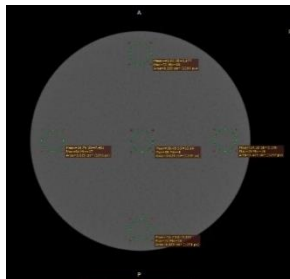


d. 135 kV

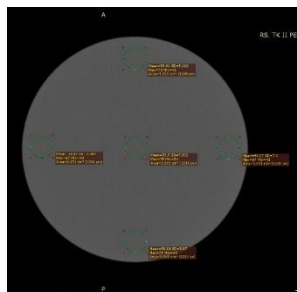


Arus Konstan: 200 mA

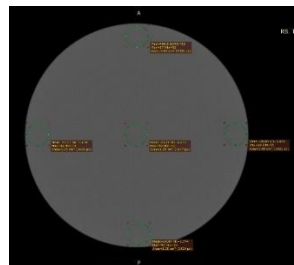
a. 80 kV



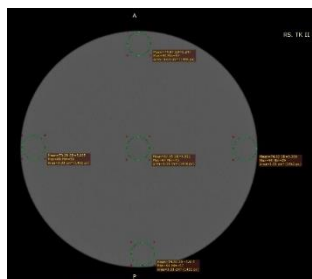
b. 100 kV



c. 120 kV

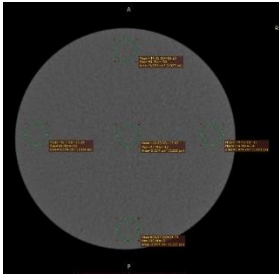


d. 135 kV

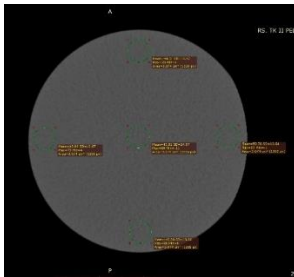


2. Variasi Arus Tabung  
Tegangan Konstan: 80 kV

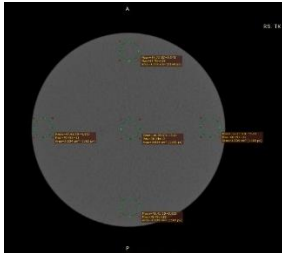
a. 50 mA



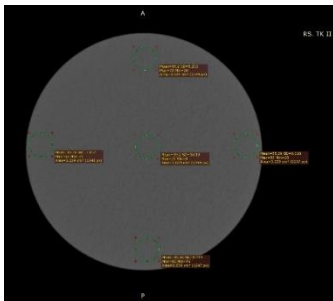
b. 100 mA



c. 150 mA

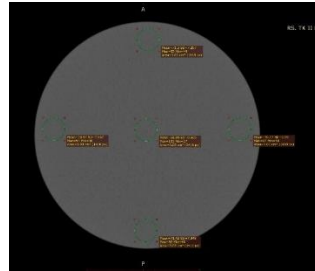


d. 200 mA

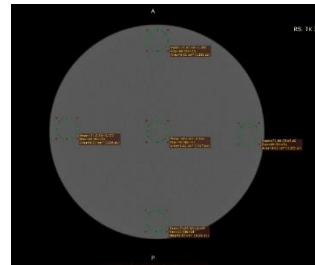


Tegangan Konstan: 135 kV

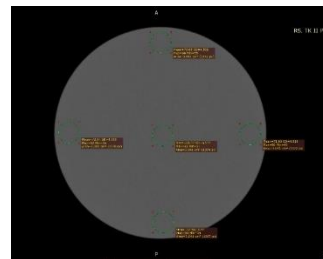
a. 50 mA



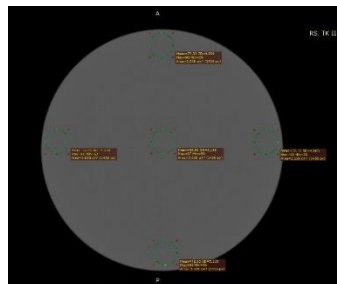
b. 100 mA



c. 150 mA



d. 200 mA



**Lampiran 9.** Hasil Data SNR dan CNR

1. Variasi Tegangan Tabung

Tegangan Tabung (kV)	Arus Tabung (mA)	Hounsfield (HU)					Background		SNR	CNR
		Tengah	Atas	Bawah	Kiri	Kanan	HU	SD		
80	50	41,69	46,81	47,12	43,9	57,42	-1129,2	343,39	0,14	3,43
100		53,24	56,72	60,03	57,82	67,12	-1092,4	296,44	0,2	3,88
120		62,91	66,73	68,74	66,65	74,26	-2007,5	201,93	0,34	10,28
135		68,92	72,46	73,38	73,46	72,34	-2018	174,79	0,41	11,96
80	200	38,3	48,03	49,92	43,64	57,45	-1166,1	383,04	0,12	3,17
100		52,57	59,92	60,97	56,41	67,23	-1964,4	284,54	0,21	7,11
120		64,46	67,96	68,71	69,19	68,92	-1983	252,87	0,27	8,11
135		68,36	71,43	73,66	71,97	71,75	-2034,4	118,86	0,6	17,72

2. Variasi Arus Tabung

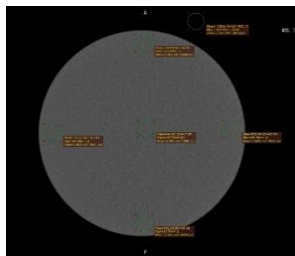
Arus Tabung (mA)	Tegangan Tabung (kV)	Hounsfield (HU)					Background		SNR	CNR
		Tengah	Atas	Bawah	Kiri	Kanan	HU	SD		
50	80	42,03	48,91	52,71	42,97	56,49	-1185,5	401,79	0,12	3,07
100		39,76	47,81	52,07	42,02	56,3	-1948,8	356,38	0,13	5,6
150		38,9	47,25	50,45	41,9	54,86	-1031,2	183,53	0,25	5,87
200		38,07	46,97	51,09	41,19	52,83	-1013,5	123,35	0,37	8,59
50	135	67,65	73,36	73,95	73,92	73,13	-2012,7	189,14	0,38	11,02
100		67,11	72,95	73,18	73,65	72,55	-2024,1	156,89	0,46	13,36
150		73,09	73,13	73,31	73,09	72,62	-2033,5	122,68	0,6	17,17
200		66,49	73	72,93	73,1	72,02	-2037,4	104,91	0,68	20,1

**Lampiran 10.** Hasil Data SNR dan CNR Pada Material-Material Phantom

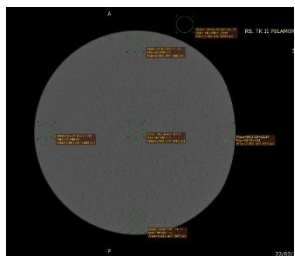
No	Material Phantom	HU Objek	SD Objek	HU Background	SD Background	SNR	CNR
1	PMP	-199,13	22,42	43,05	9,44	-8,88	-25,66
2	Air	-981,19	78,99	47,04	9,89	-12,42	-103,98
3	Teflon®	1076,21	109,62	43,91	11,15	9,82	92,58
4	Delrin®	368,43	40,43	45,19	9,60	9,11	33,66
5	Bone 20%	282,20	42,98	49,88	11,13	6,57	20,87
6	Acrylic	107,43	15,20	45,31	10,69	7,07	5,81
7	Air	-967,47	124,69	45,12	11,91	-7,76	-85,02
8	Polystyrene	-58,58	16,00	43,76	9,51	-3,66	-10,76
9	LDPE	-114,25	14,27	40,85	8,95	-8,01	-17,34
10	Bone 50%	971,83	85,73	40,28	7,06	11,34	131,97

**Lampiran 11. Hasil Citra dan Penempatan ROI Pada SNR dan CNR****1. Variasi Tegangan Tabung**  
Arus Konstan: 50 mA

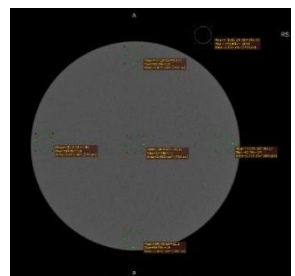
a. 80 kV



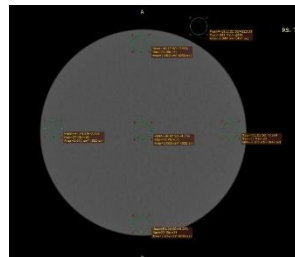
b. 100 kV



c. 120 kV

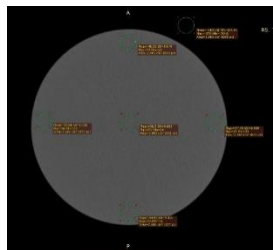


d. 135 kV

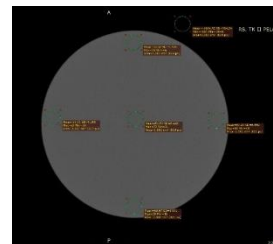


## Arus Konstan: 200 mA

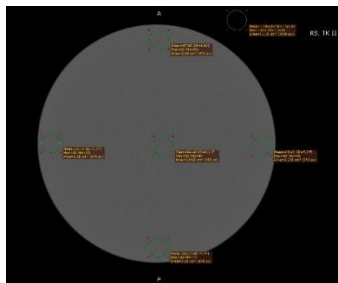
a. 80 kV



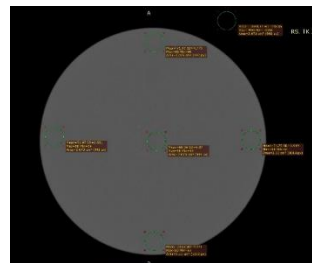
b. 100 kV



c. 120 kV



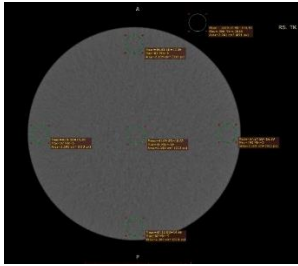
d. 135 kV



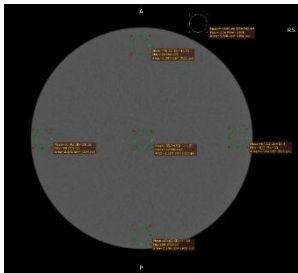


2. Variasi Arus Tabung  
Tegangan Konstan: 80 kV

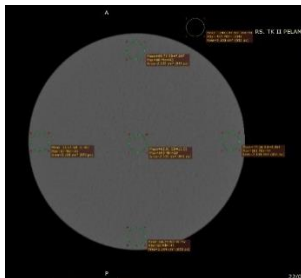
e. 50 mA



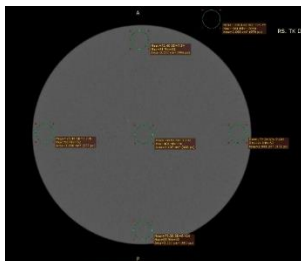
f. 100 mA



g. 150 mA

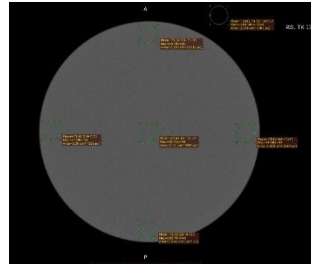


h. 200 mA

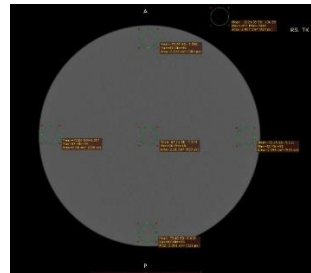


Tegangan Konstan: 135 kV

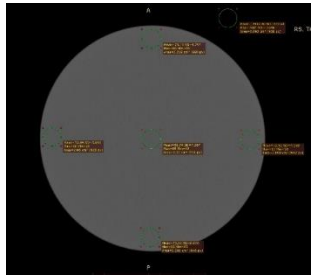
e. 50 mA



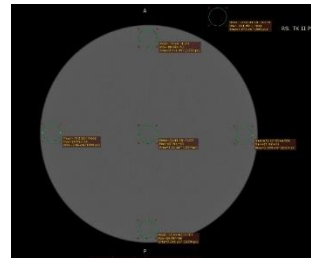
f. 100 mA



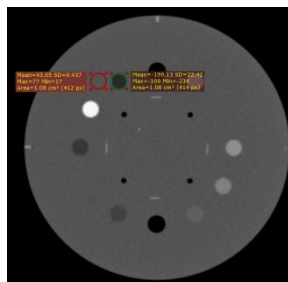
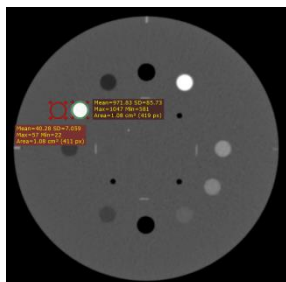
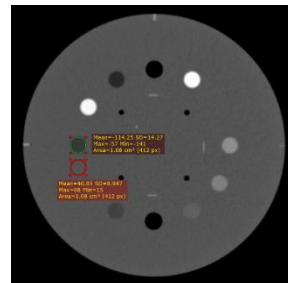
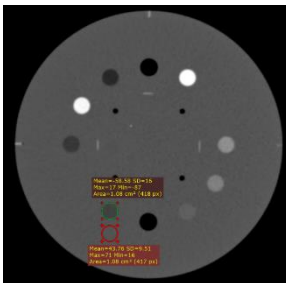
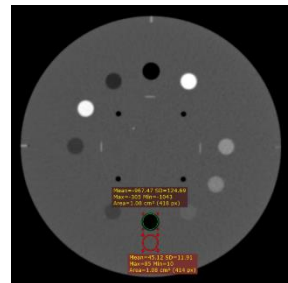
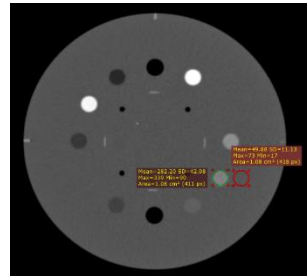
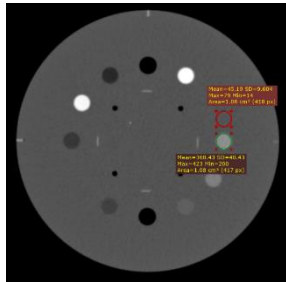
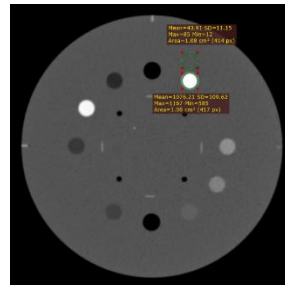
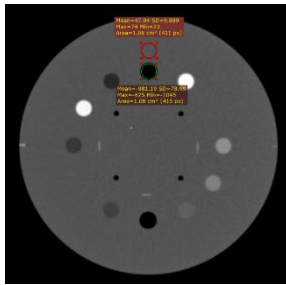
g. 150 mA



h. 200 mA

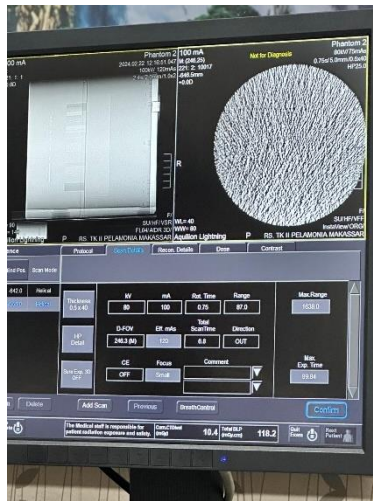
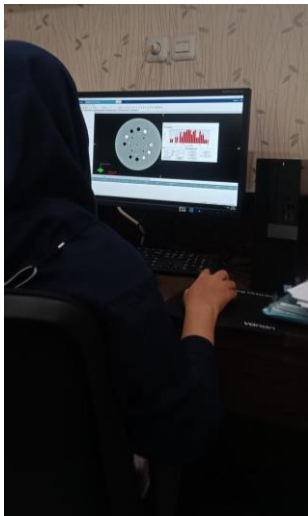


## Lampiran 12. Hasil Citra dan Penempatan ROI Pada Kesembilan Material *Phantom*



## Lampiran 13. Dokumentasi Penelitian

### 1. Pengambilan Data di Rumah Sakit Tk. II Pelamonia Makassar



### 2. Pengolahan Data Pada Software

