الشؤون الصحية بمنطقة تبوك
الصحة العامة
إدارة صحة البيئة والصحة المهنية
قسم الصحة المهنية

Radiation Survey and Shielding Certificate

Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: MALE
Date: 14 / 5 / 2019	Room Location:OPD

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
GE	GANRAL	150	10/2011	DISCOVERY DIGITAL656	.....

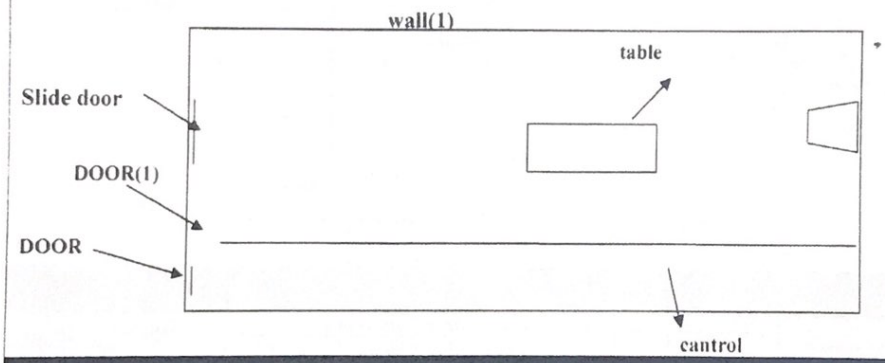
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
75	12.50	320	550

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective Dose µSv Week	Remarks
		X1	X2	X3				
1	Control panel	0.12	0.25	0.18	0.18	1.00	0.01	Pass
2	Door(1)	0.70	0.65	0.43	0.59	1.00	0.01	Pass
3	slidedoor	0.05	0.06	0.03	0.04	1.00	0.001	Pass

Done By	Turkey alsaedi	Signature
Checked BY	Name abdulimunaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas [NCRP, 147]

Dose Accumulated (µSv/week)= Work load(mA- min)/week *Dose (µSv/h)

60*mA

وزارة الصحة
Ministry of Health

الشؤون الصحية بمنطقة المدينة المنورة
الصحـــــــة العامـــــــة
ادارة صحة البيئة والصحة المهنية
قســـم الصحـــــة المـــهنيـــة

Radiation Survey and Shielding Certificate

Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: Female
Date: 14 / 5 /2019	Room Location:OPD

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
GE	GANRAL	150	10/2011	ALO1CII	3893

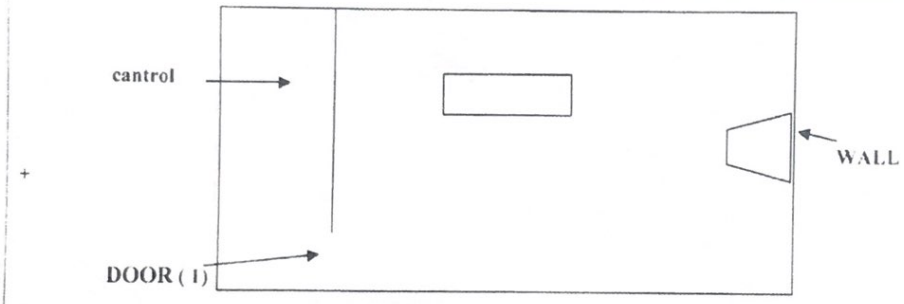
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
70	4	225	550

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective Dose(µSv/Week)	Remarks
		X1	X2	X3				
1	Control panel	0.16	0.25	0.20	0.20	1.00	0.01	Pass
2	Door1	0.46	0.28	0.30	0.34	1.00	0.01	Pass
7	wall	0.06	0.05	0.04	0.05	1.00	0.002	Pass

Radiation Protection Officers in Public Health

Done By	Name Turkey alsaedi	Signature
Checked BY	Name abdulmonaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas [NCRP, 147].

Dose Accumulated (µSv/week)= Work load(mA- min)/week *Dose (µSv/h) / 60*mA

وزارة الصحة
Ministry of Health

Radiation Survey and Shielding Certificate

Hospital: king Fahd — Department: X-RAY
Health Sector: — Room Number: MAMMO

Date: 14 5 2019 — Room Location: x-ray department

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing Model	Tube Housing S/N
HOLOGIC	MAMMO		.....	SELENIC DIMENSIONS	81401132055

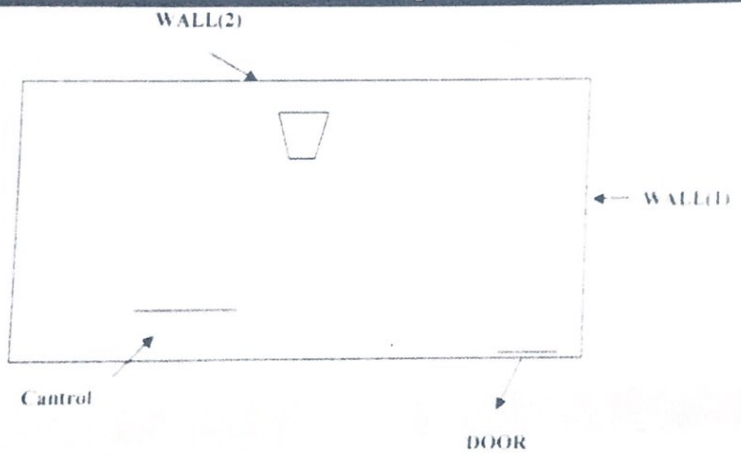
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
28	05	100	550

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h) X1	X2	X3	Average (µSv/h)	Occupancy Factor	Effective Dose(µSv/Week)	Remarks
1	Control panel	0.33	0.36	0.21	0.30	1.00	0.03	Pass
2	Door1	0.07	0.06	0.07	0.6	1.00	0.01	Pass
3	Wall(1)	0.04	0.06	0.04	0.04	1.00	0.004	Pass
4	Wall(2)	0.05	0.06	0.05	0.05	1.00	0.01	pass

Radiation Protection Officers in Public Health

Done By	Name: Turkey alsaedi	Signature
Checked BY	Name: abdulmunaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas (NCRP, No

Dose Accumulated (µSv/week) = Work load(mA- min)/week *Dose (µSv/h) / 60*mA

قسم الصحة المهنية

Radiation Survey and Shielding Certificate

Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: SUITE UP
Date: 14 / 5 /2019	Room Location:x-ray department

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
Siemens	Angio	.....	.....	Artiszee	153300

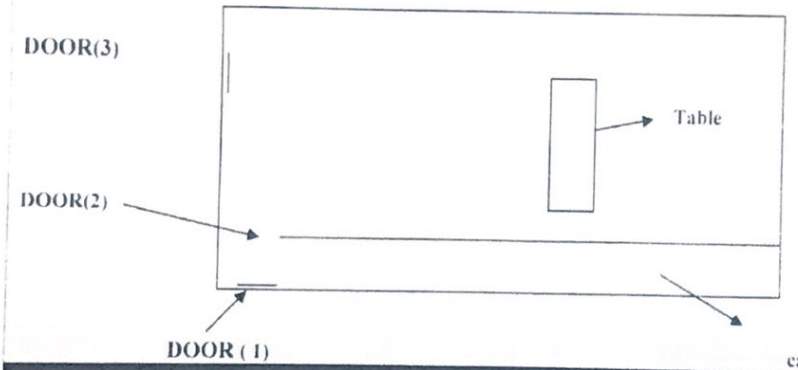
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
0.07		320	1300

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective Dose (µSv/Week)	Remarks
		X1	X2	X3				
1	Control panel	0.07	0.08	0.07	0.07	1.00	0.01	Pass
2	Door1	0.14	0.11	0.11	0.33	1.00	0.02	Pass
7	Door3	0.09	0.07	0.08	0.08	1.00	0.01	Pass

Radiation Protection Officers in Public Health

Done By	Name Turkey alsaedi	Signature
Checked BY	Name abdullmunaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas (NCRP, 147)

Dose Accumulated (µSv/week)= $\frac{\text{Work load(mA- min)/week} * \text{Dose (µSv/h)}}{60 * mA}$

وزارة الصحة
MINISTRY OF HEALTH

Radiation Survey and Shielding Certificate

Hospital: king Fahd
Health Sector:

Department: X-RAY
Room Number: 6

Date: 14 / 5 /2019

Room Location: x-ray department

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing Model	Tube Housing S/N
SIEMENS	GANRAL	150	2012	07042018	1595

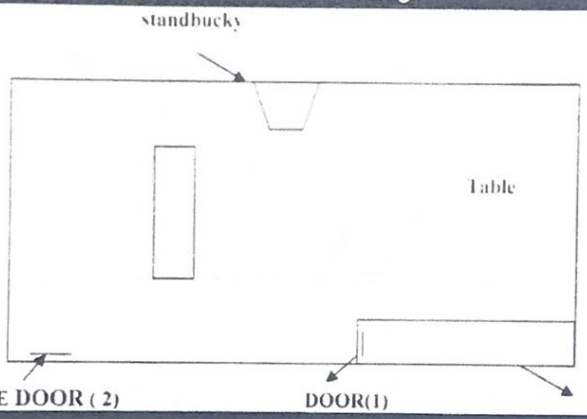
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
81	40	320	550

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h) X1	X2	X3	Average (µSv/h)	Occupancy Factor	Effective Dose µSv/ Week	Remarks
1	Control panel	0.12	0.18	0.19	0.16	1.00	0.004	Pass
2	Door1	0.12	0.19	0.18	0.16	1.00	0.004	Pass
7	SLIDE DOOR	0.05	0.05	0.06	0.05	1.00	0.001	Pass

Radiation Protection Officers in Public Health

Done By	Name Turkey alsaedi	Signature
Checked BY	Name abdulmunaim aloft	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas [NCRP, 147].

Dose Accumulated (µSv/week)= Work load(mA- min)/week *Dose (µSv/h)
60*m \

وزارة الصحة
Ministry of Health

Radiation Survey and Shielding Certificate

Hospital: king Fahd — Department: X-RAY

Health Sector: — Room Number: 5

Date: 14 / 5 / 2019 — Room Location: x-ray department

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
Care stream	GANRAL	150	5/2017	DRd-60	H89653

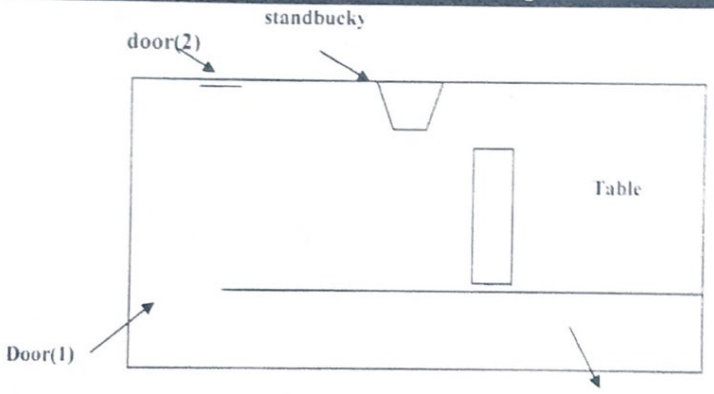
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
110	40	560	550

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h) X1	X2	X3	Average (µSv/h)	Occupancy Factor	Effective Dose µSv/Week	Remarks
1	Control panel	0.08	0.09	0.10	0.09	1.00	0.001	Pass
2	Door(1)	0.47	0.16	0.12	0.25	1.00	0.004	Pass
7	Door(2)	0.80	0.86	0.60	0.75	1.00	0.01	Pass

Radiation Protection Officers in Public Health

Done By	Name: Turkey alsaedi	Signature
Checked BY	Name: abdullmunaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas (NCRP, 147)

Dose Accumulated (µSv/week) = Work load(mA- min)/week *Dose (µSv/h) / 60*mA

وزارة الصحة

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قسم الصحة المهنية

Radiation Survey and Shielding Certificate

Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: 3
Date: 14 /5 /2019	Room Location:x-ray department

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
KODAK	GANRAL	150	9/2008	DR7500	H79203

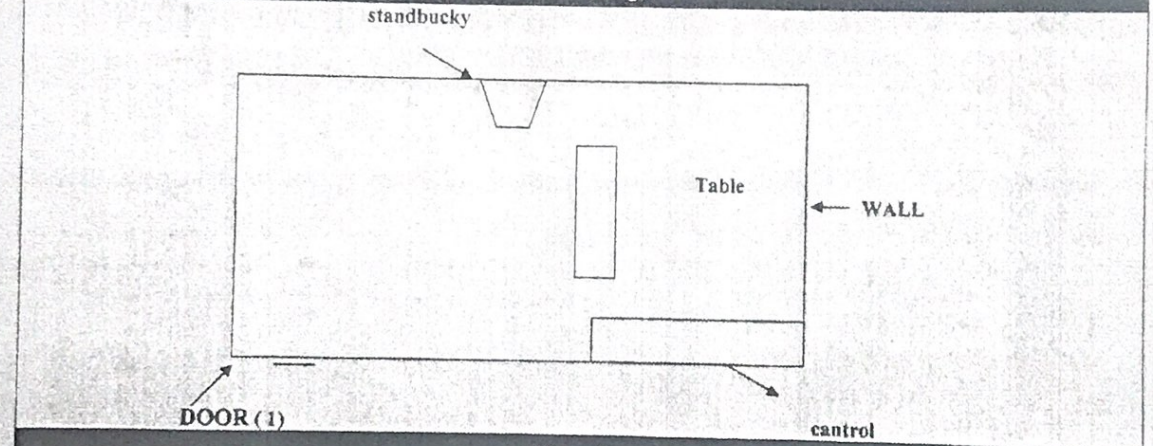
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
110	40	320	550

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective DoseµSv/Week	Remarks
		X1	X2	X3				
1	Control panel	0.60	0.49	0.20	0.43	1.00	0.01	Pass
2	Door1	0.12	0.15	0.18	0.33	1.00	0.01	Pass
7	wall	0.04	0.05	0.04	0.04	1.00	0.001	Pass

Radiation Protection Officers in Public Health

Done By	Name:Turkey alsaedi	Signature
Checked BY	Name abdulmunaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas INCRP, 147].

Dose Accumulated (µSv/week)= Work load(mA - min)/week *Dose (µSv/h)
60*mA

وزارة الصحة
Ministry of Health

Radiation Survey and Shielding Certificate

Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: FLUOROSCOPY
Date: 14 / 5 / 2019	Room Location:x-ray department

Tested Machine

Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
SIEMENS	FLUOROSCOPY			DRF	3203

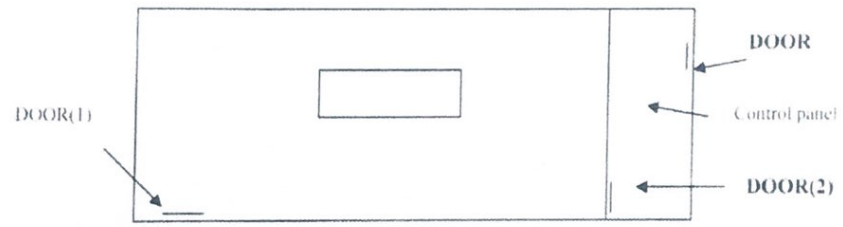
Survey Meter

Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors

KVP	MAS	MA	WORKLOAD
73	0.5	250	260

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective Dose(µSv/ Week	Remarks
		X1	X2	X3				
1	Control panel	0.17	0.21	0.20	0.19	1.00	0.003	Pass
2	Door1	0.18	0.19	0.20	0.19	1.00	0.003	Pass
3	Door2	0.12	0.12	0.20	0.14	1.00	0.002	Pass

Radiation Protection Officers in Public Health

Done By	Turkey alsaedi	Signature
Checked BY	Name abdulmunaim aloft	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas [NCRP, 14]

Dose Accumulated (µSv/week)= Work load(mA- min)/week *Dose (µSv/h)

60*mA

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قسم الصحة المهنية

Radiation Survey and Shielding Certificate

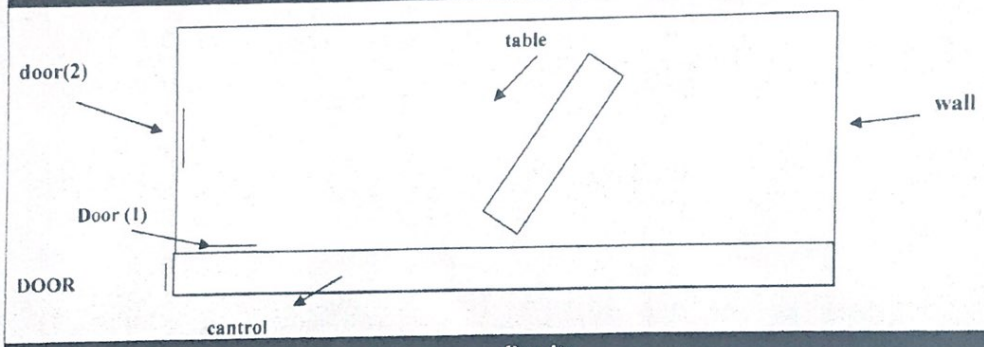
Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: CT (2)
Date: 14 / 5 /2019	Room Location:x-ray department

Tested Machine					
Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
GE	CT	.....	-------	BRIGHT SPEED	107CTO4

Survey Meter			
Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors			
KVP	MAS	MA	WORKLOAD
120		350	28000

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective DoseµSv/Week	Remarks
		X1	X2	X3				
1	Control panel	0. 17	0.14	0.27	0.19	1.00	0.3	Pass
2	Door1	8	7	5	6.6	1.00	8.8	Pass
3	Door2	4	3.50	3	3.5	1.00	4.7	Pass
5	wall	0.14	0.11	0.13	0.12	1.00	0.16	Pass

Radiation Protection Officers in Public Health

Done By	Name: Turkey alsaedi	Signature:
Checked BY	Name:abdullmunaim aloti	Signature:

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas (NCRP, 147).

$$\text{Dose Accumulated (µSv/week)} = \frac{\text{Work load(mA- min)/week} * \text{Dose (µSv/h)}}{60 * MA}$$

وزارة الصحة
Ministry of Health

الشئون الصحية بمنطقة المدينة المنورة
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قسـم الصحـــة المـهنيـة

وزارة الصحة

Radiation Survey and Shielding Certificate

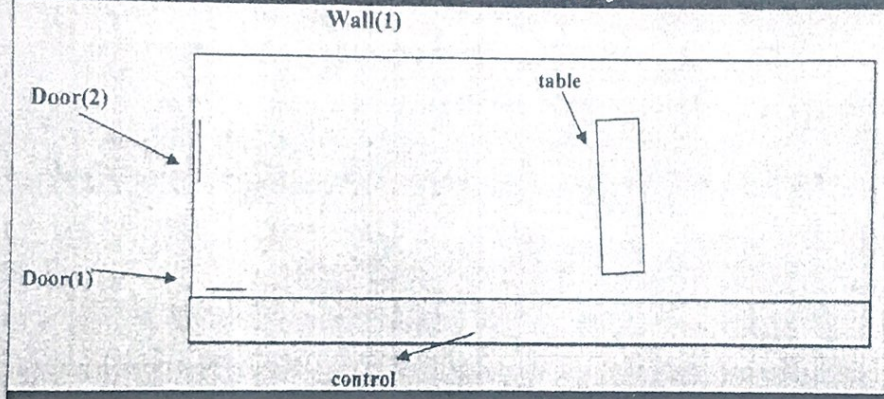
Hospital/ king Fahd	Department:X-RAY
Health Sector:	Room Number: CT - ER
Date: 14 / 5 /2019	Room Location:x-ray department

Tested Machine					
Brand	Kind	Maximum kVp	Year of Manufacturing	Tube Housing	
				Model	S/N
GE	CT Scan	.....	.....	CT750HD	1007CT05

Survey Meter			
Survey MeterType	S/N	Calibration Date	Warranty End
VICTREEN	6072	30/8/2018	30/8/2019

Factors			
KVP	MAS	MA	WORKLOAD
120		336	28000

Room Design



Results

No	Location (Survey Point)	Dose Rate (µSv/h)			Average (µSv/h)	Occupancy Factor	Effective DoseµSv/Week	Remarks
		X1	X2	X3				
1	Control panel	1.12	1.28	1.40	1.3	1.00	1.8	Pass
2	Door1	3	4	3	3.3	1.00	4.6	Pass
3	Door2	4	6	5	5	1.00	6.9	Pass
4	Wall(1)	0.11	0.12	0.10	0.11	1.00	0.2	Pass

Radiation Protection Officers in Public Health

Done By	Turkey alsaedi	Signature
Checked BY	Name:abdulmunaim alofi	Signature

The effective dose per a week should not exceed the 0.1 mSv for controlled areas and 0.02 mSv for uncontrolled areas (NCRP, 147).

Dose Accumulated (µSv/week)= Work load(mA- min)/week *Dose (µSv/h) / 60* mA