SURGITEX®

DISPOSABLE RADIATION PROTECTION GLOVES

“Surgitex” Radiation Protection Gloves

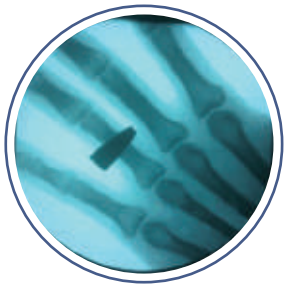
The hands are among the most commonly affected body parts during X-ray, guided procedures, particularly the left hand, due to its positioning while carrying out operations. The areas most frequently exposed include the medial sides of the index, middle, and ring fingers, placing healthcare professionals at continuous risk of scattered radiation.

If the physician’s hand is exposed to the direct beam, the mean dose reaches 120 mSv per procedure. Thus, on the basis of the annual dose limit of 500 mSv for the hands as set by ICRP, a physician could only perform four (4) CT fluoroscopy- guided procedures per year to remain within occupational exposure limits.

120MSV/Procedure= 4 times /year?

Therefore, the hands protection of Intervention physicians away from scattered X-ray has become a critical occupational health issue that must be paid attention to and resolved.

What your hands look like in X-RAY with and without “Surgitex” RAG



WITHOUT
SURGITEX RAG

WITH
SURGITEX RAG

At Surgitex, protecting these high-risk areas is our priority. Our latest innovation, the disposable lead-free latex radiation protection gloves, is designed to deliver the highest possible protection exactly where it is needed most.

Lightweight, comfortable, and completely lead-free, Surgitex gloves provide effective radiation shielding while supporting easy, eco-friendly disposal, offering a safer and smarter solution for modern clinical environments.

X-ray Attenuation efficiency of the disposable radiation protection gloves for interventional surgery

Model	thickness of gloves	Attenuation (%)
A10	0.1mm	>50
A30	0.3mm	>60

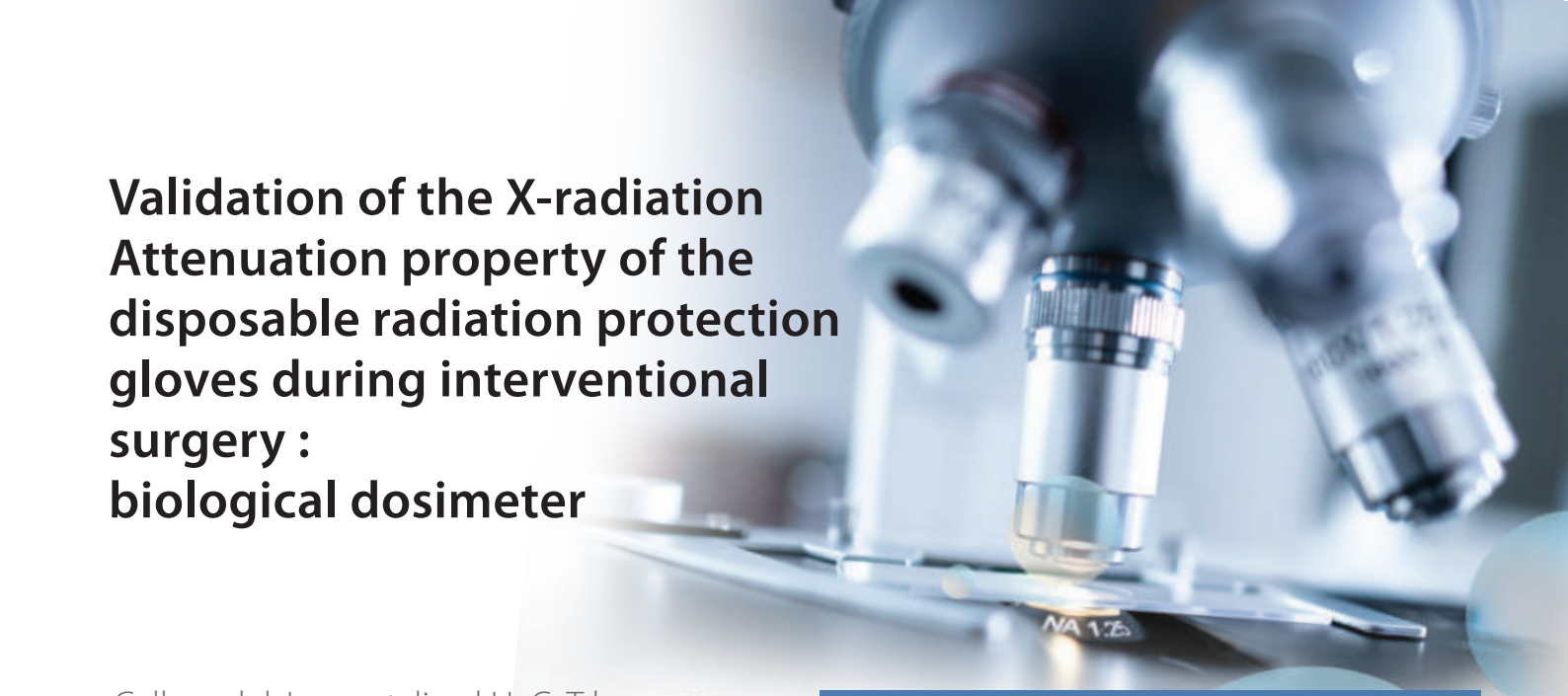
Testing condition:
Equipment : SIEMENS digital subtraction angiography (DSA)
Working conditions at test: SW-SS : on ; CU Filter: 0.1mm ; 70kV ; 20mA ; Duration of radiation exposure: 60s ; Non-direct radiation field ; Testing position was 75cm horizontally distant from the center of radiation field of DSA.

Dosimetry validation of the X-radiation Attenuation of the disposable radiation protection gloves for the interventional surgery on gradient tube voltage

DSA Tube Voltage						
Model	thickness	60 kV	70 kV	80 kV	100 kV	120kV
		Skin dose reduction (%)				
A10	0.1mm	53%	50%	38%	32%	30%
A30	0.3mm	70%	60%	50%	47%	40%

Testing condition:
Equipment : SIEMENS digital subtraction angiography (DSA)
Working conditions at test: SW-SS : on ; CU Filter: 0.1mm ; Duration of radiation exposure: 60s ; Non-direct radiation field ; Testing position was 75cm horizontally distant from the center of radiation field of DSA.

Validation of the X-radiation Attenuation property of the disposable radiation protection gloves during interventional surgery : biological dosimeter

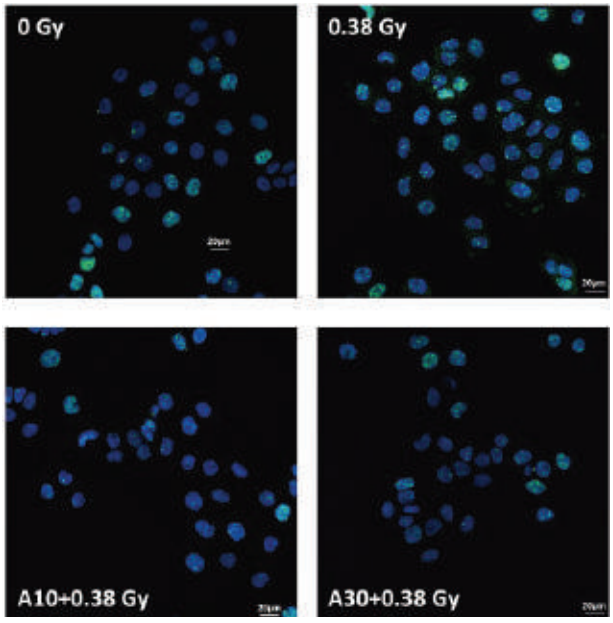


Cell model: Immortalized HaCaT human keratinocyctes
Radiation condition: RAD-SOURCE RS2000 X-ray machine, direct radiation field, 70keV, 20 mA, dose rate: 95 mGy/min, duration of exposure: 4 min, total dose: 380 mGy, temperature: room temperature (RT).
Testing Endpoint: γ-H2AX foci

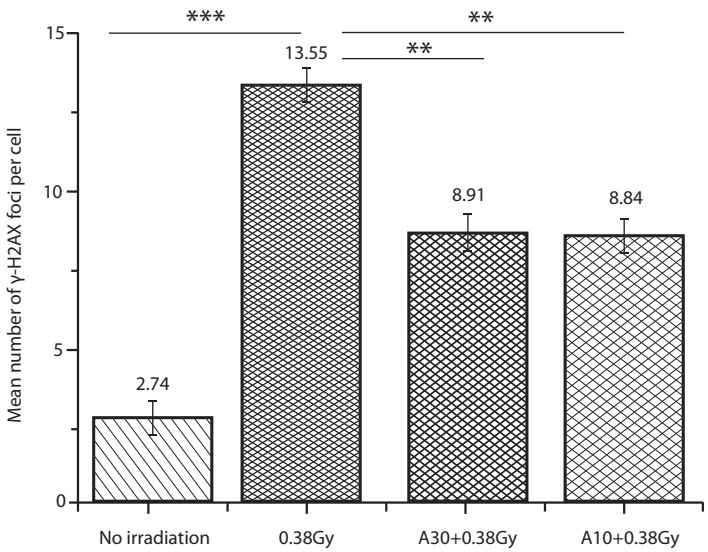
⚠ CAUTION

This glove is not intended for use in primary x-ray beam. The purpose of this radiation protective glove is to protect hands from scattered secondary radiation originating from the x-ray beam during fluoroscopic procedures. Safe use of this glove by or on latex sensitized individuals has ot been established. This product contains natural rubber latex which may cause allergic reactions. This latex glove contain 50 micrograms or less of total water extractable protein per gram.

Attenuation of X-radiation with different models of gloves



The X-radiation attenuation efficiency of the thin (A10) and thick gloves (A30):

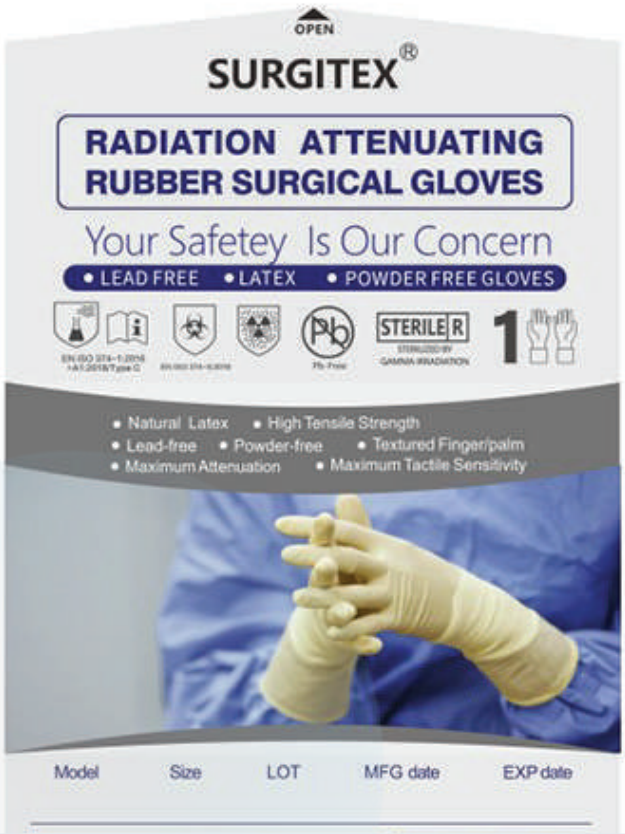


The X-radiation attenuation from the radiation protection gloves

	A10	A30
X-radiation blocking efficacy	42.9%	43.6%

SURGITEX®

PRECISION PROTECTION FOR EVERY PROCEDURE



"SURGITEX" RAG ARE

- FDA APPROVED
- CE APPROVED
- STERILIZED BY GAMMA IRRADIATION
- SINGLE USE ONLY
- RADIATION PROTECTION
- LEAD-FREE

for more information :
www.malray.net

Application to:

- Diagnostic heart catheterization
- Coronary angioplasties
- Angiocardiography
- Gynecology
- Orthopedics
- Nuclear Medicine
- Examination procedures using Fluoroscopy

SURGITEX Lead-free radiation protection gloves

- Radiation Protection Lead-free radiation
- protection gloves
- Powder-free, lead-free
- Hand protection from radiation exposure
- 100% safe, 0% lead , Single use only
- Gamma irradiation sterilized shelf life : 3 years

CAT#	: A10
Thickness	: 0.1mm
Size	: 6.5, 7, 7.5, 8, 8.5, 9
Lead Equiv	: 53% @ 60kV

CAT#	: A30
Thickness	: 0.3mm
Size	: 6.5, 7, 7.5, 8, 8.5, 9
Lead Equiv	: 70% @ 60kV