

CT Number–RLSP Phantom Instructions

(Revised June 2016)

The purpose of this phantom is to test the CT Number to Relative Linear Stopping Power (RLSP) conversion curve that your institution uses in the treatment planning system. The RLSP for each phantom material has been experimentally determined.

Instructions

1. Unscrew the top screw and fill cavity with water. Make sure all air bubbles are removed. Replace screw.
2. Image the phantom using your standard CT protocol. If you have two standard protocols (e.g. 120 kVp and 140 kVp), please image with both protocols.
3. Record the CT parameters used to scan the phantom.
4. Drain the water from the phantom and replace the screw.
5. Obtain and record the CT number (or HU value) for each region shown on page 2. You may wish to sample a few slices near the middle of the phantom. Please obtain a CT Number/HU value for air outside of the phantom as well. Note: the numbers in the image correspond with the numbers written on the phantom.
6. Print a copy of your institution's CT Number-RLSP conversion curve(s).
7. Return phantom, this packet, and conversion curve(s) with pre-paid shipping label.

If you have any questions, please contact:

Paige Taylor	PATaylor@mdanderson.org	713-745-8989
Jessica Lowenstein	JLowenst@mdanderson.org	713-745-8989
IROC Houston	IROCHouston@mdanderson.org	713-745-8989

****PLEASE COMPLETE THIS FORM AND RETURN WITH PHANTOM TO IROC HOUSTON****

Institution: _____

Address: _____

Physicist to receive report: _____

Person to call in case of questions: _____

Phone Number: _____ Email Address: _____

For Office Use Only	CT phantom #	RLSP	Inst #	Date Sent	Date Rec'd

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CT Protocol Parameters	
Scanner Type	
Protocol Name	
kVp	
mAs	
Slice thickness (mm)	
Scan Mode (helical or axial)	
Pitch	
Scan FOV (cm)	
Irradiation date	

7 (air)

Avg HU:

σ :

1
Avg HU:
 σ :

2
Avg HU:
 σ :

3
Avg HU:
 σ :

4
Avg HU:
 σ :

5
Avg HU:
 σ :

6
Avg HU:
 σ :

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6
Avg HU:
 σ :