

Block ID#: _____		
Initial: _____		

## MONITORING OUTPUT OF AN ORTHOVOLTAGE X-RAY BEAM

\*NOTE\*: Please read the instructions on back BEFORE irradiating dosimeters.

Institution: # \_\_\_\_\_ - \_\_\_\_\_ Date Mailed \_\_\_\_\_  
 \_\_\_\_\_ TLD Batch: \_\_\_\_\_  
 \_\_\_\_\_

Date of Irradiation: \_\_\_\_\_ Dosimeter Packet #: \_\_\_\_\_

Person(s) irradiating dosimeters: \_\_\_\_\_

Primary Physicist (receives report): \_\_\_\_\_

Physicist email: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Radiation machine (manufacturer/model): \_\_\_\_\_ Serial Number: \_\_\_\_\_

kVp: \_\_\_\_\_ HVL: \_\_\_\_\_

Calibration Protocol: TG-61 NCRP 69 IAEA Other: \_\_\_\_\_

PSF (BSF) for irradiation field size: \_\_\_\_\_ F-factor (rad/R) [leave blank for TG-61]: \_\_\_\_\_

### TLD Irradiation conditions:

Field size: \_\_\_\_\_ x \_\_\_\_\_ cm<sup>2</sup> OR \_\_\_\_\_ cm diameter circle

Distance from source (target) to top of PLATFORM: \_\_\_\_\_ cm

Timer setting: \_\_\_\_\_ MU Timer/end error: \_\_\_\_\_ MU  
 min min

### Reference point (for irradiation field size):

\*NOTE\*: Data requested below apply to institution's reference point, NOT location of TLD or calibration depth.  
 See item 3 on reverse side for definition of reference point.

Distance from source (target) to reference point (where dose is specified): \_\_\_\_\_ cm

Exposure/dose rate at reference point: \_\_\_\_\_  
 cGy/MU } (check one)  
 cGy/min }  
 R/min }

Dose rate specified in: (check one) { air  
 phantom (full scatter) at \_\_\_\_\_ cm depth or  d<sub>max</sub> (surface)

If your dose rate is specified at a reference point other than d<sub>max</sub>, please provide a depth dose factor (DDF). \_\_\_\_\_

Total exposure/dose delivered to reference point: \_\_\_\_\_  
 cGy muscle } (check one)  
 cGy water }  
 Roentgen in air }

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## INSTRUCTIONS

1. Assemble platform as follows. Unfold the legs and place them on the treatment table with the arrow pointing upward. Place the platform top on the legs with the inscribed square visible on the top of the platform. Before irradiating the TLD, make sure the legs are NOT directly underneath the inscribed square (see diagram below).
2. Set a 10 cm x 10 cm field size with the SSD set to the TOP OF THE PLATFORM (not the top of the block). The light field should align with the inscribed square. If a 10 cm x 10 cm field size is not possible, use the closest field size available. Do not irradiate with field sizes smaller than the TLD packet.
3. Determine the "reference point" for your machine output. The reference point is the point at which you routinely specify the exposure or dose rate in your clinical dosimetry system. Also specify whether your machine output is in air (without backscatter) or in phantom (with backscatter). For example, if you routinely specify dose to  $d_{\max}$ , 50 cm SSD, your reference point is at 50 cm and you would check the boxes indicating "in phantom" and " $d_{\max}$ ". We will correct our TLD reading based on your reference point information.
4. Place the TLD packet label side up in the center of the field and set the time to deliver 300 cGy or 300 R to your reference point.
5. Complete the TLD datasheet on the reverse side of these instructions. Fill in all requested information, as incomplete forms will delay the processing of your TLD. Please send back the TLD via regular U.S. mail using the address label provided. TLD cannot be read until 7 days after irradiation.

**If you wish to return TLD by an express or direct carrier, use the following address: Radiation Dosimetry Services, 8060 El Rio Street, Houston, TX 77054.**

If you have any questions, please call Radiation Dosimetry Services (RDS) at (713) 745-8999 or you may e-mail us at [RDS@mdanderson.org](mailto:RDS@mdanderson.org).

