

## MONITORING OUTPUT OF ELECTRON BEAM THERAPY MACHINE

\*NOTE\*: Please read the instructions on back BEFORE irradiating dosimeters. Use one datasheet for each radiation machine.

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

Date of Irradiation: \_\_\_\_\_

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

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

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

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

Field size (cone): \_\_\_\_\_

Target-Surface Distance: \_\_\_\_\_ cm

Absorbed dose specified as dose to:

Muscle } (check one)  
 Water }

Calibration Protocol:      TG-21      TG-51      Other: \_\_\_\_\_

\*Depth of dose rate (cGy/MU) specification:       $d_{max}$       Other: \_\_\_\_\_

Nominal Beam Energy (MeV)	TLD Plug ID (e.g. G345)	Depth of $d_{max}$ (cm)	Dose Rate at $d_{max}$ (cGy/MU)	Monitor Units Set (MU)	Absorbed Dose at $d_{max}$ (cGy)	Percent Depth Dose
						_____ % at _____ cm
						_____ % at _____ cm
						_____ % at _____ cm
						_____ % at _____ cm
						_____ % at _____ cm
						_____ % at _____ cm

Comments: \_\_\_\_\_  
 \_\_\_\_\_

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## INSTRUCTIONS

1. Set the standard calibration field size or cone. You may use a radiation field area larger than the phantom.
2. Stack the three lucite blocks with central hole on the treatment table centered in the irradiation field. If the three lucite blocks (electron phantom) are not enclosed with the TLD, you should have already received the phantom in a previous TLD shipment. If you cannot find the electron phantom, do not irradiate the electron TLD; contact our office at (713) 745-8999 so we can send another phantom.
3. Set the Target-Surface Distance (TSD) to the top of the lucite blocks.
4. Insert the appropriate plug for the irradiation energy in the central hole with the label side UP. The top of the plug should align with the top of the lucite blocks. The correct plug to use for each energy is indicated in the second column of the datasheet table (front side).
5. Irradiate the lucite blocks with plug to 300 cGy. Remove plug. Repeat steps 4 and 5 for each energy.
6. Fill out all requested information on the datasheet. Use one datasheet per machine. Enclose copies of your depth dose curves for each machine, energy and field size used if we do not have your current curves on file. We will be unable to process your TLD without the depth dose curves. Return all plugs, datasheets and depth dose curves in an envelope or box using the return address label provided via regular U.S. mail. 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 about irradiation of the TLD, please call our office at (713) 745-8999 or you may e-mail us at [RDS@mdanderson.org](mailto:RDS@mdanderson.org).

