PSI Center for Corporate Services

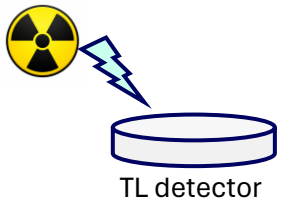
THERMOLUMINESCENCE (TL)

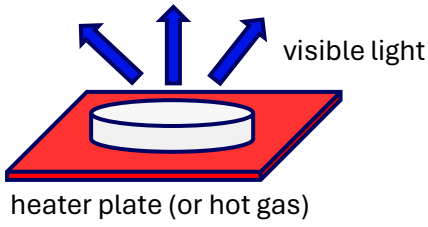
extremity dosimeters for photons and beta rays

DESIGN

PRINCIPLE OF OPERATION

Radiation creates trapped charges in the crystal





visible light intensity is proportional to dose
(heating destroys trapped charges, erasing signal)

SPECIFICATIONS

Minimum detectable dose:
Hp(0.07) = 0.1 mSv*

Maximum dose:
5 Sv*

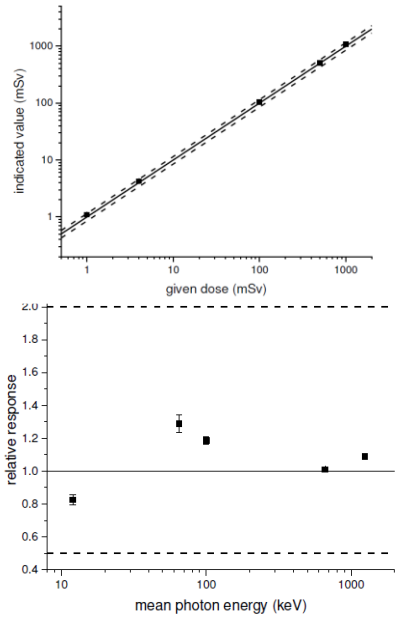
Photon energy range:
10 keV – 10 MeV* (see graph)

Beta energy range:
^{85}Kr - ^{90}Sr/^{90}Y

Fading:
< 10%/month*

Reproducibility:
<5 %*

DATA



* E. G. Yukihara “LiF:Mg,Ti TLD extremity dosimetry using the Lexsyg smart reader”. PSI internal document TM-96-21-596 (2021).

The information provided is for illustrative purposes only and should not be considered a substitute for the original data or details contained in the referenced materials.