



FWT-60-00 Batch Characterization

Batch 1137

Typical Calibration Curve

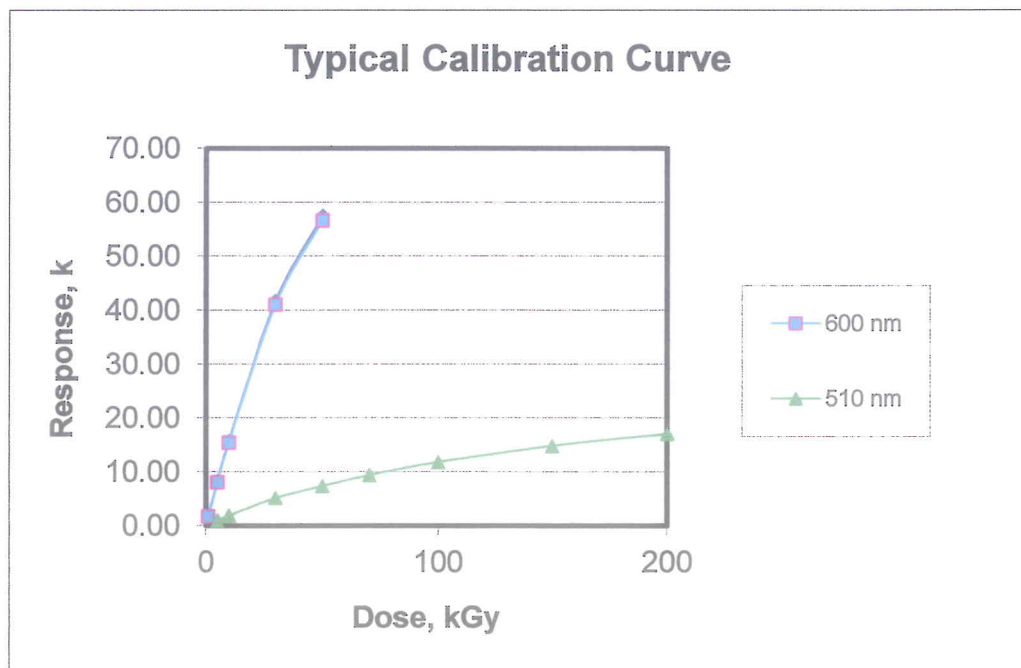
(Dosimeters pre-conditioned to 20 °C and 50%RH)

Dose, kGy	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
1	1.79	1.76	
5	8.28	8.11	0.99
10	15.73	15.42	1.90
30	41.74	41.08	5.17
50	57.53	56.69	7.38
70			9.43
100			11.86
150			14.85
200			17.08

Coefficient of Variation of k

605 nm	600 nm	510 nm
2.6%	2.6%	3.6%

Note: k is the specific absorbance and is determined from the thickness, t, and final and initial absorbances Af and Ai:
 $k = (A_f - A_i) / t$.



This typical calibration curve is provided as a guide to the response of FWT-60-00 Radiachromic Detectors to ionizing radiation. Actual response also depends on processing parameters and on the instrumentation used to measure absorbancies and thicknesses.

Scott A. Larson
 Authorization for Release

10/15/2015
 Date



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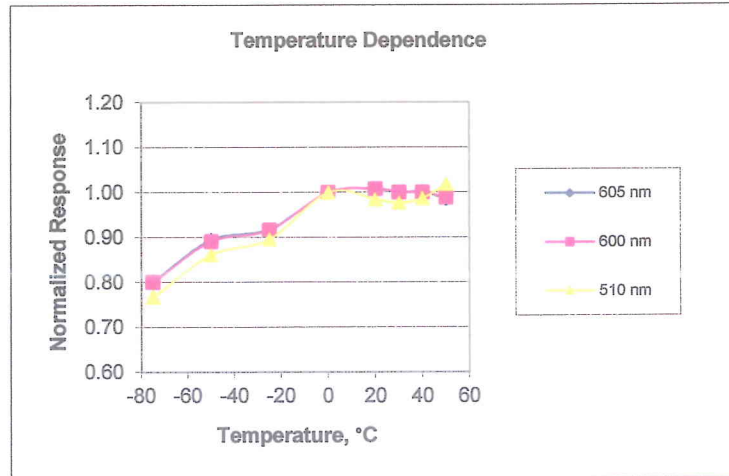
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Temperature Dependence

(Dosimeters pre-conditioned to 20 °C and 50%RH)

T, °C	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
-75	32.25	31.61	3.88
-50	35.96	35.20	4.35
-25	36.90	36.20	4.53
0	40.21	39.48	5.05
20	40.50	39.78	4.98
30	40.19	39.50	4.94
40	40.26	39.49	4.99
50	39.66	39.02	5.14

T, °C	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
-75	0.80	0.80	0.77
-50	0.89	0.89	0.86
-25	0.92	0.92	0.90
0	1.00	1.00	1.00
20	1.01	1.01	0.99
30	1.00	1.00	0.98
40	1.00	1.00	0.99
50	0.99	0.99	1.02



Humidity Dependence

(Dosimeters pre-conditioned to the indicated humidity at 20 °C)

%RH	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
30	42.11	41.50	5.48
40	43.04	42.36	5.45
45	42.37	41.70	5.38
50	42.15	41.46	5.32
55	41.24	40.55	5.19
60	40.35	39.68	5.08

%RH	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
29	0.98	1.00	1.03
40	1.01	1.02	1.02
44	0.99	1.01	1.01
50	0.98	1.00	1.00
55	0.96	0.98	0.98
60	0.94	0.96	0.95

