



FWT-60-00 Batch Characterization
 Batch 1106

Typical Calibration Curve

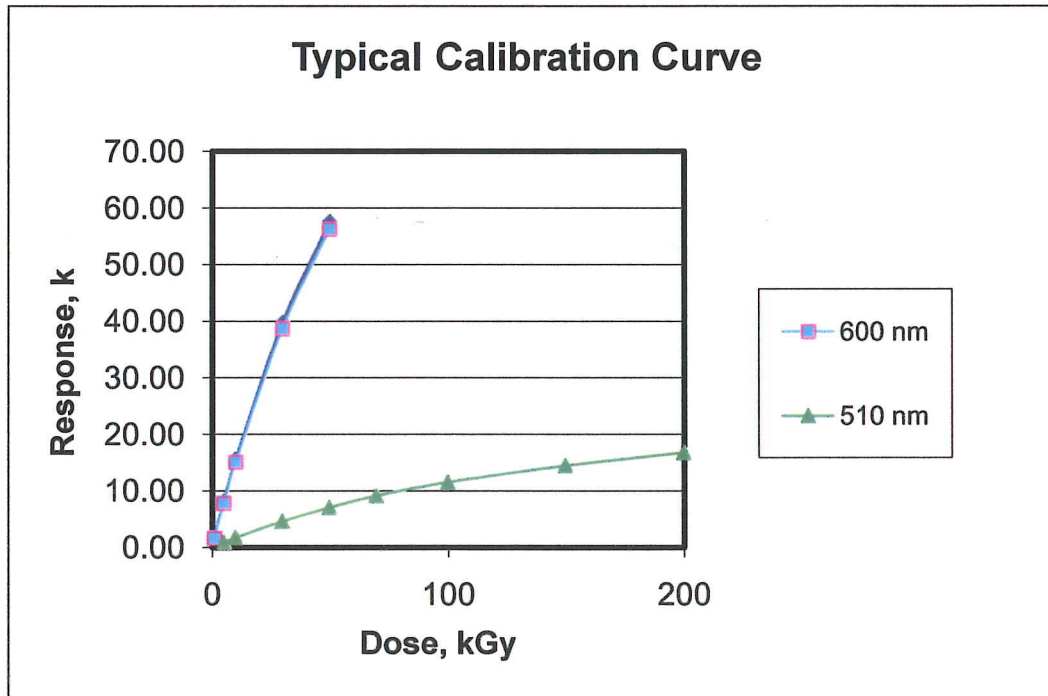
(Dosimeters pre-conditioned to 20 °C and 50%RH)

Dose, kGy	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
1	1.75	1.68	
5	8.15	7.91	0.90
10	15.61	15.16	1.76
30	39.76	38.74	4.63
50	57.56	56.29	7.09
70			9.15
100			11.57
150			14.49
200			16.80

Coefficient of Variation of k

605 nm	600 nm	510 nm
1.7%	1.8%	1.8%

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 the instrumentation used to measure absorbancies and thicknesses.

John C. Reich

 Authorization for Release

11/19/2009

 Date



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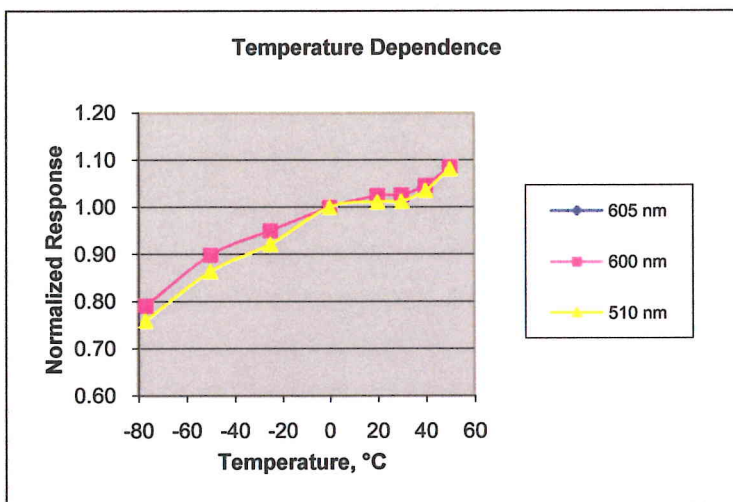
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Temperature Dependence

(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
-77	31.46	30.55	3.57
-50	35.73	34.71	4.06
-25	37.78	36.70	4.33
0	39.67	38.60	4.70
20	40.61	39.57	4.75
30	40.68	39.64	4.76
40	41.48	40.40	4.87
50	42.99	41.90	5.08

T, °C	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
-77	0.79	0.79	0.76
-50	0.90	0.90	0.86
-25	0.95	0.95	0.92
0	1.00	1.00	1.00
20	1.02	1.03	1.01
30	1.03	1.03	1.01
40	1.05	1.05	1.04
50	1.08	1.09	1.08



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
29	41.62	40.64	5.16
40	41.37	40.39	5.01
44	41.11	40.11	4.93
50	40.47	39.48	4.82
55	39.41	38.43	4.68
60	38.10	37.12	4.49

%RH	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
29	1.00	1.03	1.07
40	1.00	1.02	1.04
44	0.99	1.02	1.02
50	0.98	1.00	1.00
55	0.95	0.97	0.97
60	0.92	0.94	0.93

