



FWT-60-00 Batch Characterization

Batch 1086

Typical Calibration Curve

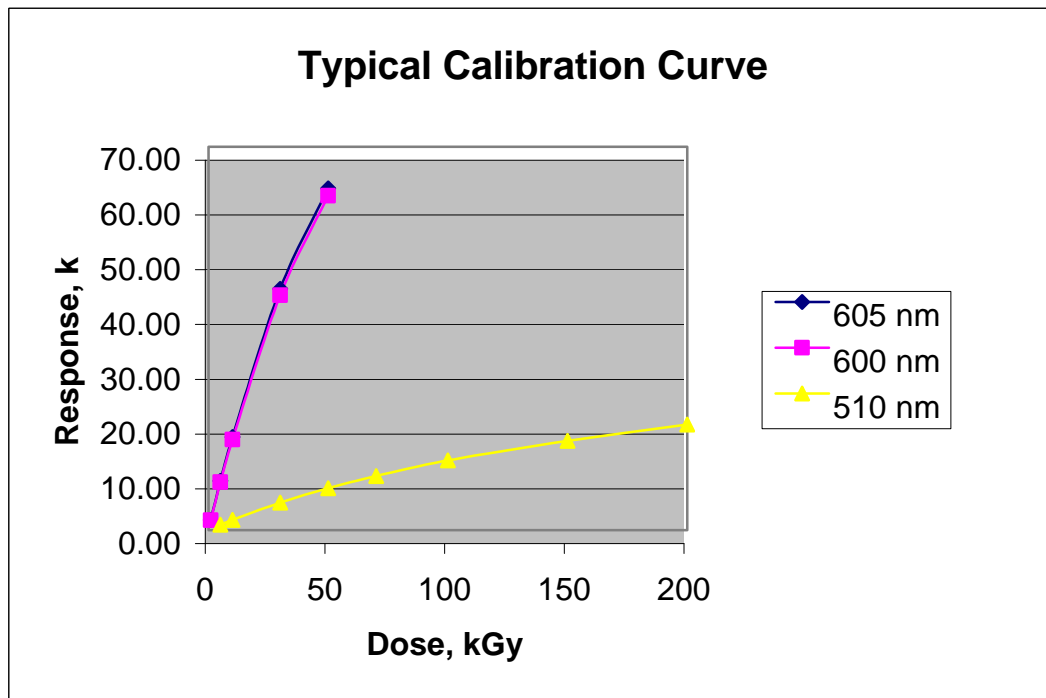
(Dosimeters pre-conditioned to 21.7 °C and 50%RH)
 (Dose rate = 11.081 kGy/hour)

Dose, kGy	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
1	1.89	1.83	
5	9.01	8.74	1.01
10	17.03	16.54	1.90
30	44.05	42.90	5.05
50	62.39	61.04	7.63
70			9.85
100			12.73
150			16.32
200			19.29

Coefficient of Variation of k

605 nm	600 nm	510 nm
1.9%	1.9%	2.7%

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.

Authorization for Release _____

Date _____



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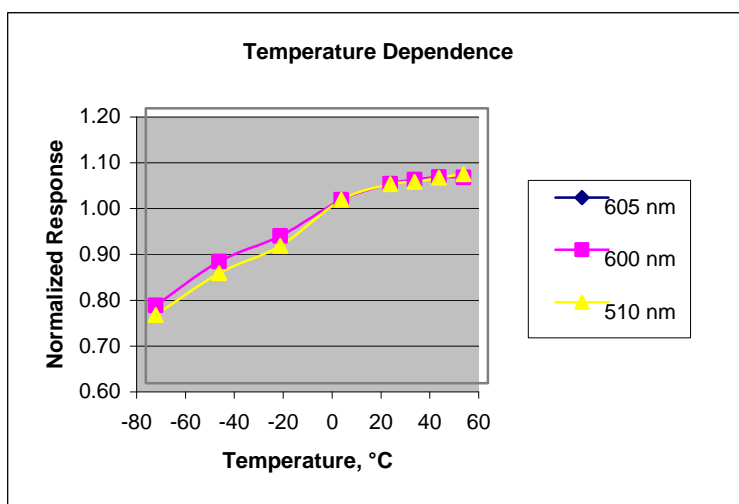
Temperature Dependence

(Dosimeters pre-conditioned to 21.7 °C and 50%RH)

T, °C	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
-76	30.87	30.01	3.51
-50	34.69	33.75	3.94
-25	36.92	35.94	4.22
0	40.04	39.01	4.69
20	41.41	40.38	4.85
30	41.77	40.72	4.87
40	42.03	40.96	4.92
50	41.94	40.92	4.95

T, °C	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
-76	0.77	0.77	0.75
-50	0.87	0.87	0.84
-25	0.92	0.92	0.90
0	1.00	1.00	1.00
20	1.03	1.04	1.03
30	1.04	1.04	1.04
40	1.05	1.05	1.05
50	1.05	1.05	1.06

(Dose rate =15.87 kGy/hour)



Humidity Dependence

(Dosimeters pre-conditioned to the indicated humidity at 21.7 °C)

%RH	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
29	44.31	43.15	5.17
40	44.92	43.76	5.21
45	43.31	42.16	4.99
50	42.30	41.17	4.87
55	40.73	39.64	4.70
62	38.39	37.34	4.56

%RH	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
29	1.02	1.05	1.06
40	1.03	1.06	1.07
45	1.00	1.02	1.02
50	0.97	1.00	1.00
55	0.94	0.96	0.96
62	0.88	0.91	0.94

(Dose rate =12.590 kGy/hour)

