



FWT-60-00 Batch Characterization
Batch 1142

Typical Calibration Curve

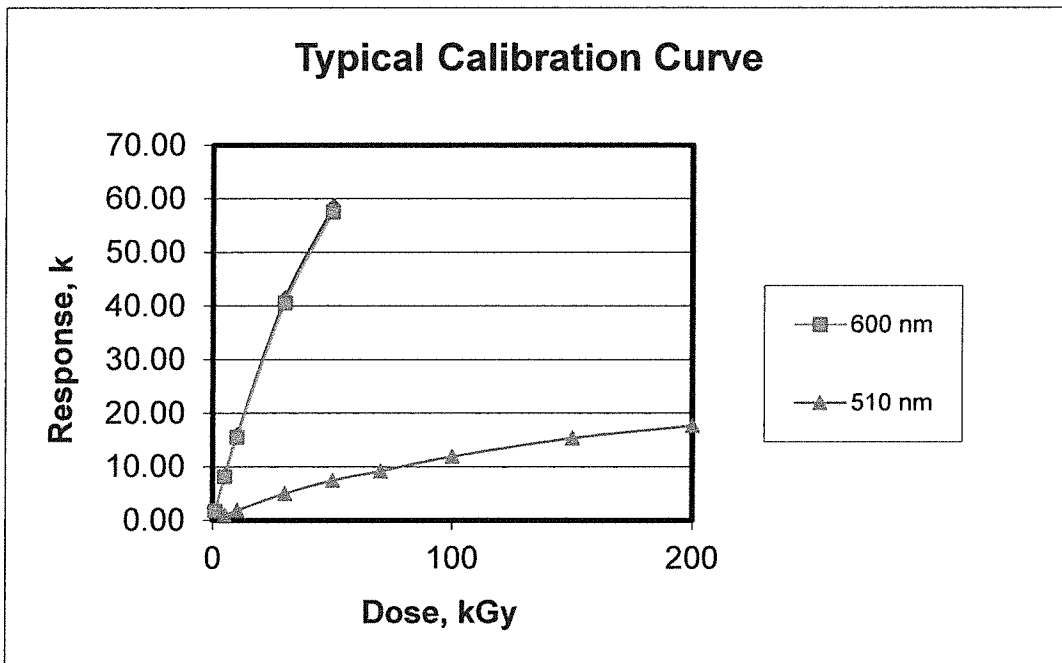
(Dosimeters pre-conditioned to 20 °C and 50%RH)

Dose, kGy	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
1	1.82	1.77	
5	8.37	8.18	0.97
10	15.94	15.55	1.87
30	41.48	40.62	5.02
50	58.58	57.55	7.47
70			9.23
100			11.94
150			15.37
200			17.69

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

6 October 2016
Date



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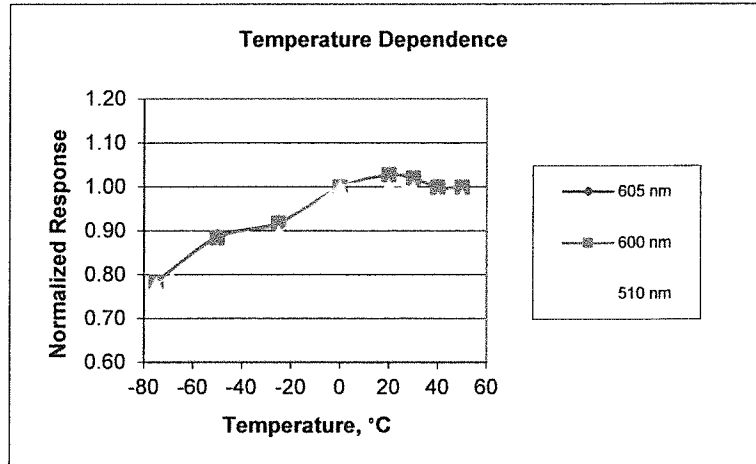
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Temperature Dependence

(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	31.16	30.42	3.83
-50	35.16	34.31	4.20
-25	36.45	35.60	4.40
0	39.68	38.81	4.91
20	40.74	39.89	4.92
30	40.44	39.59	4.90
40	39.65	38.81	4.78
50	39.66	38.81	4.81

T, °C	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
-75	0.79	0.78	0.78
-50	0.89	0.88	0.86
-25	0.92	0.92	0.90
0	1.00	1.00	1.00
20	1.03	1.03	1.00
30	1.02	1.02	1.00
40	1.00	1.00	0.97
50	1.00	1.00	0.98



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	43.22	42.32	5.38
40	43.04	42.15	5.26
45	42.26	41.39	5.14
50	41.41	40.56	5.01
55	40.24	39.39	4.85
60	39.10	38.24	4.69

%RH	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
30	1.04	1.04	1.07
40	1.04	1.04	1.05
45	1.02	1.02	1.03
50	1.00	1.00	1.00
55	0.97	0.97	0.97
60	0.94	0.94	0.94

