Precise Measurement. Proven Performance.

FWT
FAR WEST TECHNOLOGY

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FWT-60-00 Batch Characterization

Batch 1162

Typical Calibration Curve

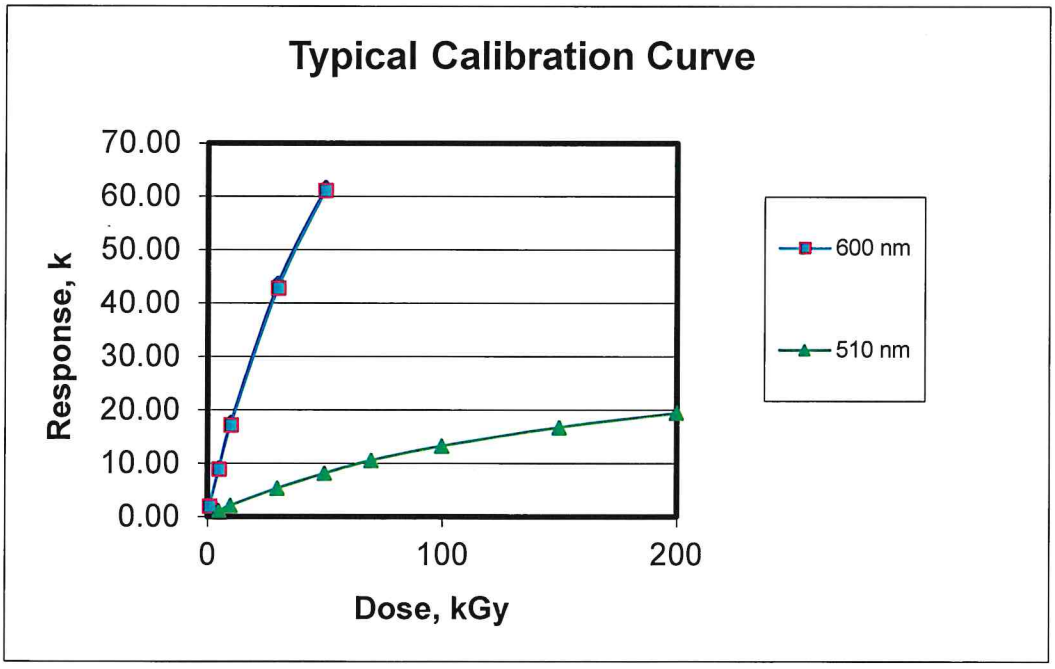
(Dosimeters pre-conditioned to 20 °C and 50%RH)

Dose, kGy	k, mm^{-1} at 605 nm	k, mm^{-1} at 600 nm	k, mm^{-1} at 510 nm
1	2.00	1.95	
5	9.13	8.92	1.12
10	17.59	17.19	2.11
30	43.69	42.84	5.33
50	61.60	61.15	8.12
70			10.56
100			13.24
150			16.74
200			19.45

Coefficient of Variation of k

605 nm	600 nm	510 nm
1.6%	1.5%	1.5%

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

Scot A Larson
Authorization for Release

December 22, 2020
Date

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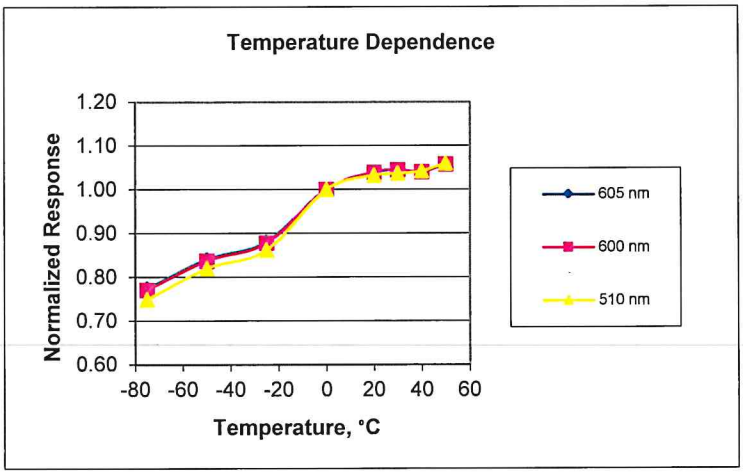
Temperature Dependence

(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	28.86	28.16	3.40
-50	31.36	30.60	3.72
-25	32.86	32.08	3.91
0	37.36	36.55	4.54
20	38.79	37.97	4.68
30	39.03	38.18	4.70
40	38.86	38.02	4.73
50	39.53	38.66	4.81

T, °C	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
-75	0.77	0.77	0.75
-50	0.84	0.84	0.82
-25	0.88	0.88	0.86
0	1.00	1.00	1.00
20	1.04	1.04	1.03
30	1.04	1.04	1.04
40	1.04	1.04	1.04
50	1.06	1.06	1.06



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	44.07	43.21	5.58
40	44.43	43.53	5.48
45	43.67	42.80	5.32
50	43.10	42.24	5.26
55	41.98	41.13	5.11
60	40.80	39.97	5.05

%RH	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
30	1.02	1.02	1.06
40	1.03	1.03	1.04
45	1.01	1.01	1.01
50	1.00	1.00	1.00
55	0.97	0.97	0.97
60	0.95	0.95	0.96