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FWT-60-00 Batch Characterization

Batch 1180

Typical Calibration Curve

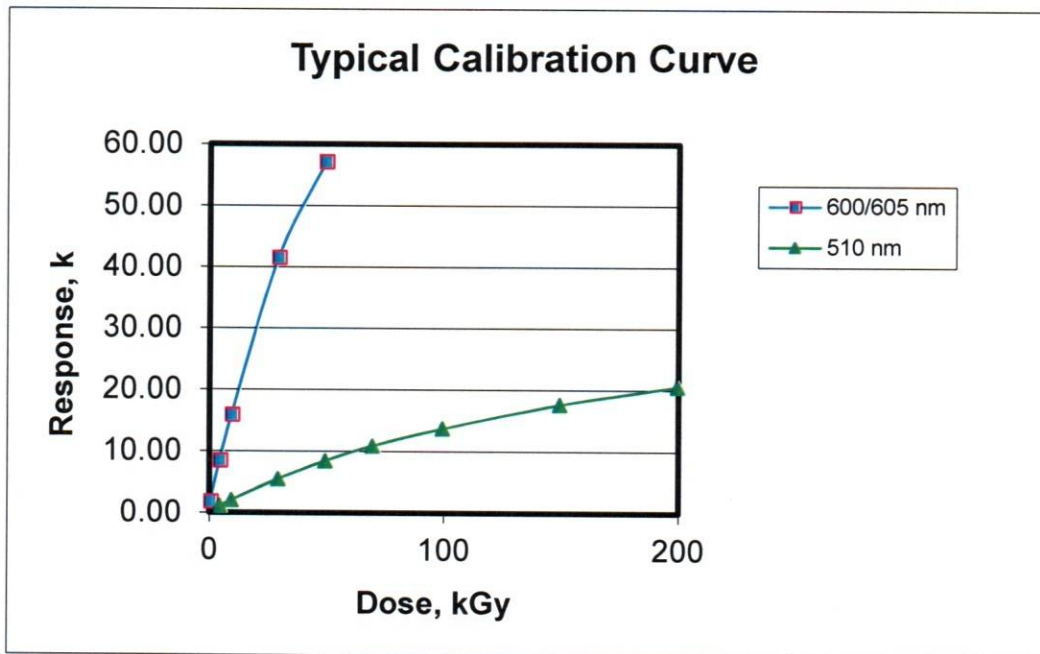
(Dosimeters pre-conditioned to 20 °C and 50%RH)

Dose, kGy	k, mm ⁻¹ at 605 nm	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
1	1.83	1.81	
5	8.63	8.51	1.09
10	16.17	15.95	2.06
30	41.96	41.56	5.48
50	57.35	57.13	8.42
70			10.88
100			13.72
150			17.62
200			20.56

Coefficient of Variation of k

605 nm	600 nm	510 nm
1.4%	1.2%	1.2%

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.

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 Authorization for Release

27 February 2025
 Date



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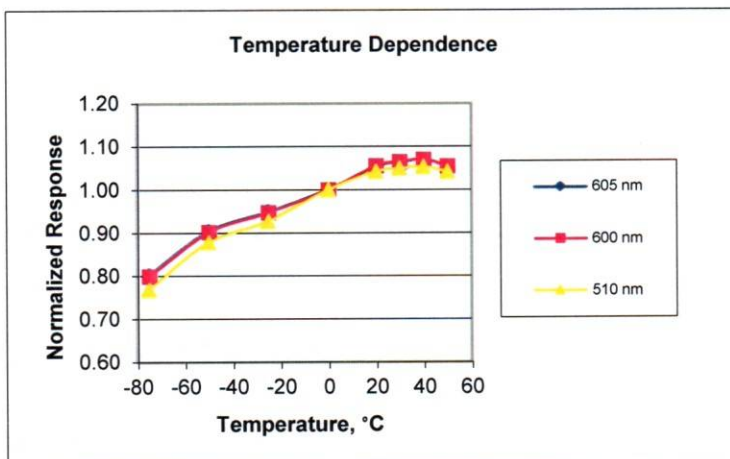
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Temperature Dependence

(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	32.37	31.96	4.11
-50	36.54	36.10	4.70
-25	38.36	37.91	4.97
0	40.43	40.01	5.36
20	42.61	42.21	5.58
30	43.01	42.59	5.62
40	43.24	42.80	5.64
50	42.63	42.18	5.58

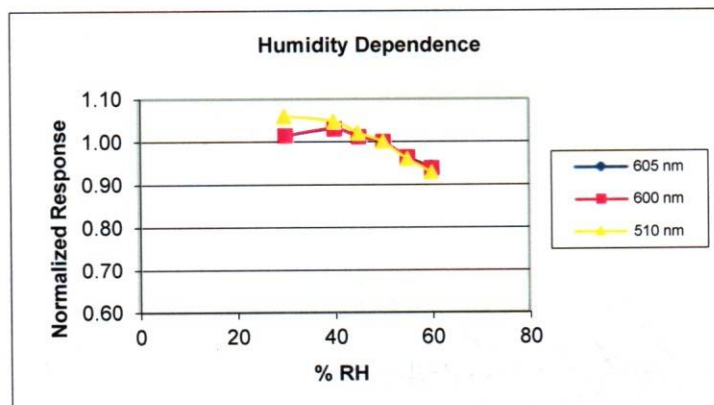


T, °C	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
-75	0.80	0.80	0.77
-50	0.90	0.90	0.88
-25	0.95	0.95	0.93
0	1.00	1.00	1.00
20	1.05	1.06	1.04
30	1.06	1.06	1.05
40	1.07	1.07	1.05
50	1.05	1.05	1.04

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	43.10	42.73	5.90
40	43.77	43.38	5.84
45	42.98	42.59	5.69
50	42.48	42.09	5.58
55	40.96	40.58	5.35
60	39.89	39.49	5.17



%RH	Norm. k at 605 nm	Norm k at 600 nm	Norm k at 510 nm
30	1.01	1.02	1.06
40	1.03	1.03	1.05
45	1.01	1.01	1.02
50	1.00	1.00	1.00
55	0.96	0.96	0.96
60	0.94	0.94	0.93