



# FAR WEST TECHNOLOGY, INC.

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## FWT-60-00 Characterization

Batch 1080

### Coefficient of Variation of k

600 nm	510 nm
2.2%	2.6%

### Variation in dose from ± 3% variation in k at 30 kGy

600 nm	510 nm
3.9%	3.5%

### Typical Calibration Curve

(Dosimeters pre-conditioned to 20 °C and 50%RH; Dose Rate = 3.8 kGy/h)

Dose, kGy	k, mm <sup>-1</sup> at 600 nm	k, mm <sup>-1</sup> at 510 nm
1	1.73	--
5	7.97	0.91
10	15.04	1.73
30	38.55	4.61
50	55.56	6.99
70	--	8.95
100	--	11.31
150	--	14.54
200	--	16.17

### Temperature Dependence

(Dosimeters pre-conditioned to 20 °C and 50%RH; Dose 34.2 kGy; Dose Rate = 17.4 kGy/h)

T, °C	-76	-50	-25	0	20	30	40	50
k, mm <sup>-1</sup> at 600 nm	35.02	38.63	41.41	42.80	44.29	43.43	44.21	44.40
k, mm <sup>-1</sup> at 510 nm	4.09	4.56	4.94	5.25	5.38	5.29	5.50	5.51

### Humidity Dependence

(Dosimeters pre-conditioned to the indicated humidity at 20 °C; Dose 30 kGy; Dose Rate = 1.1 kGy/h)

%RH	28	33	38	43	48	53
k, mm <sup>-1</sup> at 600 nm	38.34	39.88	39.39	38.66	38.24	38.74
k, mm <sup>-1</sup> at 510 nm	4.80	4.89	4.79	4.70	4.61	4.78

Note: k is the specific absorbance and is determined from the thickness, t, and final and initial absorbances A<sub>f</sub> and A<sub>i</sub>;  $k = (A_f - A_i) / t$ .

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 optical densities and thicknesses.

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Authorization for release

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Date