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FWT-60-00 Characterization Batch 1062

Coefficient of Variation of k

600 nm	510 nm
2.0%	2.6%

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

600 nm	510 nm
3.9%	3.7%

Typical Calibration Curve

(Dosimeters pre-conditioned to 25 °C and 50%RH)

Dose, kGy	k, mm ⁻¹ at 600 nm	k, mm ⁻¹ at 510 nm
1	1.82	--
5	8.07	0.90
10	14.99	1.70
30	39.34	4.69
50	55.60	6.97
70	62.04	8.67
100	--	10.71
150	--	12.91
200	--	14.95

Temperature Dependence

(Dosimeters pre-conditioned to 25 °C and 50%RH)

T, °C	-76	-50	-25	0	20	30	40	50
k, mm ⁻¹ at 600 nm	31.71	33.80	35.96	38.79	39.69	39.29	39.47	40.02
k, mm ⁻¹ at 510 nm	3.85	4.05	4.30	4.63	4.75	4.71	4.80	4.88

Humidity Dependence

(Dosimeters pre-conditioned to the indicated humidity at 25 °C)

%RH	35	40	45	50	55	60
k, mm ⁻¹ at 600 nm	39.73	39.18	38.53	38.04	37.04	35.18
k, mm ⁻¹ at 510 nm	4.84	4.71	4.66	4.53	4.40	4.23

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

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.

Authorization for release

Date