



HPNW
HEALTH PHYSICS NORTHWEST

October 30, 2023

Josh Bennett
Chief Executive Officer
Cavo Med LLC
23600 Mercantile Road, Suite 100
Beachwood, Ohio 44122

Dear Josh:

Enclosed are the attenuation and lead equivalency results for the sample that was recently submitted to Health Physics Northwest. At your request all tests were performed in accordance with ASTM test Method F2547-18. The documentation on the following page contains all of the information regarding this testing.

If you have any questions or need any additional information, please contact our office.

Sincerely,

Matt Brien, BS
Medical Physicist

Encl.

ASTM test Method F2547-18 14.2.1 Test Information

Date of Testing	October 30, 2023
Place of Testing	Health Physics Northwest
Name of Individual Performing the Testing	Matt Brien, BS Health Physics Northwest
Manufacturer / Model of X-ray Generator	Trex TM50 (G-9750A)
Manufacturer / Model of X-ray Tube	Varex Imaging Corporation / A-192

Testing Parameters

Set kVp	59	89	109	131
Measured kVp	59.8	90.0	109.7	130.2
mAs	57	44	35	25
Half-Value Layer (mm Al)	2.88	4.32	5.53	6.71

All exposure, kVp, and HVL measurements performed with an Unfors RaySafe X2 R/F sensor, Serial No.: 218431 calibrated April 17, 2023.

ASTM test Method F2547-18 14.2.3 Test Results

Sample Designation	Number of Layers	Attenuation			
		60 kVp	90 kVp	110 kVp	130 kVp
NL-250 2850 GS MK ±	2	99.8%	97.4%	94.8%	91.7%

Sample Designation	Number of Layers	Lead Equivalency (mm Pb)			
		60 kVp	90 kVp	110 kVp	130 kVp
NL-250 2850 GS MK ±	2	0.54*	0.56	0.49	0.43

*This sample attenuates more than 99.5% of X-rays produced at this tube potential. This approaches the limits for accurately determining lead equivalency. The percent error for determining lead equivalency under these conditions is significantly higher than the percent error for samples with lower attenuation.