HPNW
HEALTH PHYSICS NORTHWEST

February 23, 2023

Jarrod Parasmo
President
Protech Medical
1360 North Killian Drive, Suite 2
Lake Park, Florida 33403

Dear Jarrod:

Enclosed are the attenuation and lead equivalency results for the samples that were recently submitted to Health Physics Northwest. At your request, all tests were conducted in accordance with IEC 61331-1 Edition 2.0 2014-05, using an inverse broad beam geometry. The documentation on the following pages 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.

7525 SE Lake Road, Milwaukie, Oregon 97267
Phone: 503-620-6617 Fax: 503-684-5548
www.hpnw.com

Test Report

1.) Name and address of laboratory (and location of performed tests):
Health Physics Northwest
7525 SE Lake Road
Milwaukie, Oregon 97267

2.) Unique identification of test report:
Report 142

3.) Name and address of customer:
Protech Medical
1360 North Killian Drive, Suite 2
Lake Park, Florida 33403

4.) Identification of the methods used:
- IEC 61331-1: Edition 2.0 2014-05
    - Inverse Broad Beam Condition

5.) Description of, condition of, and unambiguous identification of the tested items:
- Test 1
    - Prolite IEC 0.25
    - Target GSM: 2,850
    - Actual GSM: 2,870
    - Number of Layers: 1
- Test 2
    - Prolite IEC 0.50
    - Target GSM: 2,850
    - Actual GSM: 2,870 + 2,900
    - Number of Layers: 2

6.) Date of receipt of all test items:
February 17, 2023

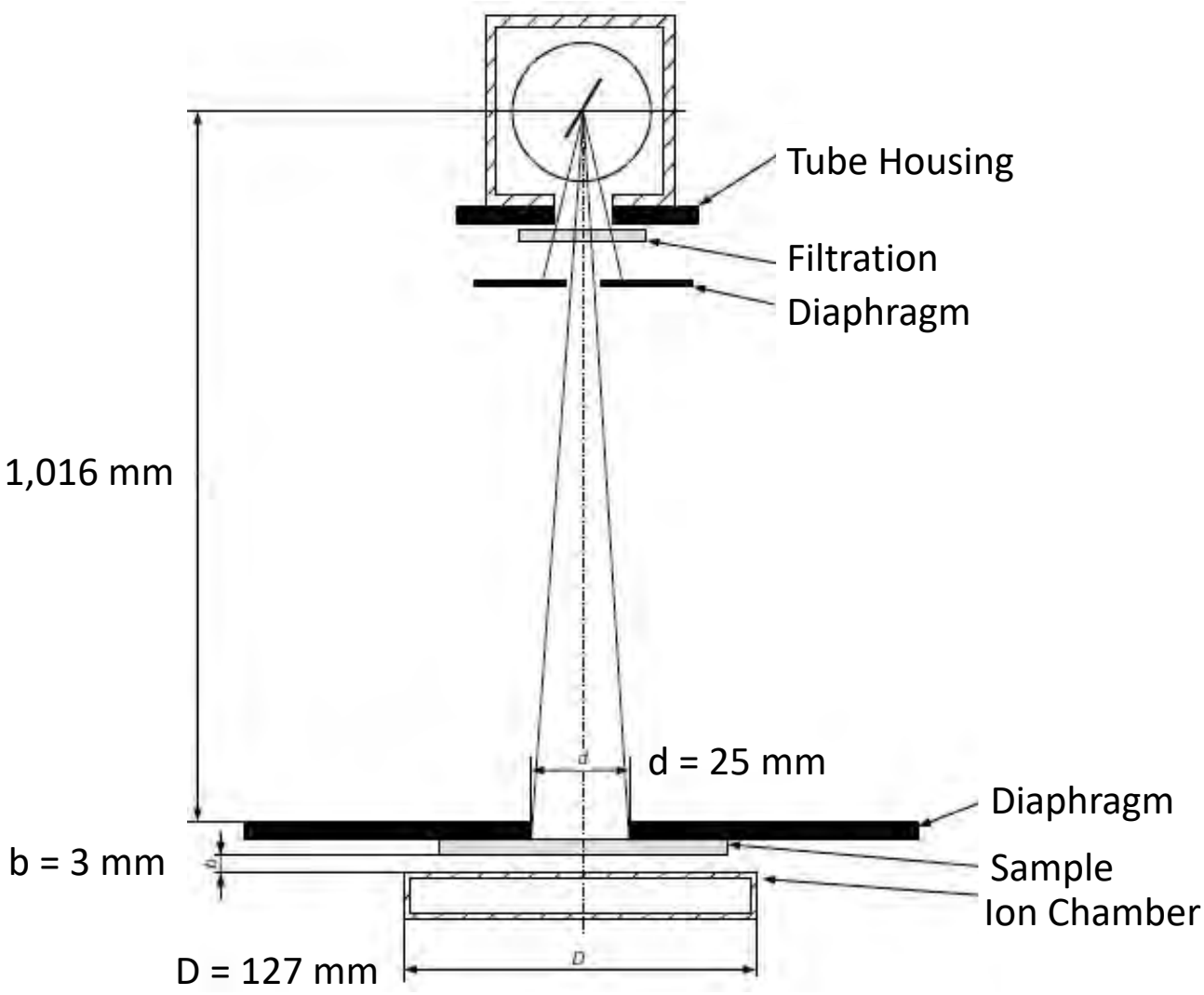
7.) Date of testing:
February 22, 2023

8.) Dates of calibration of equipment used for this testing:
- January 17, 2023 – Unfors RaySafe X2 R/F Sensor
  (used to measure and kV and half-value layer)
- April 26, 2021 – Fluke ion-chamber
  (used to measure exposure)

9.) Identification of person authorizing the test report:
Jarrod Parasmo, Protech Medical

Test Report

Measuring arrangement with an inverse broad beam condition (IEC 61331-1: 2014-05)
Not Drawn to Scale



Test Report

Radiation Qualities and Signal to Noise Condition (IEC 61331-1: 2014-05)

Set X-ray Tube Voltage	Measured X-ray Tube Voltage	First Half-Value Layer	Signal to Noise Condition
59 kV	60.2	2.12 mm Al	Pass
69 kV	69.9	2.48 mm Al	Pass
79 kV	80.0	2.78 mm Al	Pass
89 kV	89.8	3.08 mm Al	Pass
99 kV	99.8	3.46 mm Al	Pass
110 kV	110.1	3.83 mm Al	Pass
131 kV	130.4	4.49 mm Al	Pass
150 kV	148.3*	5.17 mm Al	Pass

*This measured X-ray tube voltage was obtained with the generator's maximum X-ray tube voltage setting.

Test Report

Test 1: Prolite IEC 0.25 (1 Layer):

Attenuation Ratio	15.56:	inverse broad beam	60 kV	HVL =	2.12 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	12.46:	inverse broad beam	70 kV	HVL =	2.48 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	10.15:	inverse broad beam	80 kV	HVL =	2.78 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	8.35:	inverse broad beam	90 kV	HVL =	3.08 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	7.25:	inverse broad beam	100 kV	HVL =	3.46 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	6.38:	inverse broad beam	110 kV	HVL =	3.83 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	5.65:	inverse broad beam	130 kV	HVL =	4.49 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	4.96:	inverse broad beam	148 kV	HVL =	5.17 mm Al	IEC 61331-1: 2014-05

Lead Equivalent	0.22 mm Pb:	inverse broad beam	60 kV	HVL =	2.12 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.23 mm Pb:	inverse broad beam	70 kV	HVL =	2.48 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.24 mm Pb:	inverse broad beam	80 kV	HVL =	2.78 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.24 mm Pb:	inverse broad beam	90 kV	HVL =	3.08 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.24 mm Pb:	inverse broad beam	100 kV	HVL =	3.46 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.23 mm Pb:	inverse broad beam	110 kV	HVL =	3.83 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.23 mm Pb:	inverse broad beam	130 kV	HVL =	4.49 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.22 mm Pb:	inverse broad beam	148 kV	HVL =	5.17 mm Al	IEC 61331-1: 2014-05

Test 2: Prolite IEC 0.50 (2 Layers):

Attenuation Ratio	24.08:	inverse broad beam	60 kV	HVL =	2.12 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	22.21:	inverse broad beam	70 kV	HVL =	2.48 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	19.10:	inverse broad beam	80 kV	HVL =	2.78 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	16.21:	inverse broad beam	90 kV	HVL =	3.08 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	14.22:	inverse broad beam	100 kV	HVL =	3.46 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	12.82:	inverse broad beam	110 kV	HVL =	3.83 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	11.72:	inverse broad beam	130 kV	HVL =	4.49 mm Al	IEC 61331-1: 2014-05
Attenuation Ratio	10.44:	inverse broad beam	148 kV	HVL =	5.17 mm Al	IEC 61331-1: 2014-05

Lead Equivalent	0.51 mm Pb:	inverse broad beam	60 kV	HVL =	2.12 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.51 mm Pb:	inverse broad beam	70 kV	HVL =	2.48 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.52 mm Pb:	inverse broad beam	80 kV	HVL =	2.78 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.51 mm Pb:	inverse broad beam	90 kV	HVL =	3.08 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.50 mm Pb:	inverse broad beam	100 kV	HVL =	3.46 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.49 mm Pb:	inverse broad beam	110 kV	HVL =	3.83 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.45 mm Pb:	inverse broad beam	130 kV	HVL =	4.49 mm Al	IEC 61331-1: 2014-05
Lead Equivalent	0.42 mm Pb:	inverse broad beam	148 kV	HVL =	5.17 mm Al	IEC 61331-1: 2014-05