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CALIBRATION CERTIFICATE
校正証明書
 of the **PM1603A** 腕時計型個人線量計 シリアル番号

Manufacturer: "Polimaster" Ltd., 51, F. Skoriny Street, 220141, Minsk, Republic of Belarus.

Calibration is performed by "Polimaster Ltd." Standards laboratory at the dosimetric plants Nos.1,2 (Certificate of calibration No.48-482365/1 of 01/04/2011, No.48-482365/2 of 01/04/2011).

Calibration was performed using reference sources of Cs¹³⁷.

1. Relative error of individual dose equivalent rate (DER) measurements.

Conventional true DER value (線量率)	Mean indicated value (線量計の表示値)	Error of measurement (測定誤差)	Confidence limit of the error (誤差の信頼限界)	Allowable error (accuracy) (許容誤差)
\dot{H}_{jo} , mSv/h	\dot{H}_j , mSv/h	Q_j , %	δ , %	δ_a , %
Background H_b		-	-	-
0,003				
0,8				
80				
1500				
4000				

計算方法: $Q_j = \left| \frac{(\dot{H}_j - \dot{H}_b) - \dot{H}_{jo}}{\dot{H}_{jo}} \right| \cdot 100\%$; $\delta = 1.1 \sqrt{(Q_0)^2 + (Q_j)^2}$;

$\delta_a = \pm(15 + 0.02/\dot{H}_{jo} + 0.003\dot{H}_{jo})\%$

Q_0 - error of the dosimeter system, $Q_0 = 4\%$.

2. Relative error of individual dose equivalent (DE) measurements.

Conventional true value (照射線量率)	DE accumulation time (積算時間)	Calculated DE (積算線量の計算値)	Indicated DE (積算線量の測定値)	Error of measurement (測定誤差)	Confidence limit of the error (誤差の信頼限界)	Allowable error (accuracy) (許容誤差)
\dot{H}_{jo} , mSv/h	T, min	H_{oj} , mSv	H_j , mSv	Q_j , %	δ , %	δ_a , %
0,8	30	0,4	0,376			

計算方法: $H_{oj} = \dot{H}_{jo} \cdot T$

$Q_j = \left| \frac{H_j - H_{oj}}{H_{oj}} \right| \cdot 100\%$; $\delta = 1.1 \sqrt{(Q_0)^2 + (Q_j)^2}$; $\delta_a = \pm 15\%$

If $\delta < \delta_a$ the dosimeter meets the requirements.

Conclusion: The wristwatch type dosimeter PM1603A (No.####) meets the requirements and may be used as a measuring instrument.



Head of Quality Management Department:

Date of calibration: