

RSO, Inc.
P.O. Box 1450
Laurel, MD 20725
(301) 953-2482

RSO Job No. 13361

Certificate of Calibration

19-10306-01
03004532

ISSUED TO: RSO, Inc.
5206 Minnick Road
Laurel, MD 20707

INSTRUMENT: LUDLUM
MODEL: 2221
TYPE: RATEMETER
SN: 89666

CONTACT: Greg Smith
PHONE: (301) 953-2482

PO NO:

RSO, Inc. certifies that on 04/12/2019 the above described instrument was calibrated using a radioactive source to determine the efficiency for a specific radionuclide(s) and using electronically generated pulse for the linearity. Pulsed using Ludlum 500-2, S/N 159110.

The results are tabulated below. Calibration is traceable to NIST.

		Calibration Data						
	RANGE	EXPECTED	OBSERVED		C.F.	NOTE		
ANALOG	DATA	100	100	cpm	1.00			
		400	400	cpm	1.00			
		1000	1000	cpm	1.00			
		4000	4000	cpm	1.00			
		10000	10000	cpm	1.00			
		40000	40000	cpm	1.00			
		100000	100000	cpm	1.00			
		400000	400000	cpm	1.00			
		SCALER	DATA	100	100	cnts	1.00	
				400	400	cnts	1.00	
1000	1000			cnts	1.00			
4000	3990			cnts	1.00			
10000	9980			cnts	1.00			
40000	39940			cnts	1.00			
100000	99880			cnts	1.00			
400000	399290			cnts	1.00			
C.F. AVERAGE					1.00			

Notes

Probe type(s) Probe1: PANGM Probe2: Probe3:
MODEL SER# WINDOW GEOMETRY VOLT ISOTOPE 1 EFF.(%) ISOTOPE 2 EFF.(%) ISOTOPE 3 EFF.(%) ISOTOPE 4 EFF.(%)
44-9 PR115498 FIXED CONTACT 906 Te99m 13

* RSO#437, source at contact with probe. Window Switch position = OUT.
Threshold set to 60 mV; Window set to 3294 mV.

Note: "As Found" condition +/- 10% of Expected values unless indicated.

INSTRUMENT CHECKS

BATTERY CHECK: NORMAL
CHECK SOURCE 1: S:90 READING: 16 kcpm
CHECK SOURCE 2: N/A READING:

ENVIRONMENTAL

TEMP: 23°C
PRESS: 767 mmHg
HUMID: 35 %

THE SUGGESTED RECALIBRATION DATE FOR THIS INSTRUMENT IS 04/12/2020

Calibrated By:

Greg Smith
Greg Smith

Reviewed By:

[Signature]

Cal Date: 04/12/2019

Maryland License MD-33-021-01

23170

611433
NMSS/RGN MATERIALS-C02

Rec'd. in LAT - 04/15/2019