

# Columbus Hospital

495 NO. THIRTEENTH ST. • NEWARK, N. J. 07107-1397 • (201) 268-1400

April 10, 1989

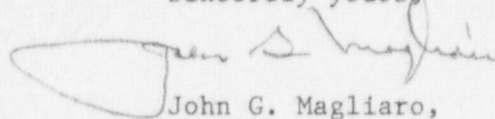
John E. Glenn, PhD, Chief  
Nuclear Materials Safety Section A  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Dear Dr. Glenn:

This is in response to your letter of March 30, 1989, regarding the recent inspection at this facility. Please be advised that a "Calicheck" Dose Calibrator Linearity Test Kit has been purchased. This will allow performance of linearity tests immediately following repair or upon acquisition of loaner units. With regards to this, we are confused about Item 2 of Appendix A. The Model CRC-30 dose calibrator was returned to us on May 9, 1988 and the linearity test was started. It was performed con-currently with patient examinations in order that these vital patient services would not be curtailed. In addition, a linearity test was performed by Capintec following repair of the unit. Please refer to the attached. In light of this, we would like Item 2 rescinded.

Should you require any additional information, please do not hesitate to contact us at (201) 268-1484.

Sincerely yours,



John G. Magliaro,  
Administrator

8905180341 890503  
REQ1 LIC30  
29-07213-03 PNU

# Columbus Hospital

495 NORTH THIRTEENTH STREET • NEWARK, NEW JERSEY 07107-1397 • (201) 268-1400

started 5-9-88 9<sup>00</sup>

## NUCLEAR MEDICINE DEPARTMENT

### QUARTERLY LINEARITY TEST

#### CAPINTEC DOSE CALIBRATOR

MODEL # CRC-30

SERIAL # 30120

\* Linearity done

after returned from capintec  
for repairs

TIME, HRS.	MEASURED READING	CORRECTION FACTOR	CALCULATED READING	WITHIN 5% RANGE
8 <sup>50</sup> 3 <sup>15</sup>	0759 77.2 mCi	16	77.87 m	✓
	6 37.5 mCi	8	36.76 m	✓
8 <sup>45</sup> 3 <sup>20</sup>	24 510 4.87 mCi	1.00	4.87 m	✓
	30 2.56 mCi	0.50	2.44 <del>2.75</del> m	✓
9 <sup>30</sup> 3 <sup>00</sup>	48 511 281 mCi	0.063	279 m	✓
	54 148.2 mCi	0.031	152 m	✓
8 <sup>55</sup>	72 512 18.0 mCi	0.004	19 m	✓

**TECHNIQUE:** Place approximately 30 mCi of Tc-99m in an empty vial, assay in dose calibrator and note time. Take additional readings at 6, 24, 30, 48, 54 and 72 hour intervals. Place in "Measured Readings" column. Use the 24-hour reading as the standard. Multiply this value by the Correction Factor for your "Calculated Reading." The ratio of measured to Calculated readings should be  $\pm 5\%$ . (ie - 0.95 to 1.05)

DATE:

5/18/88

INITIALS:

JMB

COMMENTS:

all OK - some CF's changed  
to show time discrepancies  
& also see graph



## Model CRC-30 Radioisotope Dose Calibrator

serial no. 30120

Chamber: Y7379

Power Supply Tested ☒

Iometer Tested ☒

Bias Battery Tested ✓

## Calibration

Calibration standards used for Instrument Calibration.

Radionuclide	Activity	Accuracy	Instrument Reading
Co-60	<u>116.8</u> $\mu\text{Ci}$	$\pm 1.8 \%$	set*
Co-57	<u>631</u> $\mu\text{Ci}$	$\pm 1.9 \%$	set*
Cs-137	<u>7323</u> $\text{mCi}$	$\pm 2.3 \%$	<u>736</u> $\text{mCi}$

\* Co-57 and Co-60 standards are used to set the calibration.

LINEARITY TEST (Optional)

Linearity of the chamber is tested by comparing the ratio of chamber outputs for high activity and low activity Tc-99m samples to that from the standard chamber.

☒ < 5% saturation at 2 Ci

☐ > 5% saturation at 2 Ci

DATE: 5/3/88

Frank P. Popes  
Test Engineer

Remarks on back →