

CERTIFICATE OF CALIBRATION

MODEL CAL2600 GAMMA STANDARD

Radionuclide: Cs-137 **Activity:** 3.408 kBq (92.11 nCi)
Serial Number: 129792 **Reference Date:** 1200 PDT July 1, 2008
Half Life⁽¹⁾: 30.0 ± 0.2 years

PRINCIPAL EMISSIONS⁽¹⁾

Type	Energy (keV)	Intensity (%)
gamma	661.660	85.21

SOURCE DESCRIPTION

Active Diameter: 1 mm **Backing:** 1 mm plastic
Overall Diameter: 25.4 mm **Cover:** 1 mm plastic
Thickness: 3.2 mm

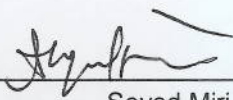
METHOD OF CALIBRATION

The source was calibrated on a high purity germanium detector using a Cs-137 efficiency at 661.660 keV. This efficiency was established and verified through ongoing intercomparisons with the National Institute of Standards and Technology. This standard is indirectly (implicitly) traceable to the National Institute of Standards and Technology.

North American Scientific, Inc. actively participates in the Radioactivity Measurements Assurance Program conducted by the National Institute of Standards and Technology in cooperation with the Nuclear Energy Institute.

TOTAL UNCERTAINTY (99% Confidence Level)

Systematic uncertainty	3.00%
Random uncertainty	0.92%
Total uncertainty (quadratic sum)	<u>± 3.14%</u>


Seyed Miri
Calibration Laboratory Manager

June 30, 2008

Date

REFERENCES

(1) Table of Radioactive Isotopes, 7th edition, 1986.

• LEAK TEST CERTIFICATION ON REVERSE •

20200 Sunburst Street, Chatsworth, CA 91311 • PH: (818) 734-8600 • Fax: (818) 734-5200