

**OHIO DEPARTMENT OF HEALTH
LICENSE FOR RADIOACTIVE MATERIAL**

Pursuant to Chapter 3748 of the Ohio Revised Code, and in reliance on statements and representations made by the licensee, a license is hereby issued authorizing the licensee named herein to receive, acquire, possess, and transfer radioactive material as designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the applications of Chapter 3748 of the Ohio Revised Code and all applicable rules promulgated thereunder. This license is subject to all applicable rules, regulations and orders of the Ohio Department of Health now or hereinafter in effect and to any conditions specified below.

LICENSEE	LICENSE NUMBER
1. NUCON International	3. 03225250036
2. 7000 Huntley Road Columbus, Ohio 43229	EXPIRATION DATE
	4. September 1, 2013
	FILE NUMBER - ID NUMBER
	5. 500403 - 4887

<p>6. RADIOACTIVE MATERIAL</p> <p>A. Any radioactive material with atomic numbers 1-83, inclusive with half-lives less than or equal to 120 days.</p> <p>B. Any radioactive material with atomic numbers 1-83, inclusive with half-lives greater than 120 days.</p> <p>C. Any radioactive material</p> <p>D. Iodine-125</p> <p>E. Iodine-131</p> <p>F. Krypton-85</p> <p>G. Hydrogen-3</p> <p>H. Nickel-63</p> <p>I. Mercury-203</p> <p>J. Radium-226</p> <p>K. Cobalt-60</p> <p>L. Americium-241</p> <p>M. Proactinium-234</p>	<p>7. CHEMICAL AND/OR PHYSICAL FORM</p> <p>A. Trace levels present in analytical samples</p> <p>B. Trace levels present in analytical samples</p> <p>C. Contaminated filter trays and test equipment</p> <p>D. Liquid</p> <p>E. Liquid</p> <p>F. Gas</p> <p>G. Foil sources</p> <p>H. Sealed sources</p> <p>I. Liquid</p> <p>J. Radium foil source, 1/4 inch wide by 2 inches long, in a sealed vial</p> <p>K. Sealed sources (Isotope Products Labs, Model 193)</p> <p>L. Sealed source</p> <p>M. Sealed source</p>	<p>8. MAXIMUM QUANTITY THAT LICENSEE MAY POSSESS AT ANY ONE TIME UNDER THIS LICENSE</p> <p>A. Total possession not to exceed 18.5 MBq (500 µCi)</p> <p>B. Total possession not to exceed 18.5 MBq (500 µCi), subject to license condition 23</p> <p>C. Total possession not to exceed 1.85 GBq (50 mCi)</p> <p>D. Not to exceed 18.5 MBq (500 µCi)</p> <p>E. Not to exceed 740 MBq (20 mCi)</p> <p>F. Not to exceed 199.7 MBq (5.4 mCi)</p> <p>G. Total of three sources: one source at 5.55 GBq (150 mCi) and two sources at 1.665 GBq (45mCi)each, total activity not to exceed 8.88 GBq (240 mCi)</p> <p>H. One source not to exceed 536.5 MBq (14.5 mCi)</p> <p>I. Total possession not to exceed 74 MBq (2 mCi)</p> <p>J. One source not to exceed 2.3 MBq (62 µCi)</p> <p>K. Two sources: 448 MBq (12.1 mCi) and 588 MBq (15.9 mCi), total activity not to exceed 1.036 GBq (28 mCi)</p> <p>L. One source not to exceed 217 Bq (5.87 nCi)</p> <p>M. One source not to exceed 4.03 KBq (109 nCi)</p>
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LICENSE FOR RADIOACTIVE MATERIALS

SUPPLEMENTARY SHEET

License Number: 03225250036

File Number – ID Number: 500403 -4887

Amendment No. 11

N. Radium-226	N. Radium foil source, (Electron Capture Detector Cell, S/N A-4183-1)	N. One source not to exceed 3.26 MBq (88 µCi)
O. Any radioactive material with atomic numbers 84-107 inclusive	O. Trace levels present in analytical samples	O. Total possession not to exceed 333 kBq (9 µCi)
P. Any radioactive material	P. Solids on a vacuum HEPA filter	P. One filter not to exceed 370 kBq (10 µCi)
Q. Hydrogen-3	Q. Sealed Source	Q. One source not to exceed 11.1 GBq (300 mCi); total possession not to exceed 22.2 GBq (600 mCi)

9. Authorized Use

- A., B., and O. Various isotopes present in *analytical* samples. Samples are not authorized for possession and must be returned to client.
- C. Various isotopes present as part of carbon filter trays and test equipment.
- D. For use as a tracer in blood filter efficiency testing.
- E. For use as a tracer in carbon filter efficiency testing.
- F. For use as a tracer in Xenon/Krypton decay testing, contained in four (4) cylinders total.
- G. (2 devices) For use in Scintograph series portable gas chromatographs for sample analysis.
- H. CE Instruments (Formerly Tracor) Model 111019 detector cell for use in Model 222 gas chromatograph for sample analysis.
- I. For use in trace level adsorption studies.
- J. For use in radon gas studies.
- K.-N. Approved to be held in storage only awaiting transfer for disposal.
- P. Various isotopes present on HEPA filter used in vacuum cleaner during decontamination of filters and other surfaces.
- Q. For receipt, possession, and return incident to calibration of Lagus Applied Technology, Inc. LMP-2000 for client.

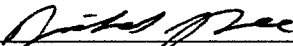
CONDITIONS

10. Licensed material may only be used at the licensee's facilities located at: 6800 and 7000 Huntley Road, Columbus, Ohio 43229.
11. The Radiation Safety Officer for this license is: Timothy S. Keller.
12. Licensed material shall be used by, or under the supervision of: J. Louis Kovach, Timothy S. Keller, Gregory J. Glasco, Lucas S. Primel, Gebremeskel Yohannes, Clinton B. Summers, and Dale E. Reaver.
13. Materials in storage in accordance with License Conditions 9. K. - 9. N. above must be transferred for disposal in accordance with OAC 3701:1-38-19.
14. All sealed sources that are used or obtained shall have been evaluated or approved under the provisions of OAC 3701:1-46-49, or by equivalent NRC or Agreement State regulation.
15. Sealed sources shall be tested for leakage and/or contamination according to OAC 3701:1-38-24.
16. The radium foil source listed in item 6.J. shall be tested for leakage and/or contamination every six months. The leak test analyses shall be performed by Troxler Electronic Laboratories or by an outside service provider specifically authorized to perform leak test analyses by the Director, the NRC, or an Agreement State.

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17. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee.
18. The licensee shall conduct a physical inventory every six months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for three years from the date of each inventory, and shall include the quantities and kinds of radioactive material, manufacturer's name, and model numbers, location of the sources, and/or devices, and the date of the inventory.
19. Each portable device shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The device or its container must be locked when in transport, storage, or when not under the direct surveillance of an authorized user.
20. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in OAC 3701:1-38-18A(1), the licensee is hereby authorized to label detector cells, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols.
21. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the Director, the NRC or an Agreement State to perform such services.
22. Except otherwise specified in this license, the licensee shall have available and follow the instructions contained in the manufacturer's instruction manual for the chromatography devices.
23. In addition to the possession limits in item 8, the licensee shall further restrict the possession of licensed materials to quantities below the minimum limit specified in OAC 3701:1-40-17(B) for establishing decommissioning financial assurance.
24. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures. The Ohio Department of Health's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
 - A. Renewal application dated May 15, 2008 and correspondence dated July 14 and August 22, 2008; Amendment No. 7 of Ohio Radioactive Materials License No. 03225250036 renews this license in its entirety.
 - B. E-mail correspondence dated September 26, 2008. (Amendment 8)
 - C. E-mail correspondence dated October 27, 2008. (Amendment 9)
 - D. Correspondence dated January 14, 2010. (Amendment 10)
 - E. Correspondence dated October 25, 2011; e-mail correspondence dated October 26, 2011; e-mail correspondence dated November 7, 2011. (Amendment 11)

For the Ohio Department of Health

DATE: 11/18/11 BY: 
 Michael J. Snee, Chief
 Bureau of Radiation Protection
 On Behalf of the Director of Health