NRC Form 374
(3-83)

U.S. NUCLEAR REGULATORY COMMISSION



# MATERIALS LICENSE

Amendment No. 01

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material 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 regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.



| Licensee | |
|---|---|
| 1. Exxon Biomedical Sciences, Inc.<br>Exxon Corporation | In accordance with application dated April 4, 1985<br>3. License number 29-19396-01 is amended in its entirety to read as follows: |
| 2.<br>P.O. Box 235<br>East Millstone, New Jersey 08873 | 4. Expiration date June 30, 1990 |
| | 5. Docket or Reference No. 030-17541 |

| 6. Byproduct, source, and/or special nuclear material | 7. Chemical and/or physical form | 8. Maximum amount that licensee may possess at any one time under this license |
|---|---|---|
| A. Carbon 14 | A. Any | A. 1000 millicuries |
| B. Hydrogen 3 | B. Any | B. 1000 millicuries |
| C. Nickel 63 | C. Foils in Tracor Model 114400-3200 or 111019 detector cells | C. Not to exceed 15 millicuries per foil |
| D. Nickel 63 | D. Foils in Hewlett Packard Model 19303 detector cells | D. Not to exceed 15 millicuries per foil |
| E. Krypton 85 | E. Sealed sources | E. Not to exceed 10 millicuries per source |
| F. Cesium 137 | F. Sealed source | F. Not to exceed 0.03 millicuries |

9. Authorized use

A. and B. For use in research studies.
C. and D. For use in gas chromatographs for sample analysis.
E. For use in dust generators to neutralize charge.
F. For use as an external standard in liquid scintillation counters.

10. Licensed material shall be used only at the licensee's facilities, at Mettlers Road, East Millstone, New Jersey.

11. The licensee shall comply with the provisions of Title 10, Chapter 1, Code of Federal Regulations, Part 19, "Notices, Instructions, and Reports to Workers; Inspections" and Part 20, "Standards for Protection Against Radiation."

12. Licensed material shall be used by or under the supervision of, Daniel E. Agopsowicz, Dennis R. Peterson, Linda G. DeLapp, Ralph K. Markarian, or John K. Schupner except that byproduct materials in Items 6.C. through 6.F. may also be used by John E. Stillman.



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**MATERIALS LICENSE**
SUPPLEMENTARY SHEET

License number: 29-19396-01

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Amendment No. 01

(Continued) CONDITIONS

13. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in Section 20.203(a)(1), Title 10, Code of Federal Regulations, Part 20, the licensee is hereby authorized to label detector cells and cell baths, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement.

14. A. Each chromatograph detector containing Nickel 63 shall be tested for leakage and/or contamination at intervals not to exceed six months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, a detector received from another person shall not be put into use until tested.

B. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the surfaces of the device in which the foil is mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission.

C. If the test reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the foil from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the test with the U.S. Nuclear Regulatory Commission, Region I, 631 Park Avenue, King of Prussia, Pennsylvania 19406, describing the equipment involved, the test results, and the corrective action taken.

D. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an Agreement State to perform such services.

15. The licensee shall conduct a physical inventory every six (6) months to account for all plated sources or sealed sources, received and possessed under the license. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material, manufacturer's name and model numbers, location of plated sources or sealed sources and the date of the inventory.

16. Detector cells containing licensed material shall not be opened or the foil sources removed from the detector cell by the licensee.

17. The licensee shall not use licensed material in or on human beings or in field applications where activity is released except as provided otherwise by specific condition of this license.

18. Experimental animals administered licensed materials or their products shall not be used for human consumption.

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U.S. NUCLEAR REGULATORY COMMISSION



**MATERIALS LICENSE**
SUPPLEMENTARY SHEET

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(Continued) CONDITIONS

19. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in applications dated May 5, 1980 and April 4, 1985 and letter dated April 24, 1985. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.


For the U.S. Nuclear Regulatory Commission
Original Signed By:
John E. Glenn

Date JUN 12 1985

By _____
Nuclear Materials Safety and
Safeguards Branch, Region I
King of Prussia, Pennsylvania 19406