

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 32, 33, 34, and 35, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess, transfer and import byproduct material listed below, and to use such byproduct material for the purpose(s) and at the place(s) designated below. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now or hereafter in effect and to any conditions specified below.

Licensee		In accordance with application dated April 28, 1966,	
1. Name	Monsanto Company	3. License number	24-01113-09 is amended
2. Address	Organic Chemicals Division 1700 South Second Street St. Louis, Missouri 63177	in its entirety to read as follows:	
		4. Expiration date	May 31, 1968
		5. Reference No.	

6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioactivity which licensee may possess at any one time
A. Hydrogen 3	A. Titanium Tritide Foil (Radiation Research Corporation Model TS-1 or T-S1)	A. 250 millicuries
B. Strontium 90	B. Sealed Source (U.S. Radium Corporation Model LAB 369)	B. 25 millicuries
C. Hydrogen 3	C. Titanium Tritide Foil (U.S. Radium Corporation Model LAB 508-1) contained in Perkin-Elmer Corporation Model 154-0709 Detector Cell	C. 250 millicuries
D. Hydrogen 3	D. Titanium Tritide Foil (U.S. Radium Corporation Model LAB 508-1) contained in F & M Scientific Corporation Model 2-2830 or 2-2837 Detector Cell	D. 400 millicuries (two detector cells containing 200 millicuries each)

9. Authorized use

- A. To be used in Barber-Coleman Company ionization detector as part of a Barber-Coleman Company Model 61-C gas chromatography unit.
- B. To be used in Barber-Coleman Company ionization detector as part of a Barber-Coleman Company Model 61-C gas chromatography unit.

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9. Authorized use (Continued)

- C. To be used in Perkin-Elmer Corporation Model 154 gas chromatography unit.
- D. To be used in F & M Scientific Corporation Model 810 gas chromatography unit.

CONDITIONS

10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above:
11. The licensee shall comply with the provisions of Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standards for Protection Against Radiation."
12. Byproduct material shall be used by, or under the supervision of, E. M. Emery.
13. Foils shall not be removed from detector cells by the licensee.
14. Detector cells containing Hydrogen 3 foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees Centigrade.
15. 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 byproduct material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement.
16. A. Sealed Strontium 90 sources shall be leak tested at intervals not exceeding 6 months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, the sealed source shall not be put into use until tested.

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CONDITIONS

16. 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 sealed source or from the surfaces of the device in which the sealed source is permanently 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 sealed source 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 Director, Division of Materials Licensing, U. S. Atomic Energy Commission, Washington, D. C., 20545, describing the equipment involved, the test results, and the corrective action taken. A copy of such report shall also be sent to the Director, Region III, Division of Compliance, USAEC, Oakbrook Professional Building, Oak Brook, Illinois, 60523.
- D. Tests for leakage and/or contamination shall be performed by the licensee in accordance with "Wipe Test Instructions for Strontium 90 Ionization Detectors" submitted with R. E. Johnson's letter dated April 20, 1959, or by other persons specifically authorized by the Commission or an Agreement State to perform such services.
17. Except as specifically provided otherwise by this license, the licensee shall possess and use byproduct material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in application dated April 30, 1962, and letters dated October 3, 1963, and November 4, 1963, from Edward M. Emery.

For the U. S. Atomic Energy Commission

Original Signed by
Robert E. Brinkman

Isotopes Branch

Division of Materials Licensing
Washington, D. C. 20545

Date MAY 13 1966

by

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