

BYPRODUCT MATERIAL LICENSE No. 45-7548-1, Amendment No. 12
(G63)

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 30, Licensing of Byproduct Material, 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 November 9, 1962,	
1. Name	Melpar, Incorporated	3. License number	45-7548-1 is amended in its entirety to read as follows:
2. Address	3000 Arlington Boulevard Falls Church, Virginia	4. Expiration date	July 31, 1963
		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. Carbon 14 B. Krypton 85 (See Page 2)	A. Any B. Gas (See Page 2)	A. 400 millicuries B. 10 curies (See Page 2)

9. Authorized use
- A. To be used in laboratory tracer studies and in laboratory studies on lower animals.
 - B. To be used in laboratory experiments as an internal energy source to study radiation induced reaction.
- (See Page 2)

CONDITIONS

- 10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
- 11. Byproduct material may also be used at the licensee's Shirley Research Plant in Springfield, Virginia.
- 12. The licensee shall comply with the provisions of Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standards For Protection Against Radiation."
- 13. Byproduct material shall be used by, or under the supervision of, John F. Ambrose, Gerald Halpert, Dr. Frank L. Aldrich, Bruno M. Vasta, Marie Tiner, Victor R. Huebner, Dr. Robert C. McIlhenny, Paul J. Killos or Dr. Earl Usdin.
- 14. A. Each sealed source containing byproduct material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas 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 six months prior to the transfer, the sealed source shall not be put into use until tested.

(See Page 2)

A-30

MATERIAL LICENSE

Supplementary Sheet

Continued From Page 1

License Number 45-7548-1
(663)

Amendment No. 12

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
C. Hydrogen 3	C. Tritiated Foil (U. S. Radium Corp. Model LAB-508-1 or equivalent)	C. 50 curies
D. Hydrogen 3	D. Tritiated Foil (Radiation Research Corp. Model T-1)	D. 300 millicuries
E. Strontium 90	E. Sealed Source (U. S. Radium Corp. Model LAB-369)	E. 20 millicuries
F. Hydrogen 3	F. Any	F. 1 curie

9. Authorized use

- C., D. & E. To be used as sources of ionization in the development and use of gas chromatographic devices or systems.
- F. Research investigations involving self-luminescent materials.

CONDITIONS

14. (continued)

- B. The test shall be capable of detecting the presence of 0.005 microcurie of removable contamination on the source. 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 five days of the test with the Director, Division of Licensing and Regulation, U. S. Atomic Energy Commission, Washington 25, D. C., 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 II, Division of Compliance, USAEC, 50 Seventh Street, Northeast, Atlanta 23, Georgia.
- D. Tests for leakage and/or contamination shall be performed by the licensee or other persons specifically authorized by the Commission to perform such services.

(See Page 3)

U. S. ATOMIC ENERGY COMMISSION
BYPRODUCT MATERIAL LICEN.

Supplementary Sheet

Continued from Page 2

License Number 45-7548-1
(G63)

Amendment No. 12

- 15. Except as 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 his applications dated June 8, 1961; June 13, 1961; July 17, 1961; July 18, 1961; December 21, 1961; February 28, 1962; June 11, 14 and 15, 1962; September 4, 1962; October 8, 1962; October 10, 1962; November 9, 19 and 29, 1962; and letters dated August 8, 1961; November 3, 1961; and June 12, 1962.
- 16. 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 (Jarrell-Ash Co.) detector cells and cell baths, containing byproduct material and used in (Jarrell-Ash Co.) gas chromatography devices, with conspicuous etched or stamped radiation caution symbols without a color requirement.

For the U. S. Atomic Energy Commission

Original Signed by
Robert E. Brinkman

by Isotopes Branch

Division of Licensing and Regulation
Washington 25, D. C.

DEC 11 1962

Date _____

DUPLICATED
FOR DIV. OF COMPLIANCE

REB 12/11/62

SWK
Yakem / Embler