

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF SEALED SOURCES

NO: TX333S133S

DATE: June 16, 1988

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SEALED SOURCE TYPE: Medical Research Irradiator

MODEL:

(b)(2)

MANUFACTURER/DISTRIBUTOR: GNI Incorporated
202 Medical Center Boulevard
Webster, Texas 77598

ISOTOPE: Am-241

MAXIMUM ACTIVITY:

(b)(2)

LEAK TEST FREQUENCY: 6 months

PRINCIPAL USE: Gamma irradiator, Category I

CUSTOM SOURCE: YES NO

CUSTOM USER: Columbia University
Staff at Nevis Laboratory
136 South Broadway
Irvington, New York 10533

Information in this record was deleted in
accordance with the Freedom of Information Act.

Exemptions

FOIA/PA

2020-0120

6/18

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DESCRIPTION: The Model (b)(2) sealed source contains a mixture of Am-241 oxide and aluminum powder pressed into a wafer. The wafer is encapsulated in titanium with the inner capsule having 0.010 inch thick windows and the outer capsule having 0.017 inch thick windows. The overall dimensions of the outer capsule are 1.93 inches O.D. and 0.094 inches thickness.

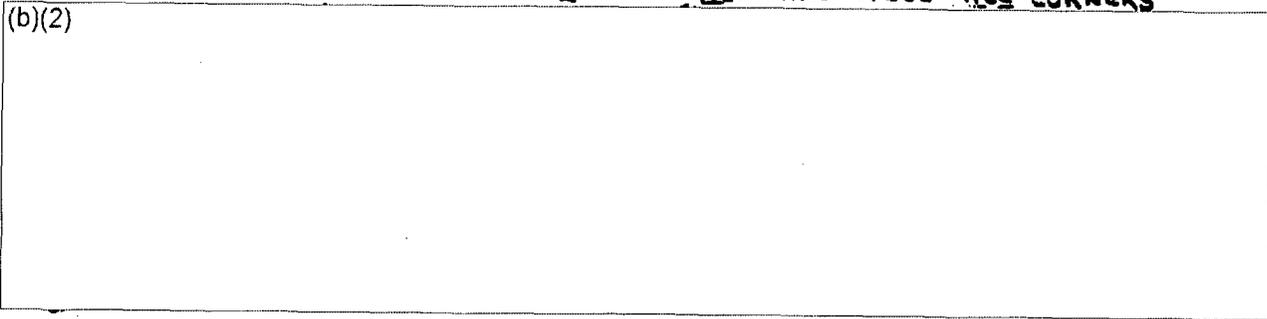
LABELING: The sealed source is engraved with the Isotope, activity, Model number and serial number.

DIAGRAM:

ACTIVITY
PRESSED AL-AmO₂

HELI-ARC WELD ALL CORNERS

(b)(2)



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CONDITIONS OF NORMAL USE: The Model (b)(2) was specifically designed to be used as part of a shielded irradiator inside an incubator to perform medical research. Temperatures may vary. However, they will rarely exceed 140 degrees Fahrenheit.

PROTOTYPE TESTING: Since this is a custom source, no prototype testing was performed. However, the source was tested and found to meet ANSI classification 77C32312.

EXTERNAL RADIATION LEVELS: The exposure rate is 3.2 R/hr at 3 inches for the (b)(2) source.

QUALITY ASSURANCE AND CONTROL: The source was tested for leakage using the vacuum ethylene glycol method after each test performed to determine the ANSI classification.

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

1. This source was constructed for use in medical research at Columbia University.
2. Specifics of handling, storage, use, transfer and disposal should be determined by the appropriate regulatory agency.

SAFETY ANALYSIS SUMMARY: The Model (b)(2) should not present after it has been installed permanently in a shielded irradiator, used under laboratory conditions and used by qualified laboratory personnel.

REFERENCES: This summary was prepared with the aid of GNI, Inc. letters dated April 11, 1988 and June 6, 1988 and all associated drawings, documents and procedures.

DATE: June 14, 1988

REVIEWED BY: [Signature]

DATE: June 14, 1988

REVIEWED BY: [Signature]

ISSUING AGENCY: Texas Department of Health
Bureau of Radiation Control