

# UNIVERSITY of MISSOURI

ENVIRONMENTAL HEALTH AND SAFETY

**TO:** Ms. Colleen Carol Casey  
U.S. Nuclear Regulatory Commission  
Region III - Nuclear Materials Safety Division  
2443 Warrenville Road  
Lisle, Illinois 60532-4352

**FROM:** Mr. Jack Crawford  
Radiation Safety Officer / Assistant Director  
Environmental Health & Safety  
University of Missouri – Columbia  
Columbia, MO 65211-3050

**DATE:** February 24<sup>th</sup> 2011

**SUBJECT:** REQUEST FOR AMENDMENT #109 to University of Missouri-Columbia Broad Scope License No. 24-00513-32, Docket No. 030-02278.

Dear Colleen,

The purpose of this letter is to request the NRC Materials License 24-00513-32 (current amendment #108) issued to the Curators of the University of Missouri-Columbia be amended to incorporate a change to an existing line item for an electroplated, 300 microcurie, Am-241 sealed source for research and student instruction.

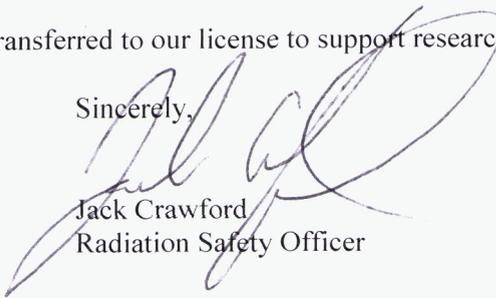
Specifically the University of Missouri-Columbia request that license No. 24-00513-32 be amended to include the following;

Change

1. Under Columns 7, and 8 please change line item **LL**;  
Column 7. - *“Eckert & Ziegler Type A2 capsule, Nominal Sealed Source-Electroplated Alpha Standard”*  
Column 8. - *300 microcuries”*
2. Under 9 Authorized use:  
- *“To be used for laboratory research, and for student Instruction”*

We are working with another licensee to have this source transferred to our license to support research.

Sincerely,

  
Jack Crawford  
Radiation Safety Officer

Attachments

cc: J. Jones  
S. Jurisson  
P. Ashbrook  
RSO File



RECEIVED MAR 01 2011

Attachment to University of Missouri Letter dated February 24<sup>th</sup> 2011, REQUEST FOR AMENDMENT #109 to University of Missouri-Columbia Broad Scope License No. 24-00513-32, Docket No. 030-02278.

For E&K, Electroplated 300 uCi Am-241 Sealed Source

**Alpha Particle Standards—Type A-2**

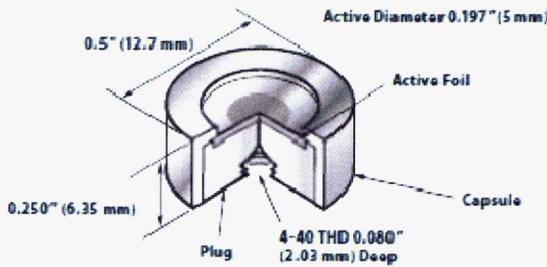
The type A-2 source is permanently fixed in an aluminum holder 0.5" diameter x 0.250" high (12.7 mm x 6.35 mm). The active diameter is 0.197" (5.0 mm).

All alpha standards are offered as spectral grade sources up to the activity and active diameters listed unless otherwise noted. All electroplated alpha standards are manufactured to a tolerance of +/- 30% of the nominal activity.



**Figure 37-A: Type A-2 Disk**

A1204



**Overall Dimensions**

Overall Diameter	Active Diameter	Height
0.5"	0.197"	0.250"
12.7 mm	5 mm	6.35 mm

**Window & Exceptions**

Window	Exceptions
None	Kf-252, Ra-226, and Th-230: 100 µg/cm <sup>2</sup> gold Po-210: 100 µg acrylic/cm <sup>2</sup> only

**Alpha Particle Standards—Type A-2**

"Alpha Particle Standards—Type A-2

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"The active foils are sealed into the A-2 capsule with a vacuum compatible epoxy resin. The resulting unit is suitable for space and other high vacuum and low temperature applications. The foil construction is extremely resistant to leakage from puncture since there is no separate window or air space."

The part number we have a quote on is AM1A2300U, not listed in the catalog but manufactured in the same manner as the others. It is a gold foil into which Am-241 is electrodeposited, and then that foil is sealed as described above.

Environmental Health and Safety  
8 Research Park Development Building  
Columbia, MO 65211



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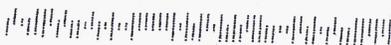


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65201  
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**RETURN RECEIPT  
REQUESTED**



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Lisle IL 60532-4352