



# International Isotopes Inc.

November 21, 2006

Dr. John Jankovich  
 US Nuclear Regulatory Commission  
 Mail Stop 8F5  
 Two White Flint North  
 11545 Rockville Pike  
 Rockville, MD 20852

Subject: Request to Amend NR-1235-S-103-S.

Dear Dr. Jankovich,

International Isotopes Inc. requests to amend Registry of Sealed Sources and Devices Safety Evaluation of Sealed Source Number NR-1235-S-103-S to include a range of sources capsules between the current dimensions of the Model INIS-SF-CS-1J and INIS-SF-CS-2J.

International Isotopes Inc. believes it is still appropriate to differentiate the capsules by Model number so that the INIS-SF-CS-1J is known to contain the Model CDC.800 and the INIS-SF-CS-2J is known to contain the Model CDC.700 source with the exception of the X38/2, X31, X31/1 and VZ-1612 outer capsules and the X7 single capsule.

The following recommended changes to NR-1235-S-103-S is provided below:

DESCRIPTION: Revise the dimensions table as follows:

Dimensions: Models INIS-SF-CS-1J and INIS-SF-CS-2J						
Maximum Outer Diameter (inches)	Minimum Outer Diameter (inches)	Maximum Length (inches)	Minimum Length (inches)	Wall Thickness (inches)	Bottom Thickness (inches)	Cap Thickness (inches)
0.294 ± 0.005	0.440 ± 0.005	0.448 ± 0.005	0.675 ± 0.005	0.045 ± 0.005	0.025 ± 0.005	0.055 ± 0.005

EXTERNAL RADIATION LEVELS: Revise the external radiation levels table as follows:

	Dose at 5 cm	Dose at 30 cm	Dose at 100 cm
Side			
Minimum Dimension	1.00 x 10 <sup>5</sup>	3.37 x 10 <sup>3</sup>	3.11 x 10 <sup>2</sup>
Maximum Dimension	1.09 x 10 <sup>5</sup>	3.43 x 10 <sup>3</sup>	3.13 x 10 <sup>2</sup>
Top			
Minimum Dimension	9.13 x 10 <sup>4</sup>	3.22 x 10 <sup>3</sup>	3.07 x 10 <sup>2</sup>
Maximum Dimension	1.02 x 10 <sup>5</sup>	3.32 x 10 <sup>3</sup>	3.11 x 10 <sup>2</sup>
External radiation levels in Rad/hr.			

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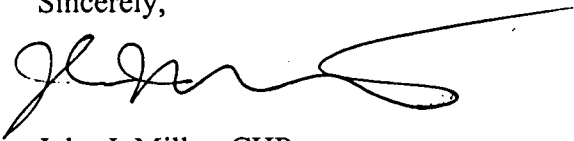
The drawing has been revised and is attached.

The calculated external radiation exposure rates remain valid and now indicate those associated with the minimum and maximum dimensions with maximum activity.

International Isotopes Inc. believes the original prototype testing conducted on the capsules maybe applied to capsules which fall within the requested range because the minimum and maximum authorized dimensions have been tested.

Should you have any questions regarding this request please feel free to contact me by phone at 208 524-5300 or via email at [jjmiller@intisoid.com](mailto:jjmiller@intisoid.com).

Sincerely,

A handwritten signature in black ink, appearing to read 'John J. Miller', with a long horizontal flourish extending to the right.

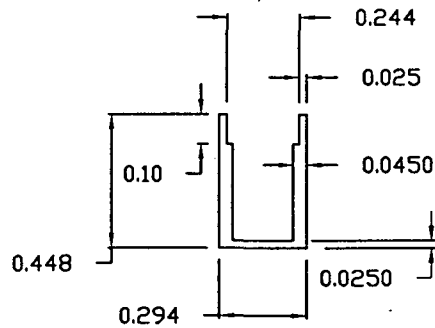
John J. Miller, CHP  
Radiation Safety Officer  
International Isotopes Inc.  
4137 Commerce Circle  
Idaho Falls, ID 83401

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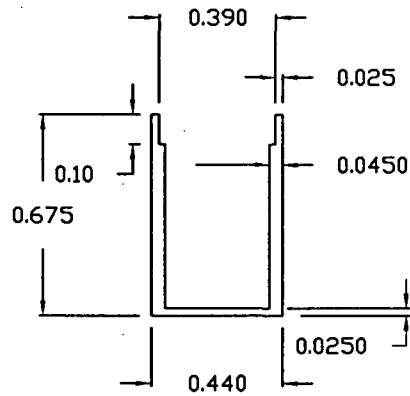
Attachment 1

Model Numbers INIS-SF-CS-1J and -2J

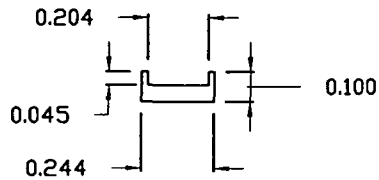
Minimum Capsule Size



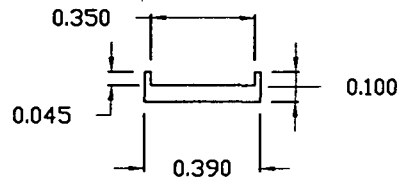
Maximum Capsule Size



Minimum End Cap Size



Maximum End Cap Size



All dimensions in inches

All components fabricated from Type 304, 304L, 316 or 316L Stainless Steel

Caps and capsule bodies shall be fabricated from the same alloy

Fusion seal weld on the full circumference of all end caps