

# Am-241

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

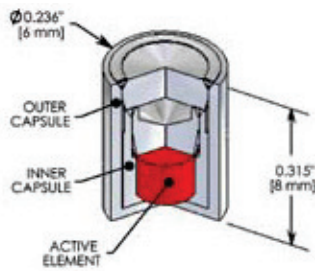
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For Low Energy Gamma applications, these sources offer a long half-life radionuclide with gamma emissions predominantly below 60keV, incorporating a stable, homogeneous active element. The lower energies are enhanced when beryllium window capsules are used.



### 3015 capsule

Double-encapsulated stainless steel source. ISO rating: C66535

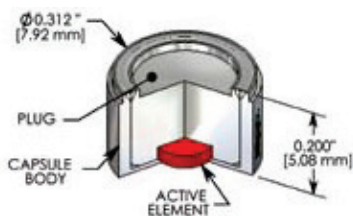


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3015	SS&DR / SFC
0.1	3.7	AM130150100U	Yes / Yes
0.5	18.5	AM130150500U	Yes / Yes
1	37	AM130150001M	Yes / Yes
5	185	AM130150005M	Yes / Yes
10	370	AM130150010M	Yes / Yes
25	925	AM130150025M	Yes / Yes
50	1850	AM130150050M	Yes / Yes

Availability: 4-8 weeks

### 3201 capsule

Single-encapsulated stainless steel source. ISO rating: C66545

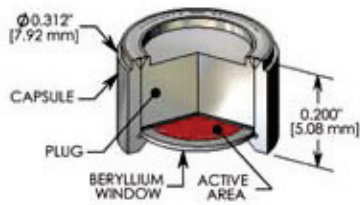


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3201	SS&DR / SFC
0.1	3.7	AM132010100U	Yes / Yes
0.5	18.5	AM132010500U	Yes / Yes
1	37	AM132010001M	Yes / Yes
5	185	AM132010005M	Yes / Yes
10	370	AM132010010M	Yes / Yes
25	925	AM132010025M	Yes / Yes
50	1850	AM132010050M	Yes / Yes

Availability: 4-8 weeks

### 3204 capsule

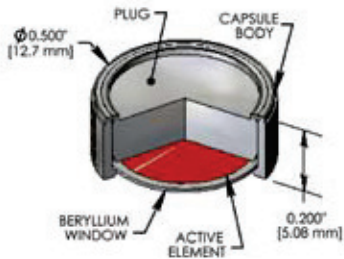
Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C43333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3204	SS&DR / SFC
0.1	3.7	AM132040100U	Yes / Yes
0.5	18.5	AM132040500U	Yes / Yes
1	37	AM132040001M	Yes / Yes
5	185	AM132040005M	Yes / Yes
10	370	AM132040010M	Yes / Yes
25	925	AM132040025M	Yes / Yes
50	1850	AM132040050M	Yes / Yes
Availability: 4-8 weeks			

### 3215 capsule

Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C33222

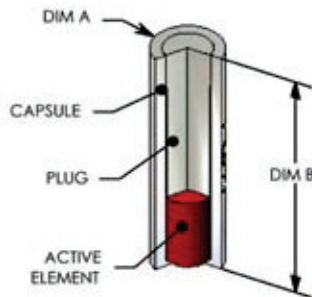


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3215	SS&DR / SFC
0.1	3.7	AM132150100U	Yes / No
0.5	18.5	AM132150500U	Yes / No
1	37	AM132150001M	Yes / No
5	185	AM132150005M	Yes / No
10	370	AM132150010M	Yes / No
25	925	AM132150025M	Yes / No
50	1850	AM132150050M	Yes / No
Availability: 4-8 weeks			

3215 capsules with activities of 27mCi / 1GBq or higher must be shipped using a Type B container.

### 3224 capsule

Single-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C66444



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3224	SS&DR / SFC
0.1	3.7	AM132240100U	Yes / Yes
0.5	18.5	AM132240500U	Yes / Yes
1	37	AM132240001M	Yes / Yes
5	185	AM132240005M	Yes / Yes
10	370	AM132240010M	Yes / Yes
25	925	AM132240025M	Yes / Yes
50	1850	AM132240050M	Yes / Yes
Availability: 4-8 weeks			

See table on p.71 for available 3224 capsule dimensions.

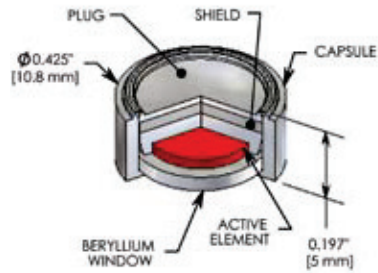
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Am-241

## Standard Capsule Designs

### 3233 capsule

Single-encapsulated stainless steel source with 0.04"/1.0mm beryllium window. ISO rating: C64344

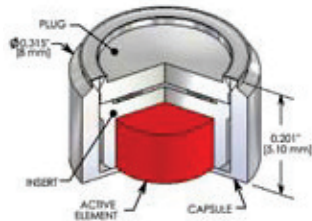


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3233	SS&DR / SFC
0.1	3.7	AM132330100U	Yes / No
0.5	18.5	AM132330500U	Yes / No
1	37	AM132330001M	Yes / No
5	185	AM132330005M	Yes / No
10	370	AM132330010M	Yes / No
30	1010	AM132330030M	Yes / No
50	1850	AM132330050M	Yes / No
100	3700	AM132330100M	Yes / No

Availability: 4-8 weeks

### G10 capsule

Single-encapsulated stainless steel source. ISO rating: C66545

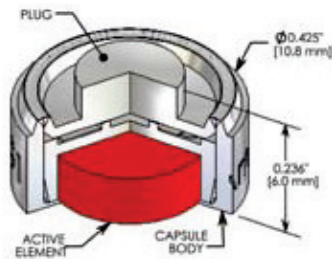


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	G10	v
1	37	AM1G100001M	Yes / Yes
2	74	AM1G100002M	Yes / Yes
5	185	AM1G100005M	Yes / Yes
10	370	AM1G100010M	Yes / Yes
15	555	AM1G100015M	Yes / Yes
20	740	AM1G100020M	Yes / Yes
30	1010	AM1G100030M	Yes / Yes

Availability: 7-8 weeks

### G11 capsule

Single-encapsulated stainless steel source. ISO rating: C64546



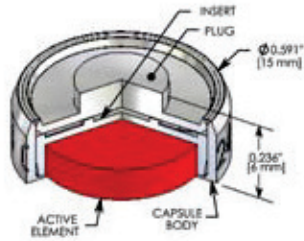
Nominal Activity		Part Numbers	Regulatory
mCi	MBq	G11	SS&DR / SFC
0.5	18.5	AM1G110500U	Yes / Yes
1	37	AM1G110001M	Yes / Yes
5	185	AM1G110005M	Yes / Yes
10	370	AM1G110010M	Yes / Yes
20	740	AM1G110020M	Yes / Yes
50	1850	AM1G110050M	Yes / Yes
100	3700	AM1G110100M	Yes / Yes

Availability: 7-8 weeks

Optional G11B capsule also available with beryllium window.

### G22 capsule

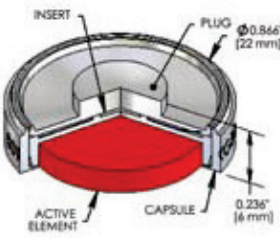
Single-encapsulated stainless steel source. ISO rating: C64546



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	G22	SS&DR / SFC
50	1850	AM1G220050M	Yes / Yes
100	3700	AM1G220100M	Yes / Yes
200	7400	AM1G220200M	Yes / Yes
300	11100	AM1G220300M	Yes / Yes
			Availability: 7-8 weeks

### G33 capsule

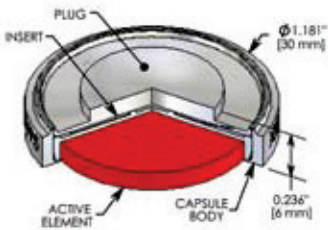
Single-encapsulated stainless steel source. ISO rating: C64546



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	G33	SS&DR / SFC
100	3700	AM1G330100M	Yes / Yes
200	7400	AM1G330200M	Yes / Yes
300	11100	AM1G330300M	Yes / Yes
500	18500	AM1G330500M	Yes / Yes
			Availability: 7-8 weeks

### G44 capsule

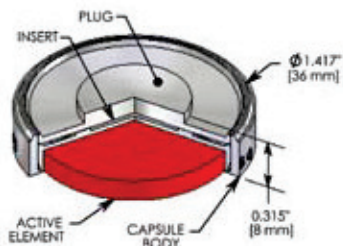
Single-encapsulated stainless steel source. ISO rating: C64444



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	G44	SS&DR / SFC
250	9250	AM1G440250M	Yes / Yes
500	18500	AM1G440500M	Yes / Yes
750	27750	AM1G440750M	Yes / Yes
1000	37000	AM1G441000M	Yes / Yes
			Availability: 7-8 weeks

### G55 capsule

Single-encapsulated stainless steel source. ISO rating: E64444



Nominal Activity		Part Numbers	Regulatory
mCi	GBq	G55	SS&DR / SFC
1000	37	AM1G551000M	Yes / Yes
2000	74	AM1G552000M	Yes / Yes
3000	111	AM1G553000M	Yes / Yes
			Availability: 7-8 weeks

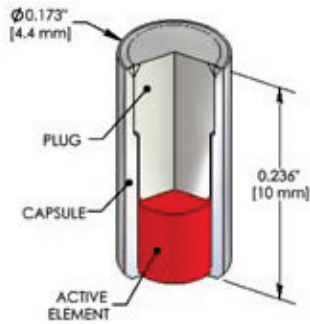
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Cs-252  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Am-241

## Standard Capsule Designs

### P08 capsule

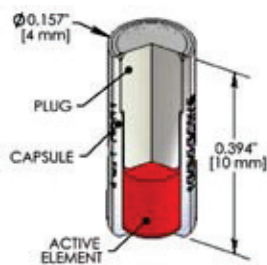
Singe-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C64444



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P08	SS&DR / SFC
1	37	AM1P080001M	Yes / No
25	925	AM1P080025M	Yes / No
50	1850	AM1P080050M	Yes / No
100	3700	AM1P080100M	Yes / No
200	7400	AM1P080200M	Yes / No
			Availability: 8-10 weeks

### P081 capsule

Singe-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C64444



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P081	SS&DR / SFC
1	37	AM1P0810001M	Yes / No
25	925	AM1P0810025M	Yes / No
50	1850	AM1P0810050M	Yes / No
100	3700	AM1P0810100M	Yes / No
150	5550	AM1P0810150M	Yes / No
			Availability: 8-10 weeks



Am-241

Am-241/Be

Ba-133

Cd-109

Cf-252

Co-57

Co-60

Cs-137

Eu-152

Fe-55

Gd-153

K-85

Mössbauer

Na-22

Ni-63

Pm-147

Ru-106

Se-75

Sr-90

Yb-169

# Am-241 / Be

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

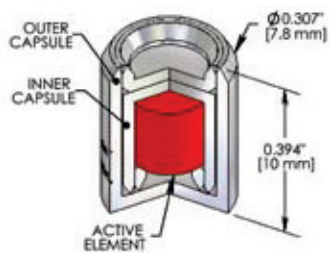
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

Am-241/Be neutron sources for geological prospecting, moisture gauging, activation analysis, nuclear research, and for applications in oil well logging, contain a homogenous mixture of Am-241 and beryllium metal powder.



### N02 capsule

Double-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C66545

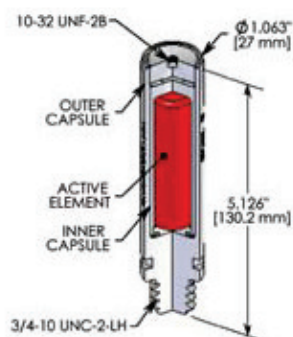


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	N02	SS&DR / SFC
1	37	AM1N020001M	Yes / Yes
10	370	AM1N020010M	Yes / Yes
40	1480	AM1N020040M	Yes / Yes
100	3700	AM1N020100M	Yes / Yes

Availability: 8-10 weeks

### N03 capsule

Double-encapsulated stainless steel source; for oil well logging applications. ISO rating: C66646



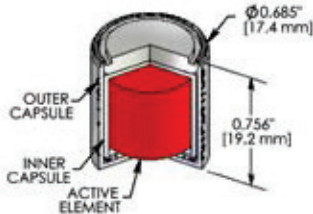
Nominal Activity		Part Numbers	Regulatory
mCi	GBq	N03	SS&DR / SFC
1000	37	AM1N030001C	Yes / Yes
3000	111	AM1N030003C	Yes / Yes
8000	296	AM1N030008C	Yes / Yes
16000	592	AM1N030016C	Yes / Yes
18000	666	AM1N030018C	Yes / Yes

Availability: 10-12 weeks

Intermediate activities also available; please inquire.

### N09 capsule

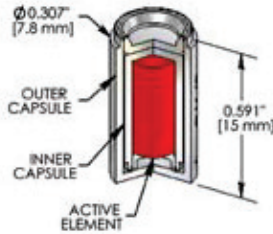
Double-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C66544



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		N09	SS&DR / SFC
1	37	AM1N090001M	Yes / Yes
10	370	AM1N090010M	Yes / Yes
100	3700	AM1N090100M	Yes / Yes
350	12950	AM1N090350M	Yes / Yes
			Availability: 8-10 weeks

### N09-1 capsule

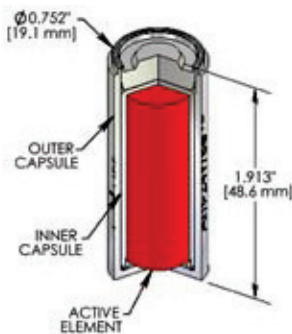
Double-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C66544



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		N09-1	SS&DR / SFC
2	74	AM1N09-10002M	Yes / Yes
5	185	AM1N09-10005M	Yes / Yes
10	370	AM1N09-10010M	Yes / Yes
100	3700	AM1N09-10100M	Yes / Yes
200	7400	AM1N09-10200M	Yes / Yes
			Availability: 8-10 weeks

### N20 capsule

Double-encapsulated stainless steel source; stable, homogeneous active element. ISO rating C66646



Nominal Activity		Part Numbers	Regulatory
mCi	GBq		
		N20	SS&DR / SFC
500	18.5	AM1N200500M	No / No
1000	37	AM1N200001C	No / No
2000	74	AM1N200002C	No / No
3000	111	AM1N200003C	No / No
			Availability: 8-10 weeks

Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Ba-133

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

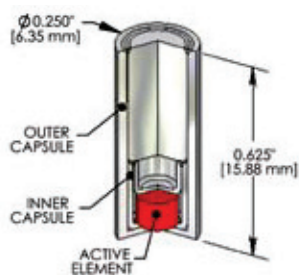
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For High Energy Gamma applications, these sources offer a long half-life radionuclide with gamma emissions up to 384keV and contain a stable, homogeneous active element.



### 3000 capsule

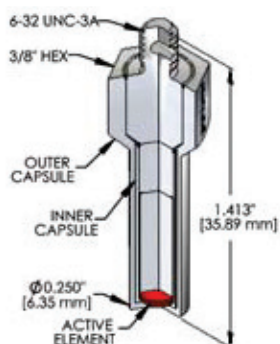
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3000	SS&DR / SFC
0.1	3.7	BA330000100U	Yes / Yes
1	37	BA330000001M	Yes / Yes
5	185	BA330000005M	Yes / Yes
10	370	BA330000010M	Yes / Yes
			Availability: 4 weeks

### 3011 capsule

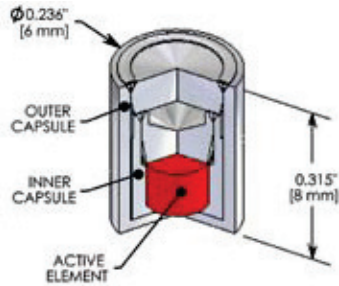
Double-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3011	SS&DR / SFC
0.1	3.7	BA330110100U	Yes / Yes
1	37	BA330110001M	Yes / Yes
5	185	BA330110005M	Yes / Yes
10	370	BA330110010M	Yes / Yes
			Availability: 4 weeks

### 3015 capsule

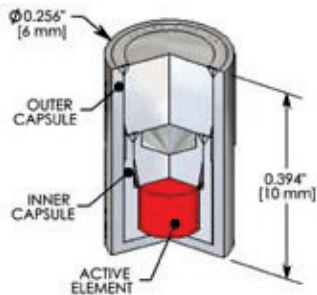
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3015	SS&DR / SFC
0.1	3.7	BA330150100U	Yes / Yes
1	37	BA330150001M	Yes / Yes
5	185	BA330150005M	Yes / Yes
10	370	BA330150010M	Yes / Yes
			Availability: 4 weeks

### 3024 capsule

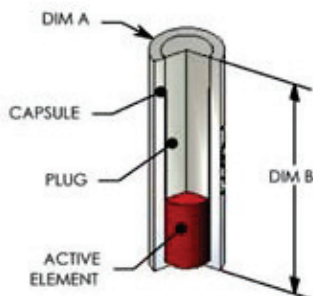
Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3024	SS&DR / SFC
0.1	3.7	BA330240100U	Yes / Yes
1	37	BA330240001M	Yes / Yes
5	185	BA330240005M	Yes / Yes
10	370	BA330240010M	Yes / Yes
			Availability: 4-6 weeks

### 3224 capsule

Single-encapsulated stainless steel source. ISO rating: C66444



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3224	SS&DR / SFC
0.1	3.7	BA332240100U	Yes / Yes
1	37	BA332240001M	Yes / Yes
5	185	BA332240005M	Yes / Yes
10	370	BA332240010M	Yes / Yes
			Availability: 4-6 weeks

See table on p.71 for available 3224 capsule dimensions.

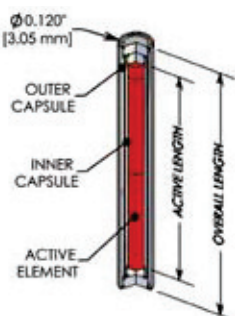
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
Kr-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Ba-133

## Standard Capsule Designs

### 3402 capsule

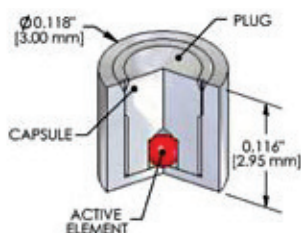
Double-encapsulated stainless steel line source. Also available in titanium. ISO rating: C33222X



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3402	SS&DR / SFC
0.1	3.7	BA334020100U	Yes / Yes
1	37	BA334020001M	Yes / Yes
5	185	BA334020005M	Yes / Yes
10	370	BA334020010M	Yes / Yes
			Availability: 4 weeks

### 3902 capsule

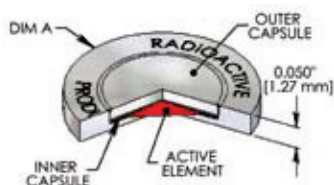
Single-encapsulated stainless steel source. ISO rating: C44222



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3902	SS&DR / SFC
0.01	0.37	BA339020010U	Yes / Yes
			Availability: 4 weeks

### 3916 capsule

Double-encapsulated stainless steel disk source. ISO rating: C33212



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3916	SS&DR / SFC
0.01	0.37	BA339160010U	Yes / Yes
			Availability: 4 weeks

3916 capsule is available in various diameters; please inquire.



Industrial source manufacturing laboratory in Burbank, CA, USA.

Am-241

Am-241/Be

Ba-133

Cd-109

Cf-252

Co-57

Co-60

Cs-137

Eu-152

Fe-55

Gd-153

K-85

Mössbauer

Na-22

Ni-63

Pm-147

Ru-106

Se-75

Sr-90

Yb-169

# Cd-109

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

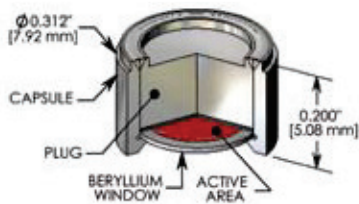
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For Low Energy Gamma and XRF applications, these sources offer a radionuclide with X-ray emissions between 22keV and 26keV contained in a stable, homogeneous active element. For most applications, beryllium window capsules are used.



### 3204 capsule

Single-encapsulated stainless steel source with 0.010"/0.254mm beryllium window. ISO rating: C43333

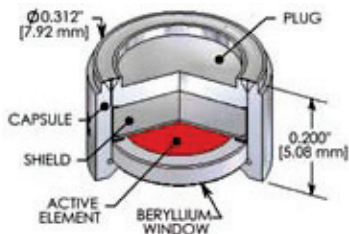


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3204	SS&DR / SFC
1	37	CD932040001M	Yes / Yes
10	370	CD932040010M	Yes / Yes
14	518	CD932040014M	Yes / Yes
20	740	CD932040020M	Yes / Yes
40	1480	CD932040040M	Yes / Yes

Availability: 4-6 weeks

### 3205 capsule

Single-encapsulated stainless steel source with 0.040"/1.01mm beryllium window. ISO rating: C43333

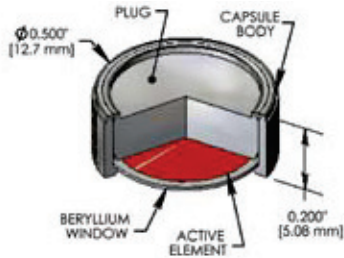


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3205	SS&DR / SFC
1	37	CD932050001M	Yes / No
10	370	CD932050010M	Yes / No
14	518	CD932050014M	Yes / No
20	740	CD932050020M	Yes / No
40	1480	CD932050040M	Yes / No
50	1850	CD932050050M	Yes / No

Availability: 4-6 weeks

### 3215 capsule

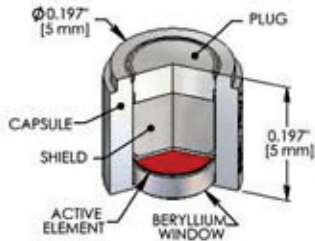
Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C33222



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3215	SS&DR / SFC
1	37	CD932150001M	Yes / No
10	370	CD932150010M	Yes / No
20	740	CD932150020M	Yes / No
50	1850	CD932150050M	Yes / No
Availability: 4-6 weeks			

### 3236 capsule

Single-encapsulated stainless steel source with 0.04"/1.0mm beryllium window. ISO rating: C54243



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3236	SS&DR / SFC
1	37	CD932360001M	Yes / No
5	185	CD932360005M	Yes / No
10	370	CD932360010M	Yes / No
Availability: 4-6 weeks			

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# CF-252

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

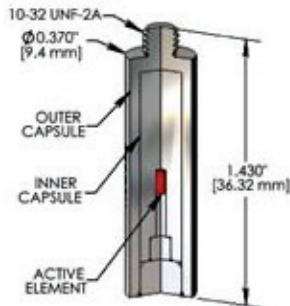
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

Spontaneous fission neutron sources for research, moisture gauging and materials analysis applications requiring low activities. Activity is contained in a stable homogeneous element.



### 3014 capsule

Double-encapsulated stainless steel point source. ISO rating: C66535

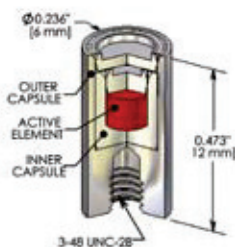


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3014	SS&DR / SFC
0.0001	0.0037	CF230140100N	Yes / No
0.005	0.185	CF230140005U	Yes / No
0.01	0.37	CF230140010U	Yes / No
0.5	18.5	CF230140500U	Yes / No
1	37	CF230140001M	Yes / No
			Availability: 4 weeks

Intermediate activities are available upon request.

### 3023 capsule

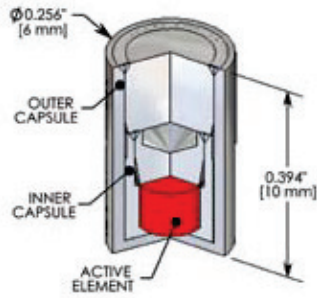
Double-encapsulated stainless steel source. ISO rating: C63333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3023	SS&DR / SFC
0.0001	0.0037	CF230230100N	Yes / Yes
0.005	0.185	CF230230005U	Yes / Yes
0.01	0.37	CF230230010U	Yes / Yes
0.5	18.5	CF230230500U	Yes / Yes
1	37	CF230230001M	Yes / Yes
			Availability: 4 weeks

### 3024 capsule

Double-encapsulated stainless steel source. ISO rating: C66535

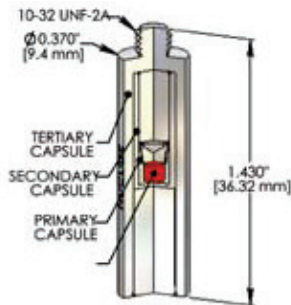


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3024	SS&DR / SFC
0.0001	0.0037	CF230240100N	Yes / Yes
0.005	0.185	CF230240005U	Yes / Yes
0.01	0.37	CF230240010U	Yes / Yes
0.5	18.5	CF230240500U	Yes / Yes
1	37	CF230240001M	Yes / Yes
			Availability: 4 weeks

Intermediate activities are available upon request.

### 3026 capsule

Triple-encapsulated stainless steel source. ISO rating: C66535

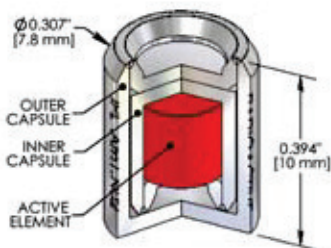


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3026	SS&DR / SFC
0.0001	0.0037	CF230260100N	Yes / Yes
0.005	0.185	CF230260005U	Yes / Yes
0.01	0.37	CF230260010U	Yes / Yes
0.5	18.5	CF230260500U	Yes / Yes
1	37	CF230260001M	Yes / Yes
			Availability: 4 weeks

Intermediate activities are available upon request.

### 3036 capsule

Double-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3036	SS&DR / SFC
0.0001	0.0037	CF230360100N	No / No
0.005	0.185	CF230360005U	No / No
0.01	0.37	CF230360010U	No / No
0.5	18.5	CF230360500U	No / No
1	37	CF230360001M	No / No
			Availability: 4 weeks

Intermediate activities are available upon request.

Am-241
Am-241/Be
Ba-133
Cd-109
CF-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# Co-57

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

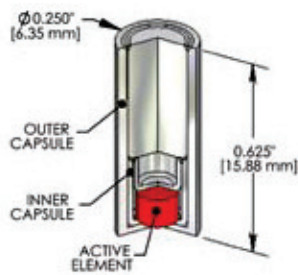
For Low Energy Gamma applications, these sources offer a radionuclide in a stable, homogeneous active element, with main gamma emissions at 122keV and 136keV.

The lower energy emissions are enhanced when beryllium window capsules are used.



### 3000 capsule

Double-encapsulated stainless steel source. ISO rating: C66535

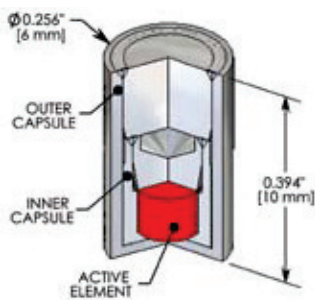


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3000	SS&DR / SFC
0.5	18.5	C0730000500U	Yes / Yes
1	37	C0730000001M	Yes / Yes
5	185	C0730000005M	Yes / Yes
10	370	C0730000010M	Yes / Yes
25	925	C0730000025M	Yes / Yes
50	1850	C0730000050M	Yes / Yes
100	3700	C0730000100M	Yes / Yes

Availability: 4-6 weeks

### 3024 capsule

Double-encapsulated stainless steel source. ISO rating: C66535

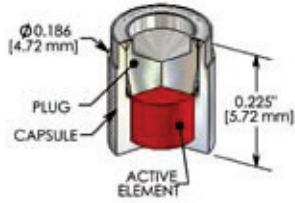


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3024	SS&DR / SFC
0.5	18.5	C0730240500U	Yes / Yes
1	37	C0730240001M	Yes / Yes
5	185	C0730240005M	Yes / Yes
10	370	C0730240010M	Yes / Yes
25	925	C0730240025M	Yes / Yes
50	1850	C0730240050M	Yes / Yes
100	3700	C0730240100M	Yes / Yes

Availability: 4-6 weeks

### 3025 capsule

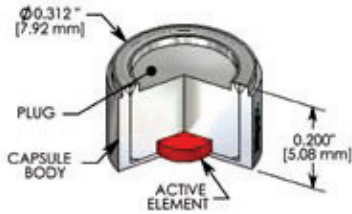
Single-encapsulated stainless steel source. ISO rating: C66434



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3025	SS&DR / SFC
0.5	18.5	C0730250500U	Yes / Yes
1	37	C0730250001M	Yes / Yes
5	185	C0730250005M	Yes / Yes
10	370	C0730250010M	Yes / Yes
25	925	C0730250025M	Yes / Yes
50	1850	C0730250050M	Yes / Yes
100	3700	C0730250100M	Yes / Yes
			Availability: 4-6 weeks

### 3201 capsule

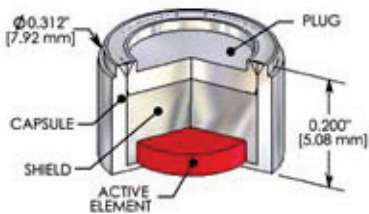
Single-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3201	SS&DR / SFC
0.5	18.5	C0732010500U	Yes / Yes
1	37	C0732010001M	Yes / Yes
5	185	C0732010005M	Yes / Yes
10	370	C0732010010M	Yes / Yes
25	925	C0732010025M	Yes / Yes
50	1850	C0732010050M	Yes / Yes
100	3700	C0732010100M	Yes / Yes
			Availability: 4-6 weeks

### 3202 capsule

Single-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3202	SS&DR / SFC
0.5	18.5	C0732020500U	Yes / Yes
1	37	C0732020001M	Yes / Yes
5	185	C0732020005M	Yes / Yes
10	370	C0732020010M	Yes / Yes
25	925	C0732020025M	Yes / Yes
50	1850	C0732020050M	Yes / Yes
100	3700	C0732020100M	Yes / Yes
			Availability: 4-6 weeks

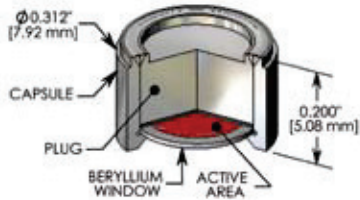
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Co-57

## Standard Capsule Designs

### 3204 capsule

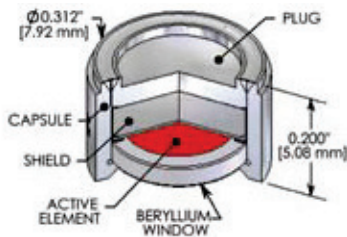
Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C43333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3204	SS&DR / SFC
0.5	18.5	C0732040500U	Yes / Yes
1	37	C0732040001M	Yes / Yes
5	185	C0732040005M	Yes / Yes
10	370	C0732040010M	Yes / Yes
25	925	C0732040025M	Yes / Yes
50	1850	C0732040050M	Yes / Yes
100	3700	C0732040100M	Yes / Yes
			Availability: 4-6 weeks

### 3205 capsule

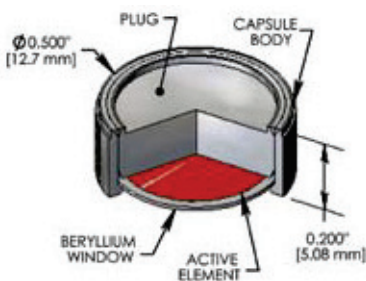
Single-encapsulated stainless steel source with 0.04"/1.0mm beryllium window. ISO rating: C43333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3205	SS&DR / SFC
0.5	18.5	C0732050500U	Yes / No
1	37	C0732050001M	Yes / No
5	185	C0732050005M	Yes / No
10	370	C0732050010M	Yes / No
25	925	C0732050025M	Yes / No
50	1850	C0732050050M	Yes / No
100	3700	C0732050100M	Yes / No
			Availability: 4-6 weeks

### 3215 capsule

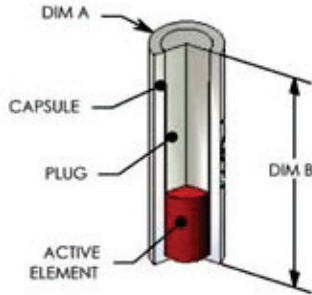
Single-encapsulated stainless steel source with beryllium window. ISO rating: C33222



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3215	SS&DR / SFC
0.5	18.5	C0732150500U	Yes / No
1	37	C0732150001M	Yes / No
5	185	C0732150005M	Yes / No
10	370	C0732150010M	Yes / No
25	925	C0732150025M	Yes / No
50	1850	C0732150050M	Yes / No
100	3700	C0732150100M	Yes / No
			Availability: 4-6 weeks

### 3224 capsule

Single-encapsulated stainless steel source. ISO rating: C66444

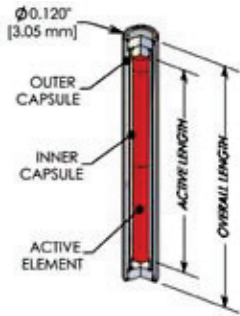


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3224	SS&DR / SFC
0.5	18.5	C0732240500U	Yes / Yes
1	37	C0732240001M	Yes / Yes
5	185	C0732240005M	Yes / Yes
10	370	C0732240010M	Yes / Yes
25	925	C0732240025M	Yes / Yes
50	1850	C0732240050M	Yes / Yes
100	3700	C0732240100M	Yes / Yes
			Availability: 4-6 weeks

See table on p.71 for available 3224 capsule dimensions.

### 3402 capsule

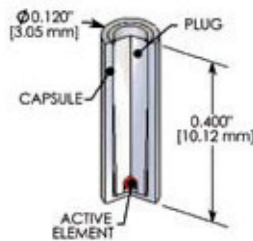
Double-encapsulated stainless steel line source. Also available in titanium. ISO rating: C33222X



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3402	SS&DR / SFC
0.5	18.5	C0734020500U	Yes / Yes
1	37	C0734020001M	Yes / Yes
5	185	C0734020005M	Yes / Yes
10	370	C0734020010M	Yes / Yes
25	925	C0734020025M	Yes / Yes
50	1850	C0734020050M	Yes / Yes
100	3700	C0734020100M	Yes / Yes
			Availability: 4-6 weeks

### 3807 capsule

Single-encapsulated stainless steel point source. ISO rating: C66444



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3807	SS&DR / SFC
0.5	18.5	C0738070500U	Yes / No
1	37	C0738070001M	Yes / No
5	185	C0738070005M	Yes / No
10	370	C0738070010M	Yes / No
25	925	C0738070025M	Yes / No
50	1850	C0738070050M	Yes / No
100	3700	C0738070100M	Yes / No
			Availability: 4-6 weeks

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Si-90
Yb-169

# Co-60

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

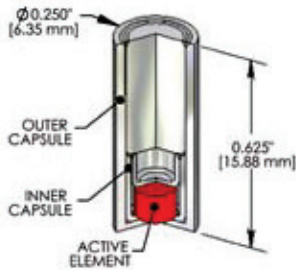
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

These High Energy Gamma sources incorporate a stable, homogeneous active element and offer a radionuclide with distinct gamma emissions of 1173keV and 1333keV.



### 3000 capsule

Double-encapsulated stainless steel source. ISO rating: C66535

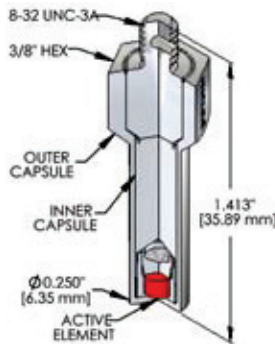


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3000	SS&DR / SFC
0.1	3.7	C0030000100U	Yes / Yes
0.5	18.5	C0030000500U	Yes / Yes
1	37	C0030000001M	Yes / Yes
5	185	C0030000005M	Yes / Yes
10	370	C0030000010M	Yes / Yes
50	1850	C0030000050M	Yes / Yes
100	3700	C0030000100M	Yes / Yes

Availability: up to 5mCi (185MBq) 4 weeks; higher activities 8 weeks

### 3011 capsule

Double-encapsulated stainless steel source. ISO rating: C66545

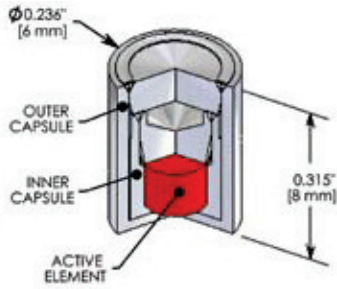


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3011	SS&DR / SFC
0.1	3.7	C0030110100U	Yes / Yes
0.5	18.5	C0030110500U	Yes / Yes
1	37	C0030110001M	Yes / Yes
5	185	C0030110005M	Yes / Yes
10	370	C0030110010M	Yes / Yes
50	1850	C0030110050M	Yes / Yes
100	3700	C0030110100M	Yes / Yes

Availability: up to 5mCi (185MBq) 4 weeks; higher activities 8 weeks

### 3015 capsule

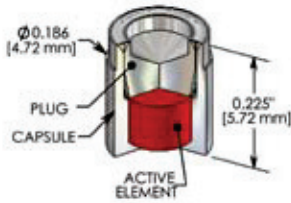
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3015	SS&DR / SFC
0.1	3.7	C0030150100U	Yes / Yes
1	37	C0030150001M	Yes / Yes
5	185	C0030150005M	Yes / Yes
10	370	C0030150010M	Yes / Yes
50	1850	C0030150050M	Yes / Yes
100	3700	C0030150100M	Yes / Yes
500	18500	C0030150500M	Yes / Yes
Availability: up to 5mCi (185MBq) 4 weeks; higher activities 8 weeks			

### 3025 capsule

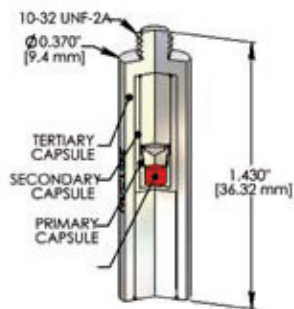
Single-encapsulated stainless steel source. ISO rating: C66434



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3025	SS&DR / SFC
0.1	3.7	C0030250100U	Yes / No
1	37	C0030250001M	Yes / No
5	185	C0030250005M	Yes / No
10	370	C0030250010M	Yes / No
50	1850	C0030250050M	Yes / No
100	3700	C0030250100M	Yes / No
500	18500	C0030250500M	Yes / No
Availability: up to 5mCi (185MBq) 4 weeks; higher activities 8 weeks			

### 3026 capsule

Triple-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3026	SS&DR / SFC
0.1	3.7	C0030260100U	Yes / No
1	37	C0030260001M	Yes / No
5	185	C0030260005M	Yes / No
10	370	C0030260010M	Yes / No
50	1850	C0030260050M	Yes / No
100	3700	C0030260100M	Yes / No
500	18500	C0030260500M	Yes / No
Availability: up to 5mCi (185MBq) 4 weeks; higher activities 8 weeks			

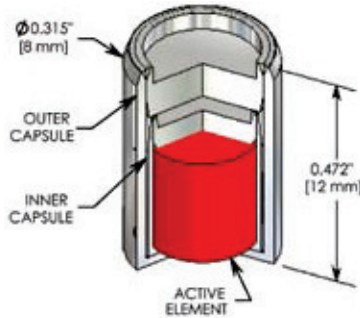
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Co-60

## Standard Capsule Designs

### 3044 capsule

Double-encapsulated stainless steel source. ISO rating: C66646

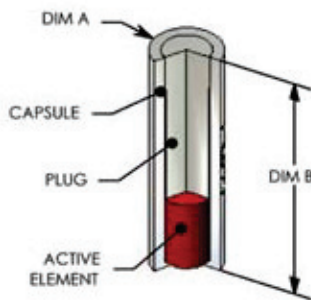


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3044	SS&DR / SFC
0.1	3.7	C0030440100U	Yes / Yes
1	37	C0030440001M	Yes / Yes
10	370	C0030440010M	Yes / Yes
100	3700	C0030440100M	Yes / Yes
1000	37000	C0030440001C	Yes / Yes
4000	148000	C0030440004C	Yes / Yes

Availability: up to 5mCi (185MBq) 4 weeks; higher activities 8 weeks

### 3224 capsule

Single-encapsulated stainless steel source. ISO rating: C66444



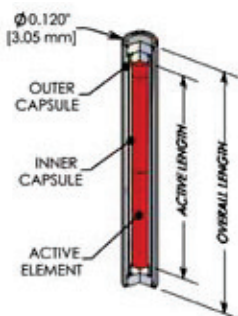
Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3224	SS&DR / SFC
0.005	0.37	C0032240005U	Yes / Yes
0.01	3.33	C0032240010U	Yes / Yes
0.05	3.7	C0032240050U	Yes / Yes
0.1	18.5	C0032240100U	Yes / Yes
0.5	37	C0032240500U	Yes / Yes
1	185	C0032240001M	Yes / Yes
5	370	C0032240005M	Yes / Yes

Availability: 4 weeks

See table on p.71 for available 3224 capsule dimensions.

### 3402 capsule

Double-encapsulated stainless steel line source. Also available in titanium. ISO rating: C33222X

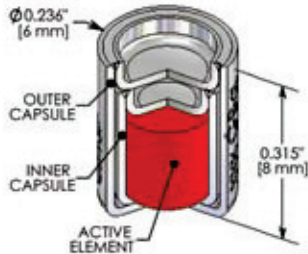


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3402	SS&DR / SFC
0.1	3.7	C0034020100U	Yes / Yes
0.5	18.5	C0034020500U	Yes / Yes
1	37	C0034020001M	Yes / Yes
5	185	C0034020005M	Yes / Yes
10	370	C0034020010M	Yes / Yes

Availability: 4-6 weeks

### P03 capsule

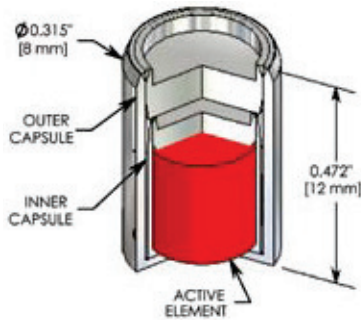
Double-encapsulated stainless steel source. ISO rating: C65545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P03	SS&DR / SFC
10	370	COOP030010M	No / No
50	1850	COOP030050M	No / No
100	3700	COOP030100M	No / No
500	18500	COOP030500M	No / No
1000	37000	COOP030001C	No / No
			Availability: 8 weeks

### P04 capsule

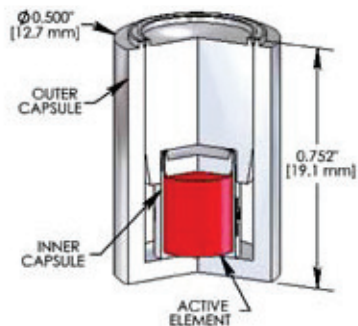
Double-encapsulated stainless steel source. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P04	SS&DR / SFC
10	370	COOP040010M	Yes / Yes
50	1850	COOP040050M	Yes / Yes
100	3700	COOP040100M	Yes / Yes
500	18500	COOP040500M	Yes / Yes
1000	37000	COOP040001C	Yes / Yes
			Availability: 8 weeks

### P17 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	GHq		
		P17	SS&DR / SFC
50	1.85	COOP170050M	Yes / Yes
100	3.7	COOP170100M	Yes / Yes
500	18.5	COOP170500M	Yes / Yes
1000	37.0	COOP170001C	Yes / Yes
2000	74.0	COOP170002C	Yes / Yes
4000	148	COOP170004C	Yes / Yes
			Availability: 8 weeks

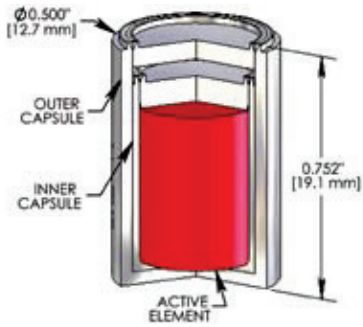
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
Kr-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Co-60

## Standard Capsule Designs

### P17-1 capsule

Double-encapsulated stainless steel source; stable, homogeneous active element. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P17-1	SS&DR / SFC
50	1.85	COOP17-10050M	Yes / Yes
100	3.7	COOP17-10100M	Yes / Yes
500	18.5	COOP17-10500M	Yes / Yes
1000	37.0	COOP17-10001C	Yes / Yes
2000	74.0	COOP17-10002C	Yes / Yes
4000	148	COOP17-10004C	Yes / Yes

Availability: 8 weeks



Eckert & Ziegler Isotope Products performs leakage tests on each source according to the ISO 9978 standard.

Am-241

Am-241/Be

Ba-133

Cd-109

Cf-252

Co-57

Co-60

Cs-137

Eu-152

Fe-55

Gd-153

K-85

Mössbauer

Na-22

Ni-63

Pm-147

Ru-106

Se-75

Sr-90

Yb-169

# Cs-137

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

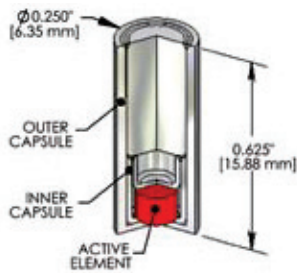
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

Supplied as a stable, homogeneous active element, for High Energy Gamma applications, these Sources offer a radionuclide with a distinct gamma emission at 662keV.



### 3000 capsule

Double-encapsulated stainless steel source. ISO rating: C66535

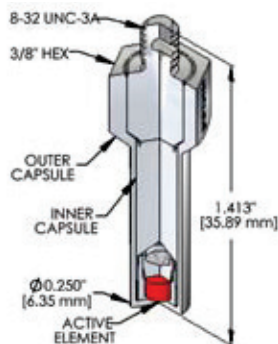


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3000	SS&DR / SFC
0.005	0.185	CS730000005U	Yes / Yes
0.1	3.7	CS730000100U	Yes / Yes
1	37	CS730000001M	Yes / Yes
10	370	CS730000010M	Yes / Yes
50	1850	CS730000050M	Yes / Yes
100	3700	CS730000100M	Yes / Yes
250	9250	CS730000250M	Yes / Yes

Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks

### 3011 capsule

Double-encapsulated stainless steel source. ISO rating: C66545

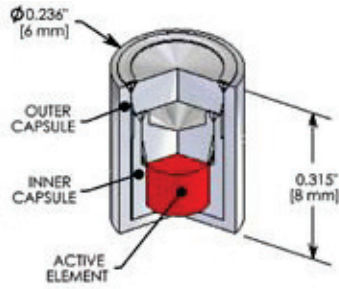


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3011	SS&DR / SFC
0.005	0.185	CS730110005U	Yes / Yes
0.1	3.7	CS730110100U	Yes / Yes
1	37	CS730110001M	Yes / Yes
10	370	CS730110010M	Yes / Yes
50	1850	CS730110050M	Yes / Yes
100	3700	CS730110100M	Yes / Yes
250	9250	CS730110250M	Yes / Yes

Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks

### 3015 capsule

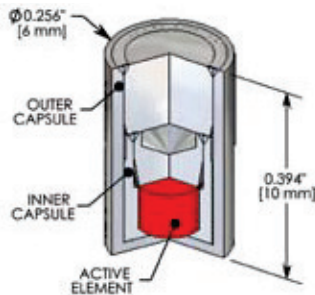
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3015	SS&DR / SFC
0.005	0.185	CS730150005U	Yes / Yes
0.1	3.7	CS730150100U	Yes / Yes
1	37	CS730150001M	Yes / Yes
10	370	CS730150010M	Yes / Yes
50	1850	CS730150050M	Yes / Yes
100	3700	CS730150100M	Yes / Yes
250	9250	CS730150250M	Yes / Yes
Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks			

### 3024 capsule

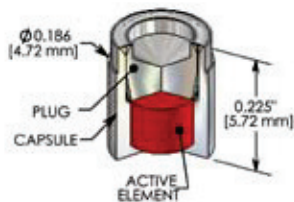
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3024	SS&DR / SFC
0.00005	0.00185	CS730240050N	Yes / Yes
0.005	0.185	CS730240005U	Yes / Yes
0.1	3.7	CS730240100U	Yes / Yes
1	37	CS730240001M	Yes / Yes
10	370	CS730240010M	Yes / Yes
50	1850	CS730240050M	Yes / Yes
100	3700	CS730240100M	Yes / Yes
500	18500	CS730240500M	Yes / Yes
Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks			

### 3025 capsule

Single-encapsulated stainless steel source. ISO rating: C66434



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3025	SS&DR / SFC
0.00005	0.00185	CS730250050N	Yes / No
0.005	0.185	CS730250005U	Yes / No
0.1	3.7	CS730250100U	Yes / No
1	37	CS730250001M	Yes / No
10	370	CS730250010M	Yes / No
50	1850	CS730250050M	Yes / No
100	3700	CS730250100M	Yes / No
Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks			

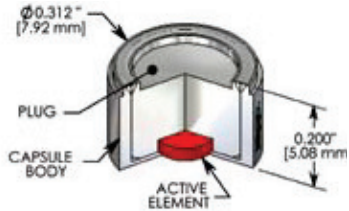
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Cs-137

## Standard Capsule Designs

### 3201 capsule

Single-encapsulated stainless steel source. ISO rating: C66545

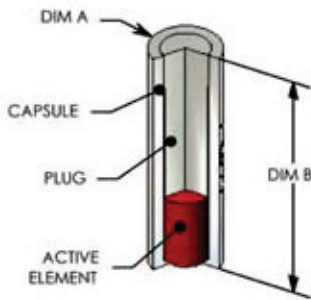


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3201	SS&DR / SFC
0.00005	0.00185	CS732010050N	Yes / Yes
0.005	0.185	CS732010005U	Yes / Yes
0.1	3.7	CS732010100U	Yes / Yes
1	37	CS732010001M	Yes / Yes
10	370	CS732010010M	Yes / Yes
50	1850	CS732010050M	Yes / Yes
100	3700	CS732010100M	Yes / Yes

Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks

### 3224 capsule

Single-encapsulated stainless steel source. ISO rating: C66444



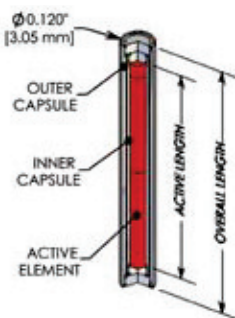
Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3224	SS&DR / SFC
0.005	0.185	CS732240005U	Yes / Yes
0.01	0.37	CS73224010U	Yes / Yes
0.05	1.85	CS732240050U	Yes / Yes
0.1	3.7	CS732240100U	Yes / Yes
0.5	18.5	CS732240500U	Yes / Yes
1	37	CS732240001M	Yes / Yes
5	185	CS732240005M	Yes / Yes

Availability: 4 weeks

See table on p.71 for available 3224 capsule dimensions.

### 3402 capsule

Double-encapsulated stainless steel line source. Also available in titanium. ISO rating: C33222X

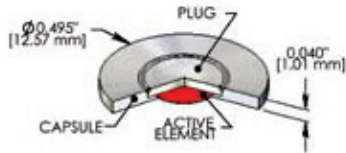


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3402	SS&DR / SFC
0.1	3.7	CS734020100U	Yes / Yes
0.5	18.5	CS734020500U	Yes / Yes
1	37	CS732240001M	Yes / Yes
5	185	CS734020005M	Yes / Yes
10	370	CS734020010M	Yes / Yes
50	1850	CS734020050M	Yes / Yes
100	3700	CS734020100M	Yes / Yes

Availability: up to 10mCi (370MBq) 4 weeks; higher activities 8 weeks

### 3888 capsule

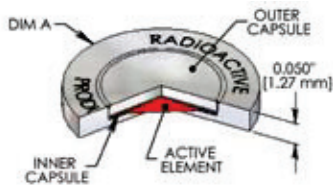
Single-encapsulated stainless steel disk source. ISO rating: C22212



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3888	SS&DR / SFC
0.000084	0.0031	CS7A38880084N	Yes / No
0.0001	0.0037	CS7A38880100N	Yes / No
0.001	0.037	CS7A38880001U	Yes / No
0.01	0.37	CS7A38880010U	Yes / No
0.1	3.7	CS7A38880100U	Yes / No
1	37	CS7A38880001M	Yes / No
			Availability: 4 weeks

### 3916 capsule

Double-encapsulated stainless steel disk source. ISO rating: C22212

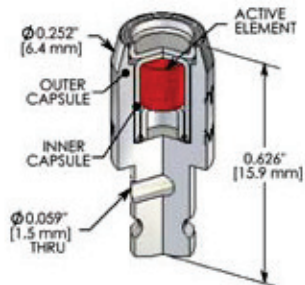


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3916	SS&DR / SFC
0.000084	0.0031	CS7A39160084N	Yes / No
0.0001	0.0037	CS7A39160100N	Yes / No
0.001	0.037	CS7A39160001U	Yes / No
0.01	0.37	CS7A39160010U	Yes / No
0.1	3.7	CS7A39160100U	Yes / No
1	37	CS7A39160001M	Yes / No
			Availability: 4 weeks

3916 capsule is available in various diameters; please inquire.

### P01 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P01	SS&DR / SFC
0.5	18.5	CS7P010500U	Yes / Yes
1	37	CS7P010001M	Yes / Yes
5	185	CS7P010005M	Yes / Yes
			Availability: 8-10 weeks

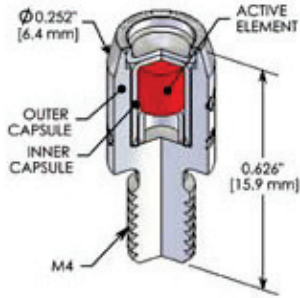
Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Sr-75
Sr-90
Yb-169

# Cs-137

## Standard Capsule Designs

### P02 capsule

Double-encapsulated stainless steel source. ISO rating: C66646

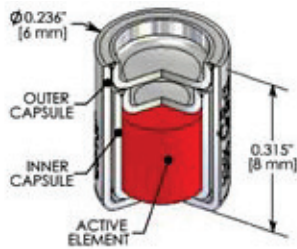


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P02	SS&DR / SFC
0.5	18.5	CS7P020500U	Yes / Yes
1	37	CS7P020001M	Yes / Yes
5	185	CS7P020005M	Yes / Yes
10	370	CS7P020010M	Yes / Yes
50	1850	CS7P020050M	Yes / Yes
100	3700	CS7P020100M	Yes / Yes
250	9250	CS7P020250M	Yes / Yes

Availability: 8-10 weeks

### P03 capsule

Double-encapsulated stainless steel source. ISO rating: C65445

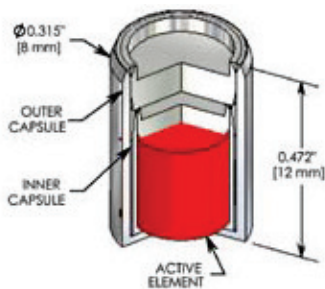


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P03	SS&DR / SFC
0.5	18.5	CS7P030500U	Yes / Yes
1	37	CS7P030001M	Yes / Yes
5	185	CS7P030005M	Yes / Yes
10	370	CS7P030010M	Yes / Yes
50	1850	CS7P030050M	Yes / Yes
100	3700	CS7P030100M	Yes / Yes
250	9250	CS7P030250M	Yes / Yes
500	18500	CS7P030500M	Yes / Yes

Availability: 8-10 weeks

### P04 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



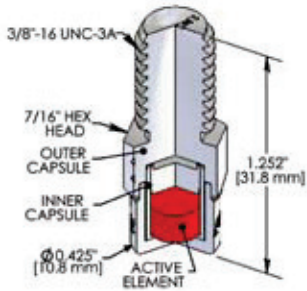
Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P04	SS&DR / SFC
1	37	CS7P040001M	Yes / Yes
10	370	CS7P040010M	Yes / Yes
100	3700	CS7P040100M	Yes / Yes
500	18500	CS7P040500M	Yes / Yes
750	27750	CS7P040750M	Yes / Yes
1000	37000	CS7P041000M	Yes / Yes
1500	65000	CS7P041500M	Yes / Yes

Availability: 8-10 weeks

Also available as P04-A capsule with M6 threaded stud. Inquire for details.

### P05 capsule

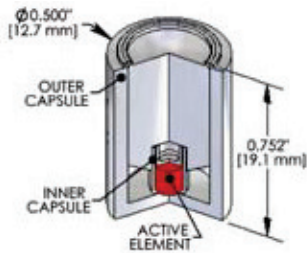
Double-encapsulated stainless steel source. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P04	SS&DR / SFC
500	18500	CS7P050500M	Yes / Yes
1000	37000	CS7P050001C	Yes / Yes
2000	74000	CS7P050002C	Yes / Yes
3000	111000	CS7P0500003C	Yes / Yes
			Availability: 8-10 weeks

### P13 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P13	SS&DR / SFC
1	37	CS7P130001M	Yes / Yes
2	74	CS7P130002M	Yes / Yes
5	185	CS7P130005M	Yes / Yes
10	370	CS7P130010M	Yes / Yes
50	1850	CS7P130050M	Yes / Yes
100	3700	CS7P130100M	Yes / Yes
			Availability: 8-10 weeks

Note: Activity tolerance: +20/-15%

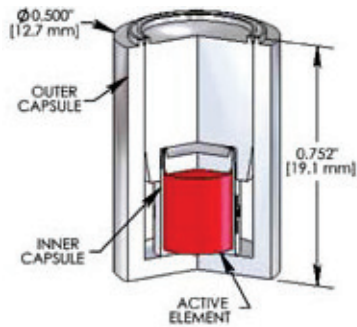
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
Kr-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Cs-137

## Standard Capsule Designs

### P17 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



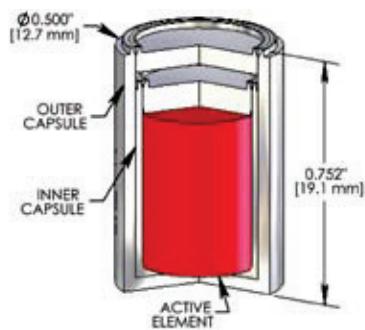
Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P17	SS&DR / SFC
1	37	CS7P170001M	Yes / Yes
10	370	CS7P170010M	Yes / Yes
100	3700	CS7P170100M	Yes / Yes
500	18500	CS7P170500M	Yes / Yes
750	27750	CS7P170750M	Yes / Yes
1000	37000	CS7P170001C	Yes / Yes
2000	74000	CS7P170002C	Yes / Yes

Availability: 8-10 weeks

Note: Activity tolerance: +20/-15%

### P17-1 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



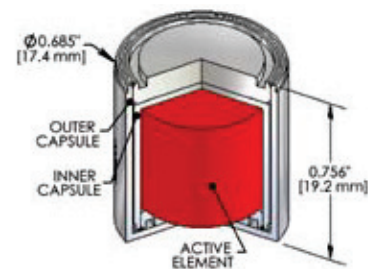
Nominal Activity		Part Numbers	Regulatory
mCi	GBq		
		P17-1	SS&DR / SFC
1000	37	CS7P17-10001C	Yes / Yes
2000	74	CS7P17-10002C	Yes / Yes
4000	148	CS7P17-10004C	Yes / Yes
6000	222	CS7P17-10006C	Yes / Yes
8000	296	CS7P17-10008C	Yes / Yes
10000	370	CS7P17-10010C	Yes / Yes

Availability: up to 6000mCi (222GBq) 8-10 weeks; please inquire for higher activities.

Note: Activity tolerance: +20/-15%

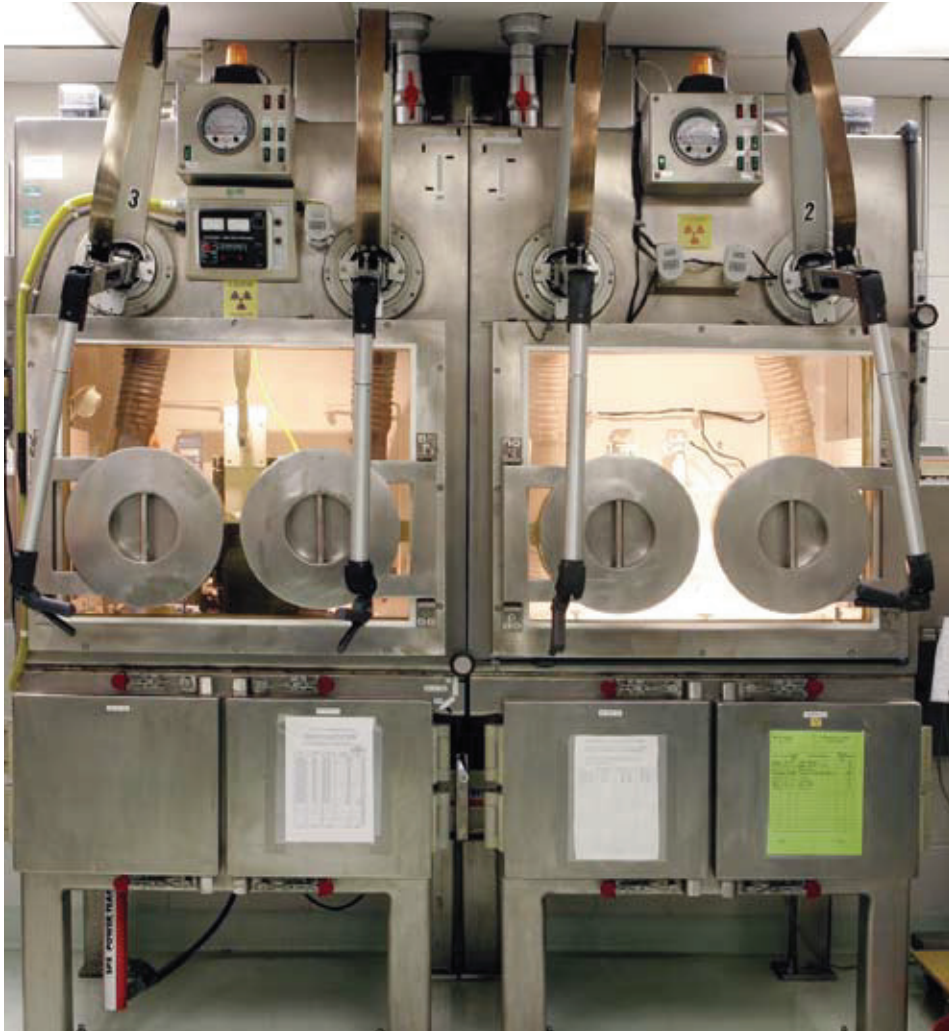
### P20 capsule

Double-encapsulated stainless steel source. ISO rating: C66646



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		P20	SS&DR / SFC
1000	37	CS7P200001C	Yes / Yes
2000	74	CS7P200002C	Yes / Yes
4000	148	CS7P200004C	Yes / Yes
6000	222	CS7P200006C	Yes / Yes
8000	296	CS7P200008C	Yes / Yes
10000	370	CS7P200010C	Yes / Yes

Availability: up to 6000mCi (222GBq) 8-10 weeks; please inquire for higher activities.



Eckert & Ziegler Isotope Products radiochemistry facilities used in the production of low-energy gamma sources.

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Si-90
Yb-169

# Eu-152

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

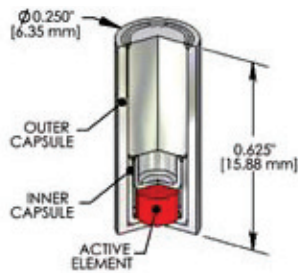
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For High Energy Gamma applications requiring a long half-life radionuclide, these sources offer a broad gamma spectrum between 122keV and ~1408keV. The activity is contained in a stable, homogeneous active element.



### 3000 capsule

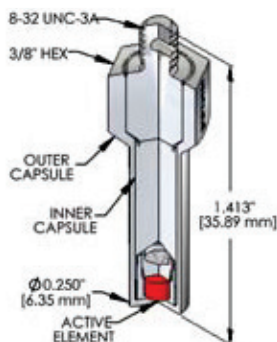
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3000	SS&DR / SFC
0.1	3.7	EU230000100U	Yes / Yes
0.25	9.25	EU230000250U	Yes / Yes
0.5	18.5	EU230000500U	Yes / Yes
1	37	EU230000001M	Yes / Yes
5	185	EU230000005M	Yes / Yes
10	370	EU230000010M	Yes / Yes
20	740	EU230000020M	Yes / Yes
			Availability: 8 weeks

### 3011 capsule

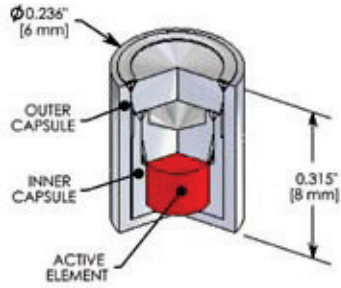
Double-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3011	SS&DR / SFC
0.1	3.7	EU230110100U	Yes / Yes
0.25	9.25	EU230110250U	Yes / Yes
0.5	18.5	EU230110500U	Yes / Yes
1	37	EU230110001M	Yes / Yes
5	185	EU230110005M	Yes / Yes
10	370	EU230110010M	Yes / Yes
20	740	EU230110020M	Yes / Yes
			Availability: 8 weeks

### 3015 capsule

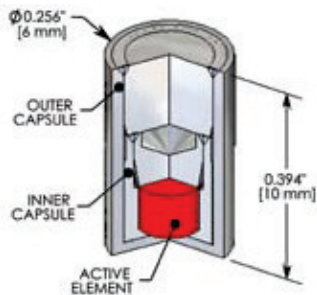
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3015	SS&DR / SFC
0.1	3.7	EU230150100U	Yes / Yes
0.25	9.25	EU230150250U	Yes / Yes
0.5	18.5	EU230150500U	Yes / Yes
1	37	EU230150001M	Yes / Yes
5	185	EU230150005M	Yes / Yes
10	370	EU230150010M	Yes / Yes
20	740	EU230150020M	Yes / Yes
			Availability: 8 weeks

### 3024 capsule

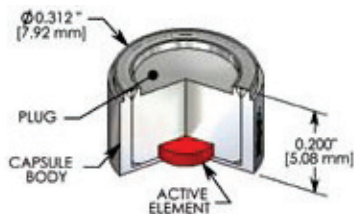
Double-encapsulated stainless steel source. ISO rating: C66535



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3024	SS&DR / SFC
0.1	3.7	EU230240100U	Yes / Yes
0.25	9.25	EU230240250U	Yes / Yes
0.5	18.5	EU230240500U	Yes / Yes
1	37	EU230240001M	Yes / Yes
5	185	EU230240005M	Yes / Yes
10	370	EU230240010M	Yes / Yes
20	740	EU230240020M	Yes / Yes
			Availability: 8 weeks

### 3201 capsule

Single-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3201	SS&DR / SFC
0.1	3.7	EU232010100U	Yes / Yes
0.25	9.25	EU232010250U	Yes / Yes
0.5	18.5	EU232010500U	Yes / Yes
1	37	EU232010001M	Yes / Yes
5	185	EU232010005M	Yes / Yes
10	370	EU232010010M	Yes / Yes
			Availability: 8 weeks

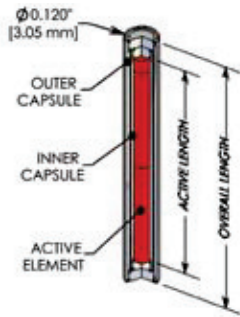
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
Kr-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Eu-152

## Standard Capsule Designs

### 3402 capsule

Double-encapsulated stainless steel line source. Also available in titanium. ISO rating: C33222X



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3402	SS&DR / SFC
0.1	3.7	EU234020100U	Yes / Yes
0.25	9.25	EU234020250U	Yes / Yes
0.5	18.5	EU234020500U	Yes / Yes
1	37	EU234020001M	Yes / Yes
5	185	EU234020005M	Yes / Yes
10	370	EU234020010M	Yes / Yes
20	740	EU234020020M	Yes / Yes
			Availability: 8 weeks

Am-241
Am-241/Be
Ba-133
Cd-109
Ce-137
Co-57
Co-60
Gd-153
Eu-152
Fe-55
Gd-153
K-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169



Eckert & Ziegler Isotope Products precisely measures the output of each source prior to dispatch.

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# Fe-55

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

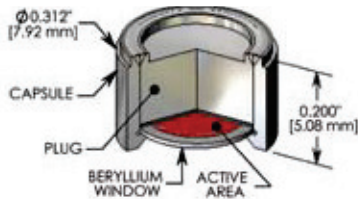
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For Low Energy X-ray applications, these sources offer a radionuclide with X-ray emissions around 6keV. Beryllium window capsules are normally used to enhance the low energy emissions. The activity is contained in a stable, homogeneous active element.



### 3204 capsule

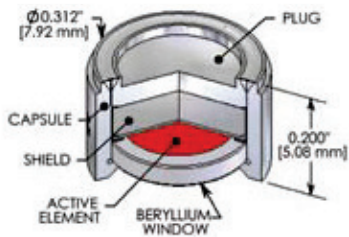
Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C43333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3204	SS&DR / SFC
1	37	FE532040001M	Yes / Yes
5	185	FE532040005M	Yes / Yes
10	370	FE532040010M	Yes / Yes
30	1110	FE532040030M	Yes / Yes
40	1480	FE532040040M	Yes / Yes
50	1850	FE532040050M	Yes / Yes
100	3700	FE532040100M	Yes / Yes
			Availability: 4 weeks

### 3205 capsule

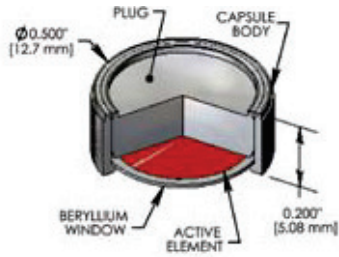
Single-encapsulated stainless steel source with 0.04"/1.0mm beryllium window. ISO rating: C43333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3205	SS&DR / SFC
1	37	FE532050001M	Yes / No
5	185	FE532050005M	Yes / No
10	370	FE532050010M	Yes / No
30	1110	FE532050030M	Yes / No
40	1480	FE532050040M	Yes / No
50	1850	FE532050050M	Yes / No
100	3700	FE532050100M	Yes / No
			Availability: 4 weeks

### 3215 capsule

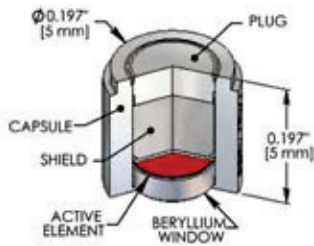
Single-encapsulated stainless steel source with 0.01"/0.25mm beryllium window. ISO rating: C33222



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3215	SS&DR / SFC
1	37	FE532150001M	Yes / No
5	185	FE532150005M	Yes / No
10	370	FE532150010M	Yes / No
30	1110	FE532150030M	Yes / No
40	1480	FE532150040M	Yes / No
50	1850	FE532150050M	Yes / No
100	3700	FE532150100M	Yes / No
			Availability: 4 weeks

### 3236 capsule

Single-encapsulated stainless steel source with 0.10"/0.25mm beryllium window. ISO rating: C54243



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3236	SS&DR / SFC
1	37	FE532360001M	Yes / No
5	185	FE532360005M	Yes / No
10	370	FE532360010M	Yes / No
30	1110	FE532360030M	Yes / No
40	1480	FE532360040M	Yes / No
50	1850	FE532360050M	Yes / No
100	3700	FE532360100M	Yes / No
			Availability: 4 weeks

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# Gd-153

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

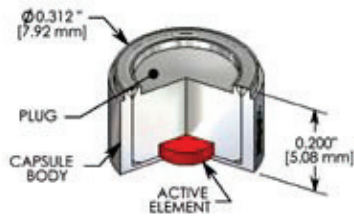
For Low Energy Gamma applications, Gd-153 sources offer a radionuclide with gamma emissions around 100keV, and X-rays between 41keV and 49keV.

The activity is contained in a stable, homogeneous active element.



### 3201 capsule

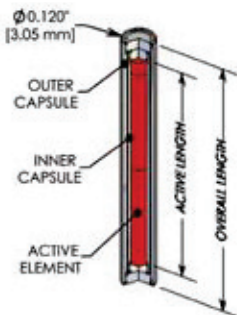
Double-encapsulated stainless steel source. ISO rating: C66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3201	SS&DR / SFC
5	185	GD332010005M	Yes / Yes
10	370	GD332010010M	Yes / Yes
20	740	GD332010020M	Yes / Yes
50	1850	GD332010050M	Yes / Yes
100	3700	GD332010100M	Yes / Yes
			Availability: 4 weeks

### 3402 capsule

Double-encapsulated stainless steel line source. Also available in titanium. ISO rating: C33222X



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3402	SS&DR / SFC
5	185	GD334020005M	Yes / Yes
10	370	GD334020010M	Yes / Yes
20	740	GD334020020M	Yes / Yes
50	1850	GD334020050M	Yes / Yes
100	3700	GD334020100M	Yes / Yes
			Availability: 4 weeks



Eckert & Ziegler Isotope Products' source production laboratory.

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
K-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# Kr-85

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

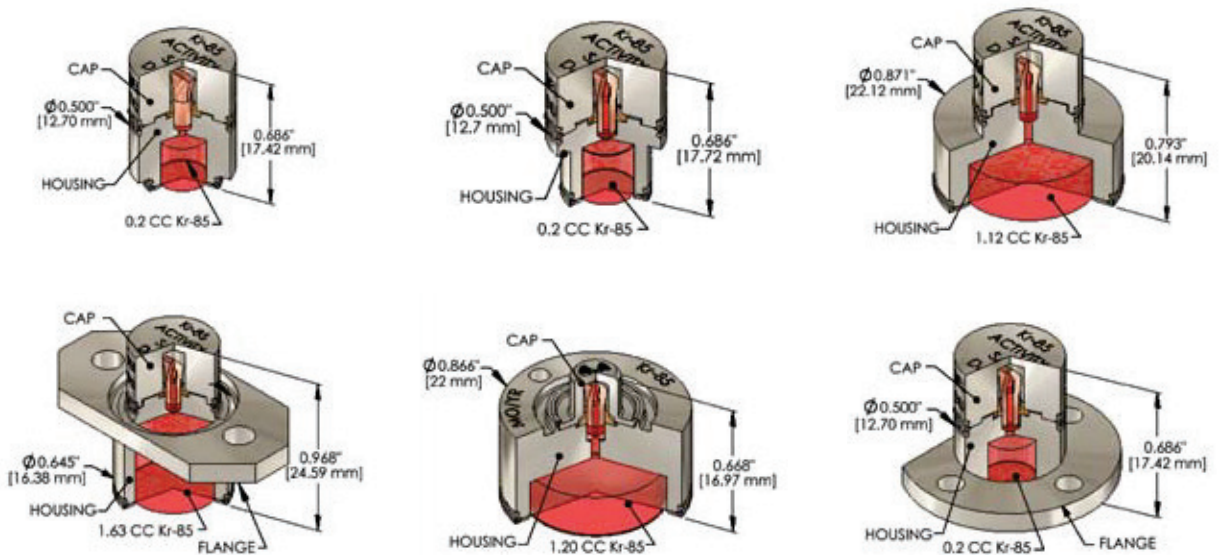
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For medium energy Beta gauging applications, these Kr-85 gas-filled sources offer a radionuclide with beta energies up to ~680keV.



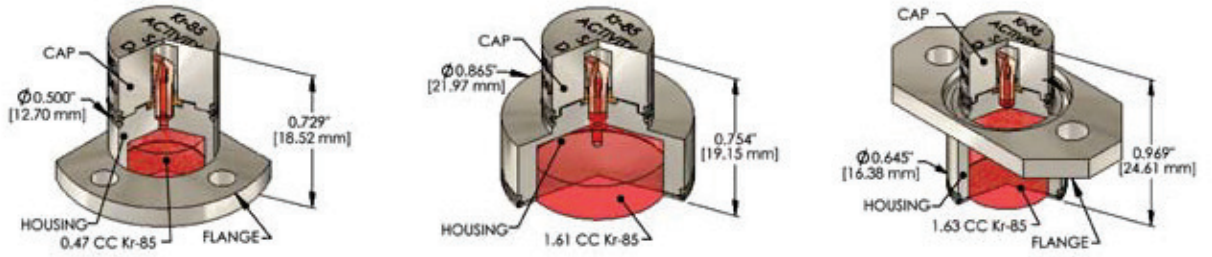
### NER584 / NER586 series

Single-encapsulated titanium source with 0.002" (0.051mm) titanium window. Activities up to 2200mCi (81.4GBq). Typical capsule configurations are shown below; please contact us for assistance before ordering.



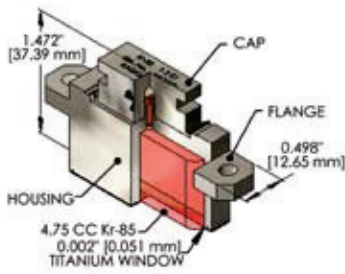
### NER585 series

Single-encapsulated stainless steel source with 0.002" (0.05mm) stainless steel window. Activities up to 3000mCi (111GBq). Typical capsule configurations are shown below; please contact us for assistance before ordering.



### NER587 capsule

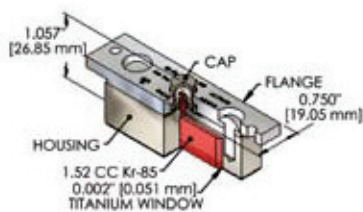
Single-encapsulated titanium source with titanium window. ISO rating: C33332



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	NER587	SS&DR / SFC
10	370	KR5NER5870010M	Yes / No
50	1850	KR5NER5870050M	Yes / No
100	3700	KR5NER5870100M	Yes / No
200	7400	KR5NER5870200M	Yes / No
500	18500	KR5NER5870500M	Yes / No
1000	37000	KR5NER5870001C	Yes / No
2000	74000	KR5NER5870002C	Yes / No
			Availability: 8 weeks

### NER588 capsule

Single-encapsulated titanium source with titanium window. ISO rating: C33332



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	NER587	SS&DR / SFC
100	3700	KR5NER58800100M	Yes / No
500	18500	KR5NER58800500M	Yes / No
1000	37000	KR5NER58801000M	Yes / No
2000	74000	KR5NER58802000M	Yes / No
2500	92500	KR5NER5882500M	Yes / No
			Availability: 8 weeks

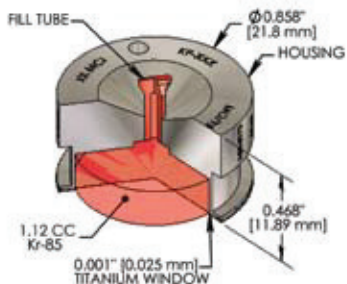
Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
Kr-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Kr-85

## Standard Capsule Designs

### NER8170 capsule

Single-encapsulated titanium source with titanium window. ISO rating: C333232

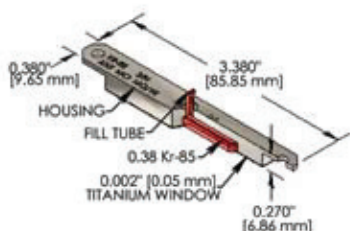


Nominal Activity		Part Numbers	Regulatory
mCi	MBq	NER8170	SS&DR / SFC
10	370	KR5NER81700010M	Yes / No
20	740	KR5NER81700020M	Yes / No
50	1850	KR5NER81700050M	Yes / No
100	3700	KR5NER81700100M	Yes / No
200	7400	KR5NER81700200M	Yes / No
500	18500	KR5NER81700500M	Yes / No
1150	42550	KR5NER81701150M	Yes / No

Availability: 8 weeks

### NER8180 capsule

Single-encapsulated titanium source with titanium window. ISO rating: C33322



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	NER8180	SS&DR / SFC
10	370	KR5NER81800010M	Yes / No
20	740	KR5NER81800020M	Yes / No
50	1850	KR5NER81800050M	Yes / No
100	3700	KR5NER81800100M	Yes / No
300	11100	KR5NER81800300M	Yes / No
700	25900	KR5NER81800700M	Yes / No
1500	55500	KR5NER81801500M	Yes / No

Availability: 8 weeks



# Mössbauer Sources

## Mössbauer Effect Sources and Absorbers

### Mössbauer Effect Sources

Applications of the Mössbauer Effect utilize recoilless nuclear absorption of low energy gamma rays, a phenomenon discovered by Rudolf Mössbauer in 1957. This phenomenon facilitates studies of the chemical and electromagnetic environment of the resonant nucleus.

Mössbauer Effect cobalt sources are prepared by the electrodeposition of Co-57 onto a variety of metal foils, commonly copper, palladium, or pure iron, followed by hydrogen annealing to diffuse the cobalt into the foil. This produces a special type of radioactive source emitting gamma rays (photons) of well-defined energy that produce the Mössbauer Effect. The effect depends upon the emission of low energy gamma rays from a nucleus without energy loss in nuclear recoil. The emitted photon then possesses the full translational energy and is capable of resonant absorption in a stable nucleus of the same nuclide. The effect is obtained by diffusing a suitable radionuclide into the matrix to eliminate nuclear recoil. An unsplit resonance absorption line results when a Co-57 source on a non-ferro-magnetic matrix (such as stainless steel or palladium) is used with a pure Fe-57 absorber deposited on a non-magnetic surface such as 300 series stainless steel. Hyperfine magnetic splitting of the spectrum results when the matrix or absorber is ferromagnetic (such as pure iron).

Mössbauer Effect Sources are prepared to order to ensure the best performance characteristics. Particular attention is given to optimizing the annealing and quenching conditions.

Active metal foils are supplied in a demountable plastic holder for attachment to a velocity transducer. The foil itself, which may be removed from the holder, is coated with a tough, radiation resistant polyimide film 9mg/cm<sup>2</sup> thick and meets NRC leak test requirements for Sealed Sources. The foil diameter for the standard mount is 0.5" (12.7mm) with an active diameter of 0.25" (6.35mm). Alternate mounts such as Ranger and Austin styles are available upon request.

Other nuclides may be available. Please contact Eckert & Ziegler Isotope Product's Customer Service for more information (see Inquiry Form at back of catalog).

### Certified Cobalt-57 Sources

Each Co-57 source is supplied with two pure iron and two type 310 stainless steel absorbers. At least 35% effect is expected for each source in copper and platinum matrices.

### Standard Activities

1mCi	37Mq
2mCi	74MBq
5mCi	185MBq
10mCi	370MBq
15mCi	555MBq
20mCi	740MBq
25mCi	925MBq
50mCi	1850MBq
100mCi	3700MBq

Part Numbers	Thickness *		Substrate	FWHM (mm/s)
MOS-057RH	0.000472"	0.012mm	Rhodium	0.27
MOS-057CU	0.000472"	0.012mm	Copper	0.27
MOS-057PD	0.000472"	0.012mm	Palladium	0.27
MOS-057PT	0.000984"	0.025mm	Platinum	0.27
MOS-057FE	0.000394"	0.01mm	Pure Iron	0.30
MOS-057NI	0.000512"	0.013mm	Nickel	0.30
MOS-057SS	0.000394"	0.01mm	Type 310 S/S	0.45

Availability: please inquire

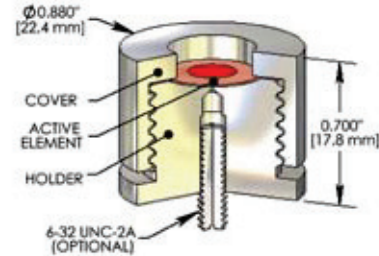
\* These thicknesses have been chosen as suitable for most applications. Thicker or thinner substrates of all these metals are usually available and may be substituted on request.

## Velocity Calibration Absorbers

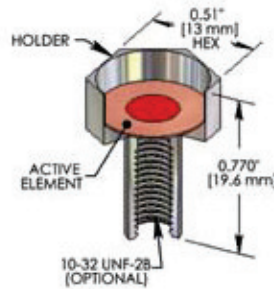
This absorber permits rapid resolution of the six lines in the magnetic hyperfine splitting in Fe-57m. The absorber is prepared by electrodeposition of highly enriched Fe-57 onto a thin foil of natural iron followed by diffusion bonding under hydrogen. A 500 µg/cm<sup>2</sup> acrylic coating prevents oxidation.

The thin absorber (approx. 6.5mg/cm<sup>2</sup>) allows a high transmission fraction of the 14keV gamma while yielding a high percentage effect (15% on the inner lines, 20% on the outer, uncorrected for background).

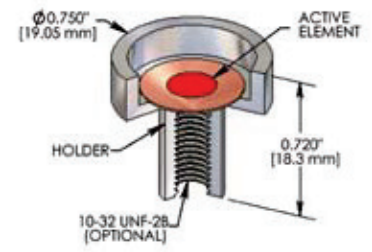
Natural iron and 310 stainless steel absorbers are also available. Two each of these absorbers are included with the purchase of any Mössbauer source.



Mössbauer Effect Source with Standard Mount



Mössbauer Ranger Mount



Mössbauer Austin Mount

Part Numbers	Material	Substrate	Thickness
MOS-NA-10	Pure iron (natural)	1" x 1" (25.4mm x 25.4mm)	4.72mg/cm <sup>2</sup> 19.7mg/cm <sup>2</sup>
MOS-NA-11	Type 310 stainless steel	1" x 1" (25.4mm x 25.4mm)	39.4mg/cm <sup>2</sup>

Availability: supplied with order; otherwise 4-6 weeks

# Na-22

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

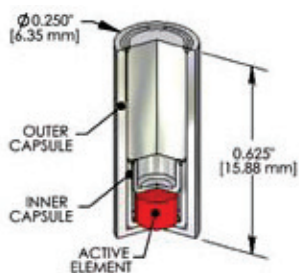
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For High Energy Gamma or positron applications these Na-22 sources offer a high energy gamma line at 1275keV, along with  $\beta^+$  annihilation emissions at 511keV. The activity is in a stable, homogeneous active element.



### 3000 capsule

Double-encapsulated stainless steel source. ISO rating: C66545

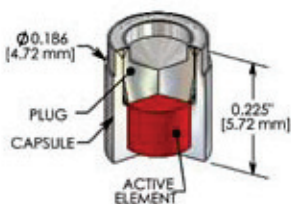


Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3000	SS&DR / SFC
0.001	0.037	NA230000001U	Yes / Yes
0.01	0.37	NA230000010U	Yes / Yes
0.1	3.7	NA230000100U	Yes / Yes
0.5	18.5	NA230000500U	Yes / Yes
1	37	NA230000001M	Yes / Yes
10	370	NA230000010M	Yes / Yes

Availability: 4 weeks

### 3025 capsule

Single-encapsulated stainless steel source. ISO rating: C66434



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3025	SS&DR / SFC
0.001	0.037	NA230250001U	Yes / Yes
0.01	0.37	NA230250010U	Yes / Yes
0.1	3.7	NA230250100U	Yes / Yes
0.5	18.5	NA230250500U	Yes / Yes
1	37	NA230250001M	Yes / Yes
10	370	NA230250010M	Yes / Yes

Availability: 4 weeks

# Ni-63

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

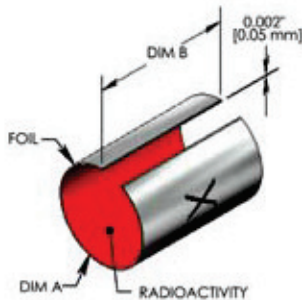
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For low energy beta applications (such as Electron Capture Detection/ Ion Mobility Spectroscopy) these Ni-63 Sources offer beta emissions up to 66keV.



### Nickel Foil Sources

Nickel foil with Ni-63 electrodeposited onto one surface. Optional inactive Nickel overplate available. A serial number is etched onto the outer inactive surface. ISO rating: C42211.



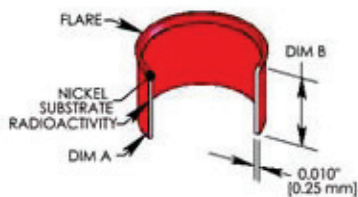
Nominal Activity		Part Numbers	Regulatory
mCi	MBq	4500	SS&DR / SFC
0.1	3.7	NI345000100U	Yes / No
0.5	18.5	NI345000500U	Yes / No
1	37	NI345000001M	Yes / No
2	74	NI345000002M	Yes / No
5	185	NI345000005M	Yes / No
10	370	NI345000010M	Yes / No
15	555	NI345000015M	Yes / No

Availability: 4-6 weeks

Foils can be ordered with a wide range of dimensions. Please inquire for details.

### NER-004R Nickel Ring Sources

Nickel or brass ring with Ni-63 electrodeposited onto all surfaces. Optional inactive Nickel overplate available. ISO Rating: C42211



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	NER-004R	SS&DR / SFC
0.1	3.7	NER-004R-100U	Yes / No
0.5	18.5	NER-004R-500U	Yes / No
1	37	NER-004R-1M	Yes / No
2	74	NER-004R-2M	Yes / No
5	185	NER-004R-5M	Yes / No
10	370	NER-004R-10M	Yes / No
15	555	NER-004R-15M	Yes / No

Availability: 4-6 weeks

Rings can be ordered with various dimensions. Please inquire for details.

Am-241  
Am-241/Be  
Ba-133  
Cd-109  
Ce-137  
Co-57  
Co-60  
Cs-137  
Eu-152  
Fe-55  
Gd-153  
K-85  
Mössbauer  
Na-22  
Ni-63  
Pm-147  
Ru-106  
Se-75  
Sr-90  
Yb-169

# Pm-147

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

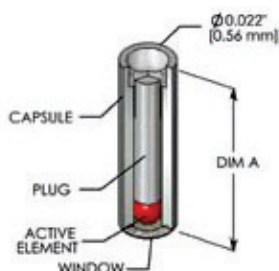
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For medium energy Beta gauging applications, these Pm-147 sources offer a radionuclide with beta energies up to ~225keV. The activity is contained within a stable, homogeneous active element.



### 3882 capsule

Single-encapsulated source with thin end window. Available in stainless steel, platinum/iridium, titanium or nickel. ISO rating: C22232. Maximum length of Dimension A is 0.180"/4.57mm.



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3882	SS&DR / SFC
0.9	33.3	PM738820900U	Yes / No
1.2	44.4	PM738821200U	Yes / No
3.0	111	PM738820003M	Yes / No
5.0	185	PM738820005M	Yes / No
9.0	333	PM738820009M	Yes / No
24.0	888	PM738820024M	Yes / No

Availability: 4-6 weeks

# Ru-106

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

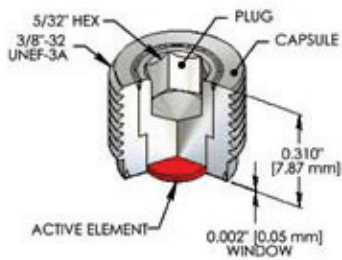
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For high energy Beta applications, these Ru-106 Sources offer a radionuclide with beta energies up to ~2.5MeV, and gamma emissions up to 1562keV. The activity is in a stable, homogeneous active element.



### 3222 capsule

Single-encapsulated stainless steel source with thin end window. ISO rating C33222



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3222	SS&DR / SFC
0.1	3.7	RU632220100U	No / Yes
0.2	7.4	RU632220200U	No / Yes
0.5	18.5	RU632220500U	No / Yes
1	37	RU632220001M	No / Yes
2	74	RU632220002M	No / Yes
			Availability: 4-6 weeks

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# Se-75

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

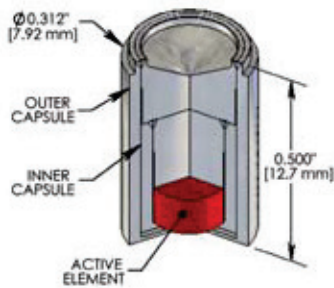
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For medium energy gamma applications, these Se-75 sources offer gamma energies between 66keV and ~400keV. The activity is in a stable, homogeneous active element.



### 3616 capsule

Double-encapsulated aluminum or titanium capsule. ISO rating: C43513



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3616	SS&DR / SFC
20	740	SE536160020M	Yes / No
50	1850	SE536160050M	Yes / No
100	3700	SE536160100M	Yes / No
200	7400	SE536160200M	Yes / No
400	14800	SE536160400M	Yes / No
			Availability: 6 weeks

# Sr-90

## Standard Capsule Designs

### Activity Tolerance

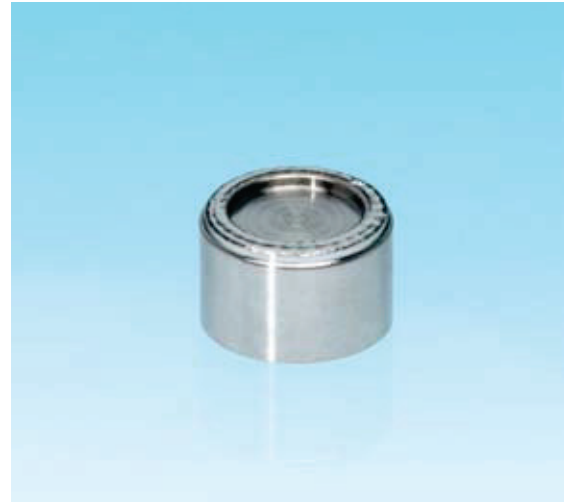
± 15% from nominal

### Recommended Working Life

See Technical Information section.

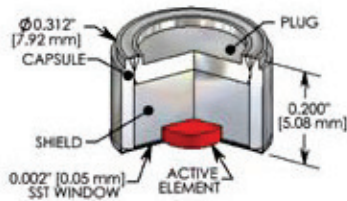
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

For high energy Beta applications, these Sr-90 Sources offer a long-lived radionuclide with beta energies up to ~2.3MeV. The activity is in a stable, homogeneous active element.



### 3203 capsule

Single-encapsulated stainless steel capsule with 0.002" (0.051mm) end window. ISO rating: 66545



Nominal Activity		Part Numbers	Regulatory
mCi	MBq		
		3203	SS&DR / SFC
1	37	SR032030001M	Yes / No
2	74	SR032030002M	Yes / No
5	185	SR032030005M	Yes / No
10	370	SR032030010M	Yes / No
20	740	SR032030020M	Yes / No
50	1850	SR032030050M	Yes / No
			Availability: see note

Sr-90 sources are made in batches at intervals several times per year. If the requested activity is available from stock, sources are normally delivered within two weeks. Please inquire for current availability.

Am-241
Am-241/Be
Ba-133
Cd-109
Cf-252
Co-57
Co-60
Cs-137
Eu-152
Fe-55
Gd-153
Kr-85
Mössbauer
Na-22
Ni-63
Pm-147
Ru-106
Se-75
Sr-90
Yb-169

# Yb-169

## Standard Capsule Designs

### Activity Tolerance

± 15% from nominal

### Recommended Working Life

See Technical Information section.

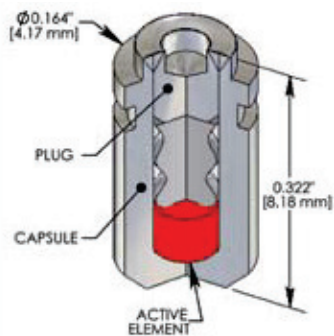
Only typical sources are listed; inquiries are invited for alternative capsule designs and activities.

Yb-169 has significant X-ray emissions between 49keV and 59keV, in addition to gamma emissions from 63keV up to 308keV. The activity is in a stable, homogeneous active element.



### 3603 capsule

Double-encapsulated aluminum source. ISO rating: C43333



Nominal Activity		Part Numbers	Regulatory
mCi	MBq	3603	SS&DR / SFC
100	3700	YB936030100M	Yes / No
300	11100	YB936030300M	Yes / No
600	22200	YB936030600M	Yes / No
1000	37000	YB936030001C	Yes / No
			Availability: 8-10 weeks