NIST Center for Neutron Research

Activation and Scattering Results

Activation of W after 180 days at 1.00e+13 n/cm^2/s

Estimated activation only. All samples must be evaluated by NIST Health Physics to determine if and how the sample can be removed from the NCNR.

Sample in beam: 3000 g of W
Time to decay below 0.100 nCi is 4.9 yrs.

				Activity above 0.0001 (μCi)				
element	**reaction**	**product**	**half life**	**0 hrs**	**1 hr**	**24 hrs**	**15 days**	**28 days**
W-184	act	W-185	75 d	1.1847e+9	1.1842e+9	1.1738e+9	1.0313e+9	9.1455e+8
W-180	act	W-181	121 d	8.2450e+6	8.2430e+6	8.1979e+6	7.5661e+6	7.0231e+6
W-186	2n	W-188	69.4 d	2.1794e+6	2.1577e+6	1.7148e+6	5.9812e+4	2.6513e+3
W-186	act	W-187	23.9 h	2.7429e+10	2.6645e+10	1.3675e+10	8.0144e+5	9.4213e+1
W-182	2n	Ta-183	5.1 d	1.3987e+3	1.3908e+3	1.2210e+3	1.8212e+2	3.1118e+1
W-184	act	W-185m+	1.62 m	1.6243e+6	---	---	---	---
total activity				2.8626e+10	2.7840e+10	1.4859e+10	1.0397e+9	9.2158e+8

Activation of W after 180 days at 1.00e+8 n/cm^2/s

Estimated activation only. All samples must be evaluated by NIST Health Physics to determine if and how the sample can be removed from the NCNR.

Sample in beam: 3000 g of W
Time to decay below 0.100 nCi is 4.9 yrs.

				Activity above 0.0001 (μCi)				
element	**reaction**	**product**	**half life**	**0 hrs**	**1 hr**	**24 hrs**	**15 days**	**28 days**
W-184	act	W-185	75 d	1.1849e+4	1.1844e+4	1.1740e+4	1.0315e+4	9.1472e+3
W-180	act	W-181	121 d	8.2476e+1	8.2457e+1	8.2005e+1	7.5685e+1	7.0254e+1
W-186	act	W-187	23.9 h	2.7589e+5	2.6800e+5	1.3754e+5	8.0610e+0	9.4759e-4
W-184	act	W-185m+	1.62 m	1.6243e+1	---	---	---	---
W-186	2n	W-188	69.4 d	2.1917e-4	2.1699e-4	1.7246e-4	---	---
total activity				2.8783e+5	2.7993e+5	1.4937e+5	1.0399e+4	9.2174e+3

Questions?
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