

Test results Cesium/Strontium

(microspiral filter porosity 0,05-0,1 µm)

The result below is from a swedish test performed in may 2013 on microspiral filters (0,05µm).

The purpose of the test was to establish the amount of reduction of alpha- and beta particles from a water contaminated with Cesium 137 and Strontium 90.

The result, as displayed below, showed the reduction of Alpha with > 98% and Beta with >99%!

In the experiment two serial connected microspiral filters (0,05µm) were used as displayed on the next page.

Alpha particles

0,29 Bq/ml Before filter 130505 Ref 53
0,0058 Bq/ml After filter 130505 Ref 54

Beta particles

43 Bq/ml Before filter 130505 Ref 55
0,2 Bq/ml After filter 130505 Ref 56

Below the result of an international test performed in 1996

(Microspiral filter)- Cesium Test Results					
02 May 1996					
Initial Cs Feed Concentration = 417 mg/L pH = 3.4					
Measured Cs Feed Concentration (mg/L)	Feed Volume (L)	Mass of Cs in Feed Volume (mg)	Measured Cs Effluent Concentration (mg/L)	Mass of Cs Loaded on the Filter (mg)	Percent of Cs Removed (%)
417.00	0.25	104.25	<5.0*	99.25	95.20
417.00	0.50	208.50	<5.0*	203.50	95.20
417.00	1.00	417.00	<5.0*	412.00	97.60
417.00	2.00	834.00	<5.0*	829.00	98.80
417.00	4.00	1668.00	<5.0*	1663.00	99.40
417.00	8.00	3336.00	<5.0*	3331.00	99.70
	Total	6672.00		6637.00	99.85
* Cs concentration below the ICP detection level of 5 mg/L Filter mass for this test is approximately 170 g					

(Microspiral filter)- Strontium Test Results					
02 May 1996					
Initial Sr Feed Concentration = 142 mg/L pH = 3.4					
Measured Sr Feed Concentration (mg/L)	Feed Volume (L)	Mass of Sr in Feed Volume (mg)	Measured Sr Effluent Concentration (mg/L)	Mass of Sr Loaded on the Filter (mg)	Percent of Sr Removed (%)
142.00	0.25	35.50	0.002*	35.50	99.99
142.00	0.25	35.50	0.0040	35.50	99.99
142.00	0.50	71.00	0.0540	70.95	99.92
142.00	1.00	142.00	0.1440	141.86	99.90
142.00	2.00	284.00	0.2550	283.75	99.91
142.00	4.00	568.00	0.2900	567.71	99.95
142.00	8.00	1136.00	1.3900	1134.61	99.88
	Total	2272.00		2269.86	99.91
* Sr concentration below the ICP detection level of 0.002 mg/L Filter mass for this test is approximately 170 g					

