NELAC PT for Accreditation

Fields of Proficiency Testing with PTRLs

Drinking Water

Effective October 1, 2007

Matrix	EPA Analyte Code	NELAC Analyte Code	Analyte	Conc Range	Acceptance Criteria[1,2,3,4] a	b	c	d	NELAC PTRL[5]
			Radiochemistry	pCi/L (except as noted)					pCi/L
Drinking Water	0001	2830	Gross Alpha	7 to 75	0.8586	1.4802	0.1610	1.1366	3.0
Drinking Water	0002	2840	Gross Beta	8 to 75	0.8508	2.9725	0.0571	2.9372	3.0
Drinking Water	0008	2875	Iodine-131	3 to 30	0.9711	0.8870	0.0624	0.6455	2.1
Drinking Water	0012	2965	Radium-226	1 to 20	0.9253	0.3175	0.0942	0.0988	0.86
Drinking Water	0013	2970	Radium-228	2 to 20	0.9243	0.2265	0.1105	0.3788	0.88
Drinking Water	0014	3055	Natural Uranium	2 to 70	0.9568	0.0773	0.0668	0.2490	1.2
Drinking Water	0014	3055	Uranium (mass)	3 to 104 ug/L	0.9568	0.1153	0.0668	0.3716	1.8 ug/L
Drinking Water	0009	2995	Strontium-89	10 to 70	0.9648	0.1591	0.0379	2.6203	3.8
Drinking Water	0010	3005	Strontium-90	3 to 45	0.9369	0.2279	0.0902	0.5390	1.4
Drinking Water	0011	3030	Tritium	1000 to 24000	0.9883	-46.4776	0.0532	38.8382	760
			Gamma Emitters[6]						
Drinking Water	0007	2765	Barium-133	10 to 100	0.9684	-0.1424	0.0503	1.0737	6.4
Drinking Water	0005	2800	Cesium-134[7]	10 to 100	0.9369	0.0845	0.0482	0.9306	6.6
Drinking Water	0006	2805	Cesium-137[7]	20 to 240	1.0225	0.2624	0.0347	1.5185	16
Drinking Water	0003	2815	Cobalt-60	10 to 120	1.0257	0.3051	0.0335	1.3315	7.2
Drinking Water	0004	3070	Zinc-65	30 to 360	1.0495	0.1245	0.0530	1.8271	25

NELAC PT for Accreditation

Fields of Proficiency Testing with PTRLs

Drinking Water

Effective October 1, 2007

1) Acceptance limits are set at the Mean ± 2 SD
(Mean = a*T + b; SD = c*T + d where T is the assigned value).

2) If the lower acceptance limit generated using the criteria contained in this table is less than (<) 10% of the assigned value, the lower acceptance limits are set at 10% of the assigned value.

3) If the lower acceptance limit generated using the criteria contained in this table is greater than (>) 90% of the assigned value, the lower acceptance limits are set at 90% of the assigned value.

4) If the upper acceptance limit generated using the criteria contained in this table is less than (<) 110% of the assigned value, the upper acceptance limits are set at 110% of the assigned value.

5) NELAC Proficiency Testing Reporting Limits (PTRLs) are provided as guidance to laboratories analyzing NELAC PT samples. These levels are the lowest acceptable results that could be obtained from the lowest spike level for each analyte. The laboratory should report any positive result down to the PTRL. It is recognized that in some cases (especially for analytes that typically exhibit low recovery) the PTRL may be below the standard laboratory reporting limit. However, the laboratory should use a method that is sensitive enough to generate results at the PTRL shown. NELAC PTRLs are also provided as guidance to PT Providers. At a minimum for all analytes with an assigned value equal to "0", the PT Provider should verify that the sample does not contain the analyte at a concentration greater than or equal to the PTRL.

6) Laboratories seeking or maintaining NELAP accreditation for Gamma (Photon) Emitters must meet NELAC PT requirements for all Gamma Emitter analytes in the Fields of Proficiency Testing in a given PT study, by technology/method (Barium-133, Cesium-134, Cesium-137, Cobalt-60, Zinc-65).

7) Laboratories seeking or maintaining NELAP accreditation for Radioactive Cesium must meet NELAC PT requirements for both Radioactive Cesium analytes in the Fields of Proficiency Testing in a given PT study, by technology/method (Cesium-134, Cesium-137).