



**TNI PT for Accreditation**  
**Fields of Proficiency Testing with PTRLs**  
**Drinking Water**  
**Effective: November 1, 2023**

Blue = New Analyte      Magenta = Changes

Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte	Conc Range	Acceptance Criteria <sup>1,2,3,4</sup>				TNI PTRL <sup>5</sup>
						a	b	c	d	
				<b>Radiochemistry</b>	pCi/L (except as noted)					pCi/L
Drinking Water	0001	2830	NA	Gross alpha	7 to 75	1.0000	0.0000	0.1000	1.2306	3.1
Drinking Water	0002	2840	NA	Gross beta	8 to 75	1.0000	0.0000	0.1000	1.6408	3.1
Drinking Water	0008	2875	10043-66-0	Iodine-131	3 to 30	1.0000	0.0000	0.0500	0.4602	1.8
Drinking Water	0012	2965	13982-63-3	Radium-226	1 to 20	1.0000	0.0000	0.0500	0.4602	0.1
Drinking Water	0013	2970	15262-20-1	Radium-228	2 to 20	1.0000	0.0000	0.1000	0.4102	0.8
Drinking Water	0014	3055	7440-61-1	Uranium (activity)	2 to 70	1.0000	0.0000	0.0500	0.3084	1.2
Drinking Water	0014	1184	7440-61-1	Uranium (mass)	3 to 104 ug/L	1.0000	0.0000	0.0500	0.4602	1.8 ug/L
Drinking Water	0009	2995	14158-27-1	Strontium-89	10 to 70	1.0000	0.0000	0.0500	4.6020	1.0
Drinking Water	0010	3005	10098-97-2	Strontium-90	3 to 45	1.0000	0.0000	0.0500	0.9204	0.86
Drinking Water	0011	3030	10028-17-8	Tritium	1000 to 24000	1.0000	0.0000	0.0500	460.2041	100
				<b>Gamma Emitters<sup>6</sup></b>						
Drinking Water	0007	2765	13981-41-4	Barium-133	10 to 100	1.0000	0.0000	0.0500	4.6020	1.0
Drinking Water	0005	2800	13967-70-9	Cesium-134 <sup>7</sup>	10 to 100	1.0000	0.0000	0.0500	4.6020	1.0
Drinking Water	0006	2805	10045-97-3	Cesium-137 <sup>7</sup>	20 to 240	1.0000	0.0000	0.0500	9.2041	2.0
Drinking Water	0003	2815	10198-40-0	Cobalt-60	10 to 120	1.0000	0.0000	0.0500	4.6020	1.0
Drinking Water	0004	3070	13982-39-3	Zinc-65	30 to 360	1.0000	0.0000	0.0500	13.8061	3.0



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- 1) Acceptance limits are set at the Mean  $\pm$  2 SD  
(Mean =  $a \cdot T + b$ ; SD =  $c \cdot T + d$  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) TNI Proficiency Testing Reporting Limit (PTRL) is a statistically derived value that represents the lowest acceptable concentration for an analyte in a proficiency test sample, if the analyte is spiked into the proficiency test sample.
- TNI PTRLs are also used by PT Providers to set the assigned value for unspiked analytes. For all analytes with an assigned value equal to <PTRL, the PT Provider must verify that the PT sample does not contain the analyte at a concentration greater than or equal to one-half (1/2) of the PTRL.
- Refer to the "TNI V1M1 2016 Standard Update Guidance on Proficiency Testing Reporting Limit (PTRL)", GUID-3-114-Rev0, October 15, 2018 for further information.
- 6) Laboratories seeking or maintaining TNI accreditation for Gamma (Photon) Emitters must meet TNI 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 TNI accreditation for Radioactive Cesium must meet TNI 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).