

Reference Material and Inter-laboratory Quality Control Materials Product Summary

May 2024

Version: 1

Assigned Values: Values provided have been generated from Inter-Laboratory Proficiency Programmes (ILPP) or from data provided by laboratories for the purpose of characterisation. The reference material values provided in this summary are the mean of the results after the exclusion of statistical outliers. The Assigned Range provided for the Inter-laboratory QC Materials is the range of test values available for purchase. Each Reference and QC Material comes with a Data Summary Sheet.

Missing Values and Available Tests: For Reference Materials where property values do not meet the statistical criteria, the summary values have not been provided. For this reason, not all tests will be available for every Reference Material of the same matrix. However, if there are 3 or more data points available, an Assigned Value will be provided with the corresponding QC material.

Sample Sizes: Available sample sizes are shown for reference materials.

Ordering Reference Materials and/or Quality Control Materials, acknowledges you have read and understood our terms and conditions. These can be found at: <https://www.global-proficiency.com/terms-conditions>

Note: When ordering QC materials, please quote both the Product ID AND the process run

QC Material: Water - Synthetic Effluent Water - Base

Matrix: Water	Product ID	15822-QC	15823-QC
	Process Run	PR11428	PR11428
	Expiry Date	7 Jun 24	7 Jun 24
	Sample Size	860mL	860mL
	Alkalinity - Total (mg/L)	83.8	129
	Ammonia-N (mg/L)	3.26	6.42
	BOD cBOD (mg/L)	65.6	207
	BOD Total (mg/L)	64.2	218
	Boron (mg/L)	0.241	1.14
	Bromide (mg/L)	0.103	1.38
	Calcium (mg/L)	6.49	21.0
	Carbon - Total Organic (mg/L)	27.5	96.9
	Carbon-NonPurgable Org (mg/L)	27.4	95.2
	Chemical Oxygen Demand (mg/L)	117	385
	Chloride (mg/L)	31.0	65.9
	Conductivity (uS/cm)	337	689
	Fluoride (mg/L)	0.136	2.70
	Hardness - Total (mg/L)	43.9	93.6
	Magnesium (mg/L)	6.53	10.1
	Nitrate-N (mg/L)	1.36	5.24
	Nitrite-N (mg/L)	0.0348	
	Nitrogen - Organic (mg/L)	3.84	13.3
	Nitrogen - Total (mg/L)	8.24	23.8
	Nitrogen -Tot. Kjeldahl (mg/L)	6.95	19.6
	Nitrogen -Tot. Oxidised (mg/L)	1.41	5.18
	pH - Base Solution (pH units)	7.63	7.36
	pH - Standard (pH units)	7.39	6.48

Phosphorus - Total (mg/L)	7.44	33.8
Phosphorus Dis Reactive (mg/L)	4.36	15.1
Phosphorus Tot Dissol (mg/L)	7.20	29.8
Potassium (mg/L)	18.9	79.6
Silica (as SiO2 mg/L)	12.2	41.3
Sodium (mg/L)	38.3	57.7
Solids - Tot Suspended (mg/L)	78.2	232
Solids - Total (mg/L)	321	848
Solids - Total Volatile (mg/L)	152	363
Solids - Volatile Susp (mg/L)		151
Solids -Total Dissolved (mg/L)	225	558
Sulphate (mg/L)	18.4	48.0
Turbidity (NTU)	27.4	

QC Material: Water - Effluent - Chlorine

Matrix: Water	Product ID	15828-QC
	Process Run	PR11428
	Expiry Date	13 Aug 24
	Sample Size	
	Total Chlorine (mg/L)	2.03

QC Material: Water - Synthetic Effluent Water - Trace Elements

Matrix: Water	Product ID	15824-QC	15825-QC
	Process Run	PR11428	PR11428
	Expiry Date	7 Aug 24	7 Aug 24
	Sample Size	200mL	200mL
	Aluminium (mg/L)	0.248	0.887
	Antimony (mg/L)	0.0201	0.183
	Arsenic (mg/L)	0.0250	0.247
	Barium (mg/L)	0.0341	0.246
	Bismuth (mg/L)	0.0318	0.247
	Cadmium (mg/L)	0.0195	0.193
	Chromium (mg/L)	0.0291	0.289
	Cobalt (mg/L)	0.0192	0.193
	Copper (mg/L)	0.126	1.62
	Iron (mg/L)	0.517	4.02
	Lead (mg/L)	0.0193	0.181
	Lithium (mg/L)	0.0464	0.552
	Manganese (mg/L)	0.256	3.02
	Mercury (mg/L)	0.0210	0.0997
	Molybdenum (mg/L)	0.301	0.613
	Nickel (mg/L)	0.0241	0.237
	Selenium (mg/L)	0.0506	0.500
	Strontium (mg/L)	0.0755	0.754
	Zinc (mg/L)	0.409	1.25

QC Material: Water - Seawater - Base

Matrix: Water	Product ID	15891-QC	15892-QC
	Process Run	PR11477	PR11477
	Expiry Date	4 Sep 24	4 Sep 24
	Sample Size	860mL	860mL
	ABS_254NM (AU/cm)	0.0427	0.0957
	Alkalinity Total (mg/L)	133	168
	Ammonia-N (mg/L)	0.147	0.417
	BOD cBOD (mg/L)	5.88	12.2
	BOD Total (mg/L)		12.6
	Calcium (mg/L)	418	373
	Carbon NonPurg Org (mg/L)	7.57	17.0
	Carbon-Total Organic (mg/L)	6.93	16.9
	Chloride (mg/L)	19900	16314
	Conductivity (mS/cm)	53.3	44.7
	Fluoride (mg/L)	10.5	9.61
	Hardness Total (as CaCO3 mg/L)	6681	5405
	Magnesium (mg/L)	1329	1081
	Nitrate-N (mg/L)	0.0591	0.435
	Nitrite-N (mg/L)	0.0196	0.0193
	Nitrogen Tot Kjeldahl (mg/L)	0.538	1.21
	Nitrogen Tot Oxidised (mg/L)	0.0780	0.447
	Nitrogen Total (mg/L)	0.640	1.66
	Orthophosphate as P (mg/L)	0.0521	0.0958
	pH - Base Solution (pH units)	7.94	7.92
	Phosphorus Diss React (mg/L)	0.0552	0.102
	Phosphorus Total (mg/L)	0.104	0.183
	Potassium (mg/L)	428	363

	Salinity (ppth)	35.5	29.2
	Silica as SiO₂ (mg/L)		33.9
	Sodium (mg/L)	11029	8827
	Solids Tot Dissolved (mg/L)	38682	32224
	Solids Tot Suspended (mg/L)	47.3	21.8
	Solids Total (mg/L)	41613	34419
	Sulphate (mg/L)	2824	2297
	Turbidity (NTU)	13.7	6.91

QC Material: Water - Seawater - Trace Elements

Matrix: Water	Product ID	15893-QC	15894-QC
	Process Run	PR11477	PR11477
	Expiry Date	4 Sep 24	4 Sep 24
	Sample Size	200mL	200mL
	Aluminium (mg/L)	0.383	0.412
	Antimony (mg/L)	0.00520	0.00917
	Arsenic (mg/L)	0.0376	0.0782
	Barium (mg/L)	0.234	0.361
	Bismuth (mg/L)	0.00344	0.00288
	Boron (mg/L)	7.02	12.4
	Bromine (mg/L)	79.4	78.6
	Cadmium (mg/L)	0.00102	0.00148
	Chromium (mg/L)	0.00317	0.00411
	Cobalt (mg/L)	0.00427	0.00601
	Copper (mg/L)	0.0365	0.0551
	Iron (mg/L)	0.438	0.554
	Lead (mg/L)	0.0351	0.0507
	Lithium (mg/L)	3.29	13.1
	Manganese (mg/L)	0.00920	0.0194
	Mercury (mg/L)	0.00182	0.00241
	Molybdenum (mg/L)	0.107	0.165
	Nickel (mg/L)	0.0168	0.0250
	Selenium (mg/L)	0.0965	0.141
	Strontium (mg/L)	1.87	1.99
	Uranium (mg/L)	0.0322	0.0472
	Vanadium (mg/L)	0.0222	0.0314
	Zinc (mg/L)	0.209	0.0504