

Table S1: TKN concentrations from Nicotinic acid-PTSA measured using s-TKN™ and standard methods.

Theoretical TKN (ppm)	s-TKN method (ppm)	Standard method (ppm)
2	1.98	1.972
4	3.93	3.721
8	7.77	7.713
10	9.67	9.467
12	11.80	11.443

Table S2: TKN concentrations from Ammonium-PTSA measured using s-TKN™ method.

Theoretical TKN (ppm)	s-TKN method (ppm)
2	1.95
4	3.80
8	7.62
10	10.10
12	11.80
14	13.80
16	15.60

Table S3: TKN concentrations from Urea measured using s-TKN™ and standard method.

Theoretical TKN (ppm)	s-TKN method (ppm)	Standard method (ppm)
2	2.09	1.901
4	4.19	4.042
8	8.19	7.959
10	10.25	10.628
12	11.80	12.268
14	14.75	14.699
16	16.5	15.687

Table S4: TKN concentrations from mixed standard - Glycine- PTSA and nitrate measured using s-TKN™ and standard method.

Theoretical nitrate (ppm)	Theoretical TKN (ppm)	Theoretical TN (ppm)	standard method (TKN concentration)	s-TKN method (TKN concentration)
8	0	8	NA	NA
0	8	8	8.51	8.11
8	8	16	8.62	7.56
6	6	12	6.09	5.87
4	4	8	4.18	4.02
2	6	8	6.78	5.98
6	2	8	2.47	2.01
2	2	4	2.12	1.93

Table S5: TKN concentrations for real world matrices using s-TKN™ and standard method (EPA 351.2).

Sample ID	Measured TKN (ppm) (s-TKN method)	Measured TKN (ppm) (Standard method)
Estuarine water	0.08	0.401
Estuarine water	0.39	0.334
Estuarine water	0.77	0.808
Estuarine water	1.14	0.412
Estuarine water	0.34	0.419
Estuarine water	0.44	0.445
Lake water	0.52	0.466
Lake water	0.55	0.542
Lake water	0.54	0.421
Lake water	0.85	0.521
Wastewater	2.46	2.517
Wastewater	4.31	4.766
Wastewater	15.7	15.083
Wastewater	14.5	14.992
Wastewater	12.6	12.69
Wastewater	9.83	10.584
Wastewater	7.55	7.68
Wastewater	5.36	6.22
Wastewater	4.23	3.979
Wastewater	1.89	1.852
Wastewater	29.15	29.73
Wastewater	26.4	25.6
Wastewater	43.7	43.08
Wastewater	45.3	48.61
Wastewater	28.85	31.1
Wastewater	21.25	23.5
Wastewater	24.8	25.292
Wastewater	30.0	31.14
Wastewater	26.75	24.85
Wastewater	22.27	23.69
Wastewater	31.82	30.91
Wastewater	32.65	31.82
Wastewater	31.15	30.185
Wastewater	2.69	2.861
Wastewater	14.9	14.938
Wastewater	7.71	7.368
Wastewater	3.64	3.932
Wastewater	1.86	1.886
Wastewater	31.6	37.81
Estuarine water	2.79	3.625
Estuarine water	6.23	5.06
Estuarine water	7.67	8.12
Estuarine water	10.4	9.932
Estuarine water	8.46	9.096
Estuarine water	3.38	2.844