

Standard Preparation

Rev. H (19Jun03)

TrAAcs Standards

Analyte: **Ammonia-N**

Range: **High**

Stock Conc. (ppm): 100

Stock Recipe: 0.4717g Ammonium Sulfate per 1000 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
2.000	50	1.000
1.600	50	0.800
1.200	50	0.600
0.800	50	0.400
0.400	100	0.400
0.200	100	0.200
0.100	500	0.500

Note: Make all Working Stds. Fresh on day of analysis.

Analyte: **Ammonia-N**

Range: **Low**

Stock Conc. (ppm): 10

Stock Recipe: 5.000 mL of 100 ppm Stock per 50 mL

<u>Final Working Standard Conc (ppb)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
200	50	1.000
100	50	0.500
50	50	0.250
20	50	0.100
10	100	0.100
5	500	0.250

Note: Make ALL Standards (incl. 10 ppm) Fresh on day of analysis.

Analyte: **Chloride**

Stock Conc. (ppm): 5000

Stock Recipe: 8.2425g Sodium Chloride per 1000 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
100	50	1.000
50	100	1.000
25	100	0.500
10	250	0.500

Analyte: **Nitrate / Nitrite-N**

Stock Conc. (ppm): 100

Stock Recipe: 0.3034g Sodium Nitrate per 500 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
5.000	10	0.500
2.000	50	1.000
0.800	50	0.400
0.200	100	0.200
0.050	500	0.250
0.020	100	1.0 mL of 2.0ppm Working Standard
0.010	100	0.5 mL of 2.0ppm Working Standard

Note: Make 0.02 & 0.01 ppm Std. Fresh on day of analysis.

Analyte: Nitrite-N

Stock Conc. (ppm): 100

Stock Recipe: 0.2463g Sodium Nitrite per 500 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
2.000	50	1.000
0.800	50	0.400
0.200	100	0.200
0.050	500	0.250
0.020	100	1.0 mL of 2.0ppm Working Standard
0.010	100	0.5 mL of 2.0ppm Working Standard

Note: Make all Working Stds. Fresh on day of analysis.**Analyte: Phosphate-P**

Stock Conc. (ppm): 100

Range: **High**

Stock Recipe: 0.2199g Potassium Phosphate, Monobasic per 500 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
2.000	50	1.000
1.600	50	0.800
1.200	50	0.600
0.800	100	0.800
0.400	100	0.400
0.200	100	0.200

Analyte: Phosphate-P

Stock Conc. (ppm): 10

Range: **Low**

Stock Recipe: 1.000 mL of 100 ppm Stock per 10 mL

<u>Final Working Standard Conc (ppb)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
200.0	50	1.000
100.0	100	1.000
50.0	100	0.500
20.0	250	0.500
10.0	250	0.250
5.0	500	0.250

Note: Make ALL Standards (incl. 10 ppm) Fresh on day of analysis.

QC8000 Standards

Analyte: Nitrate/Nitrite & Ammonia-N

Stock Conc. (ppm): 100 ea.

Nitrate Stock Recipe: 0.3034g Sodium Nitrate per 500 mL

Ammonia Stock Recipe: 0.4717g Ammonium Sulfate per 1000 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
2.000 ea.	50	1.000 ea.
0.800 ea.	50	0.400 ea.
0.200 ea.	100	0.200 ea.
0.050 ea.	500	0.250 ea.
0.020 ea.	100	1.0 mL of 2.0ppm Working Standard
0.010 ea.	100	0.5 mL of 2.0ppm Working Standard
0.005 ea. (only Nitrate used in curve)	100	0.25 mL of 2.0ppm Working Standard

Note: Make all Working Stds. Fresh on day of analysis.

Analyte: Bromide

Stock Conc. (mg Br-/L): 100

Stock Recipe: 0.129 g Sodium Bromide per 1000 mL

<u>Final Working Standard Conc (mg)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
60.00	100	60.000
40.00	100	40.000
30.00	100	30.000
10.00	100	10.000
5.00	100	5.000
2.00	100	2.000
1.00	100	1.0 mL of 100mg Br-/L Working Standard

Analyte: Chloride (Low Range)

Stock Conc. (ppm): 1000

Stock Recipe: 1.649g Sodium Chloride per 1000 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
10.00	100	1.000
8.00	100	0.800
4.00	100	0.400
1.00	250	0.250
0.50	500	0.250
0.25	1000	0.250
0.10	100	1.0 mL of 10.0ppm Working Standard

Analyte: Chloride (Med Range) & Phosphate-P (Low Range)

Cl Stock Conc.: 5000 ppm Stock Recipe: 8.2425g Sodium Chloride per 1000 mL

PO₄-P Stock Conc.: 100 ppm Stock Recipe: 0.2199g Potassium Phosphate, Monobasic per 500 mL

PO₄-P Intermediate Stock Recipe: 1.000 mL of 100 ppm Stock per 10 mL

<u>Final Working Standard Conc</u>		<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>	
Cl (ppm)	PO ₄ -P (ppb)		Cl	PO ₄ -P Intermed Stk.
100.0	200	50	1.00	1.00
50.0	100	100	1.00	1.00
25.0	50	100	0.50	0.50
10.0	20	250	0.50	0.50
5.0	10	250	0.25	0.25

2.5

5

500

0.25

0.25

Note: Make all Working Stds. And PO4 Intermed Stock Fresh on day of analysis.

Analyte: Low Chloride & Low PhosphatePO₄-P Stock Conc: 100 ppm Stock Recipe: 0.2199g Potassium Phosphate, Monobasic per 500 mLPO₄-P Intermediate Stock Recipe: 1.000 mL of 100 ppm Stock per 10 mL

Cl Stock Conc: 1000 ppm Stock Recipe: 1.649g Sodium Chloride per 1000 mL

Cl Intermediate Stock Recipe: 5.000 mL of 1000 ppm Stock per 50 mL

<u>Final Working Standard Conc (ppm)</u>		<u>Vol. Flask Volume (mL)</u>	<u>Volume of Intermediate Stock to Add (mL)</u>	
Cl (ppm)	PO ₄ -P (ppb)		Cl	-P Intermed
10.00	200	50	5.000	1.000
5.00	100	100	5.000	1.000
1.00	50	100	1.000	0.500
0.25	20	250	0.625	0.500
0.10	10	250	0.250	0.250
0.05	5	500	0.250	0.250

Analyte: AlkalinityStk Conc.(ppm CaCO₃ as Na₂CO₃): 5,000 Stock Recipe: 0.530g Sodium Carbonate per 100 mL CO₂

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
500	50	5.00
375	50	3.75
250	50	2.50
125	100	2.50
25	250	1.25
10	500	1.00

Note: Make all Working Stds. fresh on day of analysis.**Analyte: Total (Dissolved) Nitrogen**

Stock Conc. (ppm): 100 Stock Recipe: 0.3034g Sodium Nitrate per 500 mL

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
2.000	50	1.000
1.000	100	1.000
0.400	100	0.400
0.200	250	0.500
0.100	250	0.250
0.050	500	0.250

Note: Make all Working Stds. fresh on day of analysis.**Analyte: Total (Dissolved) Phosphorous - Low Range**

Stock Conc (ppm): 100 Stock Recipe: 0.2199g Potassium Phosphate, Monobasic per 500 mL

<u>Final Working Standard Conc (ppb)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
1000.0	100	1.000
400.0	100	0.400
200.0	250	0.500
100.0	250	0.250
50.0	500	0.250
10.0	100	1.0 mL of 1000 ppb Working Standard

Note: Make all Working Stds. fresh on day of analysis.

Analyte: **Sulfate (High)**

Stock Conc (ppm): 1000

Stock Recipe: 1.479g Sodium Sulfate (dried at 105 C overnight) per 1L

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
300.0	25	7.500
250.0	25	6.250
150.0	50	7.500
100.0	50	5.000
50.0	100	5.000

Analyte: **Sulfate**

Stock Conc (ppm): 1000

Stock Recipe: 1.479g Sodium Sulfate (dried at 105 C overnight) per 1L

<u>Final Working Standard Conc (ppm)</u>	<u>Vol. Flask Volume (mL)</u>	<u>Volume of Stock to Add (mL)</u>
50.0	50	2.500
40.0	50	2.000
20.0	50	1.000
10.0	50	0.500
5.0	100	0.500

rd
rd

rd
rd

rd
rd
ard

andard

ard

1 Stk

2-Free H2O

ard

