

## **Ψ Acetate Buffer Solution, pH 4.0**

*For Residual Chlorine, American Public Health Association (APHA) 4500-Cl C. Iodometric Method II* *Corrosive*

*Meets American Society for Testing and Materials (ASTM) D-1427 specifications).*

<b>AB2005</b>	<b>500 mL</b>
<b>AB2005</b>	<b>1 L</b>
<b>AB2005</b>	<b>3.8 L</b>
<b>AB2005</b>	<b>4 x 3.8 L</b>
<b>AB2005</b>	<b>10 L</b>
<b>AB2005</b>	<b>20 L</b>

## **Ψ Acetate Buffer Solution, pH 4.2**

*Acetic Acid - Acetate Anion Buffer*

*Acetic Acid, Glacial and Sodium Acetate, Trihydrate in de-ionized water.* *Corrosive*

<b>AB2042</b>	<b>500 mL</b>
<b>AB2042</b>	<b>1 L</b>
<b>AB2042</b>	<b>3.8 L</b>
<b>AB2042</b>	<b>4 x 3.8 L</b>
<b>AB2042</b>	<b>10 L</b>
<b>AB2042</b>	<b>20 L</b>

## **Ψ Acetic Acid, Glacial, A.C.S.**

*CH<sub>3</sub>COOH F.W. 60.05 Density d=1.053 g/mL CAS 64-19-7 Assay: 99.7% min. Molarity 17.4 M, [Vinegar Acid] Chemical Abstract Service (CAS) Registry Number Hygroscopic, Corrosive, Flammable.*

<b>AA9010</b>	<b>500 mL</b>
<b>AA9010</b>	<b>1 L</b>
<b>AA9010</b>	<b>2.5 L</b>
<b>AA9010</b>	<b>3.8 L</b>
<b>AA9010</b>	<b>4 x 3.8 L</b>

## **Ψ Acetic Acid, Glacial, Technical Grade**

*CH<sub>3</sub>COOH F.W. 60.05 d = 1.053 g/mL CAS 64-19-7 Assay: 99.0% min. Molarity 17.4 M, [Vinegar Acid] Hygroscopic, Corrosive, Flammable.*

<b>AA9410</b>	<b>500 mL</b>
<b>AA9410</b>	<b>2.5 L</b>
<b>AA9410</b>	<b>3.8 L</b>
<b>AA9410</b>	<b>4 x 3.8 L</b>
<b>AA9410</b>	<b>10 L</b>
<b>AA9410</b>	<b>20 L</b>

### **Acetic Acid, 5% (w/v)**

*Approximately 0.83 Molar*

AA6535      1 L  
AA6535      3.8 L  
AA6535      4 x 3.8 L

### **Acetic Acid, 10% (w/w)**

*Actually 1.685 M, density 1.0121 g/mL*

AA6210      1 L  
AA6210      3.8 L  
AA6210      4 x 3.8 L

### **Ψ Acetic Acid, 20% (v/v)**

*Actually 3.49 M, d= 1.0250 g/mL      Corrosive*

AA6420      1 L  
AA6420      3.8 L  
AA6420      4 x 3.8 L

### **Ψ Acetic Acid, 46% (v/v) Technical Grade**

*Prepared from 460 mL of Acetic Acid, glacial diluted to 1 L with DI Water      Corrosive*

AA9480      3.8 L  
AA9480      4 x 3.8 L

### **Ψ Acetic Acid, 50% (v/v)**

*Approximately 8.7 Molar      Corrosive*

AA6484      1 L  
AA6484      3.8 L  
AA6484      4 x 3.8 L

### **Acetic Acid Standard, 100 mg/L (ppm)**

*100 mg/L (100 ppm) in 10% (v/v) Ethanol*

AA7500      100 mL

### **Acetic Acid Standard, 250 mg/L (ppm)**

*250 mg/L (250 ppm) in 10% (v/v) Ethanol*

AA7510      100 mL

### **Acetic Acid Standard, 300 mg/L (ppm)**

*300 mg/L (300 ppm) in 10% (v/v) Ethanol*

AA7520      100 mL

### **Acetic Acid Standard, 500 mg/L (ppm)**

500 mg/L (500 ppm) in 10% (v/v) Ethanol

**AA7530      100 mL**

### **Acetic Acid Standard, 750 mg/L (ppm)**

750 mg/L (750 ppm) in 10% (v/v) Ethanol

**AA7540      100 mL**

### **Acetic Acid Standard, 800 mg/L (ppm)**

800 mg/L (800 ppm) in 10% (v/v) Ethanol

**AA7550      100 mL**

### **Acetic Acid Standard, 1,000 mg/L (ppm)**

1,000 mg/L (1,000 ppm) in 10% (v/v) Ethanol

**AA7560      100 mL**

### **Acetic Acid Standard, 1,200 mg/L (ppm)**

1,200 mg/L (1,200 ppm) in 10% (v/v) Ethanol

**AA7570      100 mL**

### **Acetic Acid Standard, 2,500 mg/L (ppm)**

2,500 mg/L (2,500 ppm) in 10% (v/v) Ethanol

**AA7580      100 mL**

### **Ψ Acetone, A.C.S.**

$CH_3COCH_3$  F.W. 58.08  $d = 0.788$  g/mL CAS 67-64-1 Assay: 99.5% min.

[2-Propanone; Dimethyl Ketone] Flammable.

**AC9020      500 mL**

**AC9020      1 L**

**AC9020      3.8 L**

**AC9020      4 x 3.8 L**

### **Ψ Acetone, Technical Grade**

$CH_3COCH_3$  F.W. 58.08  $d = 0.788$  g/mL CAS 67-64-1 [2-Propanone; Dimethyl Ketone]

**AC9420      500 mL**

**AC9420      1 L**

**AC9420      3.8 L**

**AC9420      4 x 3.8 L**

**AC9420      20 L**

### **Acetone, 10% (v/v)**

*Acetone, Semiconductor Grade (Class 10) dissolved in de-ionized Water.*

**AO6258 3.8 L**

**AO6258 4 x 3.8 L**

### **Ψ Alcohol, Denatured, Reagent, A.C.S.**

*CH<sub>3</sub>CH<sub>2</sub>OH F.W. 46.07 d = 0.785 g/mL CAS 64-17-5 Assay: Methanol and Ethanol 94.0 - 96.0% (v/v) Contains SDA 3A and Isopropanol at 4.0 - 6.0% (v/v) Flammable*

**AD9100 1 L**

**AD9100 3.8 L**

**AD9100 4 x 3.8 L**

### **Ψ Aluminum Atomic Absorption Standard, 1,000 mg/L(ppm)\***

*Aluminum in 2% Nitric Acid; Verified National Institute of Standards and Technology (NIST) Standard Reference Material (SRM), 3101. Corrosive*

**AL7700 100 mL**

**AL7700 500 mL**

**\*- For Atomic Absorption and ICP Standards call for different Matrix!**

### **Aluminum Chloride, Hexahydrate, Reagent Grade**

*AlCl<sub>3</sub>·6H<sub>2</sub>O F.W. 241.43 CAS 7784-13-6*

**AC9547 100 g**

**AC9547 500 g**

### **Ammonium Acetate, Crystal, A.C.S.**

*NH<sub>4</sub>C<sub>2</sub>H<sub>3</sub>O<sub>2</sub> F.W. 77.08 CAS 631-61-8 Assay: 97% min.*

**AA9599 500 g**

**AA9599 2.5 kg**

### **Ammonium Chloride, A.C.S.**

*NH<sub>4</sub>Cl F.W. 53.49 CAS 12125-02-9 Assay: 99.5% min. [Sal Ammoniac]*

**AC9500 500 g**

**AC9500 2.5 kg**

### **Ammonium Chloride, Technical Grade**

*NH<sub>4</sub>Cl F.W. 53.49 CAS 12125-02-9 Assay: 99.5% min. Untreated (No anti-caking agent)*

**AC9487 500 g**

**AC9487 2.5 kg**

### **Ψ Ammonium Chloride Buffer, pH 9.5 @ 25°C**

*Ammonium Chloride-Ammonium Hydroxide Corrosive*

AC2150 1 L  
AC2150 3.8 L

### **Ψ Ammonium Chloride Buffer, pH 10.0 @ 25°C**

*Ammonium Chloride - Ammonium Hydroxide Corrosive*

AC2160 1 L  
AC2160 3.8 L  
AC2160 4 x 3.8 L

### **Ammonium Hydroxide, 3% Solution**

*30 mL of Ammonium Hydroxide, A.C.S. diluted to 1 Liter with de-ionized water.*

AH6010 500 mL  
AH6010 1 L

### **Ψ Ammonium Hydroxide, 25% (v/v) Solution [1 + 3]**

*One volume of Ammonium Hydroxide, A.C.S. to three volumes of de-ionized water.*

AH6829 500 mL  
AH6829 1 L  
AH6829 3.8 L

### **Ψ Ammonium Hydroxide, 50% (v/v) Solution [1 + 1]**

*One volume Ammonium Hydroxide, A.C.S. to an equal volume of water.*

AH6827 1 L  
AH6827 3.8 L

### **Ψ Ammonium Hydroxide, A.C.S.**

*NH<sub>4</sub>OH F.W. 35.05 d= 0.898 g/mL CAS 1336-21-6 Assay: 28.0 - 30.0% NH<sub>3</sub>  
[Aqueous Ammonia; Strong Ammonia Solution] Corrosive.*

AH9030 500 mL  
AH9030 2.5 L  
AH9030 3.8 L  
AH9030 4 x 3.8 L

### **Ψ Ammonium Persulfate, Crystal, A.C.S.**

$(\text{NH}_4)_2\text{S}_2\text{O}_8$  F.W. 228.19 CAS 7727-54-0 Assay: 98.0% min. Moisture-Sensitive. Oxidizer.

**AP9502 500 g**

**AP9502 2.5 kg**

**AP9502 5 kg**

**AP9502 12 kg**

### **Ammonium Sulfate, A.C.S.**

$(\text{NH}_4)_2\text{SO}_4$  F.W. 132.14 CAS 7783-20-2 Assay: 99.0% min.

**AS8603 500 g**

**AS8603 2.5 kg**

### **Ammonium Thiocyanate, A.C.S.**

$\text{NH}_4\text{SCN}$  F.W. 76.12 CAS 1762-95-4 Assay: 97.5% min.

**AT9571 500 g**

**AT9571 1 kg**

### **Ammonium Thiocyanate, 0.01 N (N/100) Aqueous**

$0.0100\text{ N} \pm 0.0005\text{ N}$  (0.0095 - 0.0105 N)

**AT1011 1 L**

**AT1011 3.8 L**

### **Ammonium Thiocyanate, 0.1 N (N/10) Aqueous**

About 8 g per L,  $0.1000\text{ N} \pm 0.0005$  (0.0995 - 0.1005 N)

**AT1012 1 L**

**AT1012 3.8 L**

## **Anti-Foam B**

10% (v/v) Emulsion of Anti-Foam A (100% mixture of Polydimethylsiloxanes of various molecular weights) in distilled or de-ionized water.

<b>AF6230</b>	<b>60 mL</b>
<b>AF6230</b>	<b>120 mL</b>
<b>AF6230</b>	<b>500 mL</b>
<b>AF6230</b>	<b>1 L</b>

## **Antimony Atomic Absorption Standard, 1,000 mg/L (ppm)**

Antimony Potassium Tartrate in de-ionized Water; Verified NIST SRM 3102

<b>SB7710</b>	<b>100 mL</b>
<b>SB7710</b>	<b>500 mL</b>

## **Ascorbic Acid, Powder, USP Grade**

$C_6H_8O_6$  F.W. 176.13 CAS 50-81-7 Assay: 99.0 - 100.5% [Vitamin C; L-Ascorbic Acid]

<b>AA9503</b>	<b>500 g</b>
<b>AA9503</b>	<b>1 kg</b>

## **Ψ Barium Atomic Absorption Standard, 1,000 mg/L (ppm)**

Barium Carbonate in 2% Nitric Acid; Verified NIST SRM 3104

<b>BA7720</b>	<b>100 mL</b>
<b>BA7720</b>	<b>500 mL</b>

## **Ψ Barium Chloride, Dihydrate, A.C.S.**

$BaCl_2 \cdot 2H_2O$  F.W. 244.26 CAS 10326-27-9 Assay: 99.0%

<b>BC9610</b>	<b>500 g</b>
<b>BC9610</b>	<b>2.5 kg</b>

## **Barium Chloride, 10% (w/v) Aqueous**

For Sulfate, APHA 4500-SO<sub>4</sub> C. Gravimetric Method

<b>BC6030</b>	<b>1 L</b>
<b>BC6030</b>	<b>3.8 L</b>

## **Barium Diphenylamine Sulfonate, 0.1% (w/v)**

Redox Indicator for Iron (II) Titrations; Electrochemical Transition Potential of + 0.83 V color changes from Green - Violet.

<b>BD4380</b>	<b>100 mL</b>
<b>BD4380</b>	<b>500 mL</b>
<b>BD4380</b>	<b>1 L</b>

## **Ψ Barium Hydroxide, Octahydrate, A.C.S.**

$Ba(OH)_2 \cdot 8H_2O$  F.W. 315.464 CAS 12230-71-6 Assay: Not less than 98.0%  
Each mL of 1N Hydrochloric Acid corresponds to 0.1577 g of  $Ba(OH)_2 \cdot 8H_2O$   
BH9527 500 g

## **Barium Hydroxide, Saturated, Aqueous**

49.1 grams per liter approximately.

BH6831 1 L  
BH6831 3.8 L

## **Basic Fuchsin, 0.2% (w/v) Aqueous**

pH 1.2 (purple) to pH 3.0 (red) [C.I. 42500; Basic Red 9]

BF4121 100 mL  
BF4121 500 mL

## **Borate Buffer Solution, pH 9.5 @ 25° C**

Sodium Borate and Sodium Hydroxide solution. For Nitrogen (Ammonia) APHA 4500-NH<sub>3</sub>

BB2020 1 L

## **Boric Acid, Crystal, A.C.S.**

$H_3BO_3$  F.W. 61.83 CAS 10043-35-3 Assay: 99.5% min. [orthoBoric Acid; Boracic Acid]

BA9504 500 g  
BA9504 2.5 kg

## **Boric Acid, Technical Grade**

$H_3BO_3$  F.W. 61.83 CAS 10043-35-3

BA9440 500 g  
BA9440 2.5 kg

## **Boric Acid Solution, 40 g/L Aqueous**

For increasing the concentration of boric acid in plating baths quickly; solid Boric Acid dissolves slowly at room temperature.

BA6921 1 L  
BA6921 3.8 L



### **Boric Acid Solution, 2% (w/v) Indicator Solution**

*For Nitrogen (Ammonia), APHA 4500 - NH<sub>3</sub> E. Titrimetric Method.  
Methyl Red-Methylene Blue Mixed Indicator.*

<b>BA6042</b>	<b>500 mL</b>
<b>BA6042</b>	<b>1 L</b>
<b>BA6042</b>	<b>3.8 L</b>
<b>BA6042</b>	<b>4 x 3.8 L</b>
<b>BA6042</b>	<b>10 L</b>
<b>BA6042</b>	<b>20 L</b>

### **Boric Acid Solution, 4% (w/v) Indicator Solution**

*For Nitrogen (Ammonia), APHA 4500 - NH<sub>3</sub> E. Titrimetric Method.  
Bromocresol Green - Methyl Red Indicator, for Kjeldahl Nitrogen Analysis.*

<b>BA6040</b>	<b>500 mL</b>
<b>BA6040</b>	<b>1 L</b>
<b>BA6040</b>	<b>3.8 L</b>
<b>BA6040</b>	<b>4 x 3.8 L</b>
<b>BA6040</b>	<b>10 L</b>
<b>BA6040</b>	<b>20 L</b>

### **Boric Acid Solution, 0.25 M**

*About 15.5 g of Boric Acid per Liter of solution.*

<b>BA6545</b>	<b>1 L</b>
<b>BA6545</b>	<b>3.8 L</b>

### **Boron Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Boric Acid in water; Verified NIST SRM 3107*

<b>B7730</b>	<b>100 mL</b>
<b>B7730</b>	<b>500 mL</b>

### **Bromocresol Green (BCG) Sodium Salt, A.C.S.**

*C<sub>21</sub>H<sub>13</sub>Br<sub>4</sub>O<sub>5</sub>Na F.W. 720.00 CAS 62625-32-5*

*[3', 3'', 5', 5''-Tetrabromo-m-cresolsulfonphthalein Sodium Salt]*

<b>BG4444</b>	<b>5 g</b>
<b>BG4444</b>	<b>10 g</b>

### **Bromocresol Green Indicator Solution, 0.04% (w/v)**

*pH 3.8 (Yellow) - pH 5.4 (Blue)*

**BG4010      500 mL**

**BG4010      1 L**

**BG4010      3.8 L**

### **Bromocresol Green Indicator Solution, 0.1% (w/v)**

*pH 3.8 (Yellow) - pH 5.4 (Blue)*

**BG4020      500 mL**

**BG4020      1 L**

**BG4020      3.8 L**

### **Bromocresol Purple (BCP) Indicator Solution, 0.04% (w/v)**

*pH 5.2 (Yellow) - pH 6.8 (Purple) [5', 5''-Dibromo-o-cresolsulfonphthalein]*

**BP4030      500 mL**

**BP4030      1 L**

**BP4030      3.8 L**

### **Bromophenol Blue (BPB) Sodium Salt, A.C.S.**

*C<sub>19</sub>H<sub>9</sub>Br<sub>4</sub>O<sub>5</sub>SNa F.W. 691.97 CAS 62625-28-9*

**BP4041      5 g**

**BP4041      10 g**

### **Bromophenol Blue Indicator Solution, 0.04% (w/v)**

*pH 3.0 (Yellow) - pH 4.6 (Blue)*

**BB4040      500 mL**

**BB4040      1 L**

**BB4040      3.8 L**

### **Bromothymol Blue (BTB) Sodium Salt, A.C.S.**

*C<sub>27</sub>H<sub>27</sub>O<sub>5</sub>SBr<sub>2</sub>Na F.W. 646.38 CAS 34722-90-2 pH 6.0 (Yellow) - pH 7.6 (Blue)*

*[3', 3''-Dibromothymolsulfonphthalein Sodium]*

**BT4051      5 g**

**BT4051      10 g**

### **Bromothymol Blue Indicator, 0.04% (w/v) Aqueous**

*pH 6.0 (Yellow) - pH 7.6 (Blue)*

**BT4050      500 mL**

BT4050 1 L  
BT4050 3.8 L

*Buffered Oxide Etchants (BOE) are silicon dioxide etching solutions formulated from high purity Semiconductor Grade 49% (w/w) Hydrofluoric Acid and high purity 40% (w/w) Ammonium Fluoride. Formulations are available in standard NH<sub>4</sub>F: HF ratios or made to customer specifications.*

*Formulations are also available with ACME-developed surfactants to improve surface wetting and promote etch uniformity.*

### **Ψ Buffered Oxide Etchant, 6:1, Electronic / Cleanroom Grade**

*Integral ratio of Ammonium Fluoride, 40% (w/w) and Hydrofluoric Acid, 49% (w/w)*  
*NH<sub>4</sub>F Assay: 33.6 - 34.6% HF Assay: 7.08 - 7.38%*

BO6546 3.8 L  
BO6546 4 x 3.8 L

### **Ψ Buffered Oxide Etchant, 15:1, Electronic / Cleanroom Grade**

*NH<sub>4</sub>F Assay: 36.9 - 37.9% HF Assay: 9.94 - 10.24%*

BO6547 3.8 L  
BO6547 4 x 3.8 L

### **Ψ Buffered Oxide Etchant, 500:1, Electronic / Cleanroom Grade**

BO6548 3.8 L  
BO6548 4 x 3.8 L

### **Buffer Standard, pH 1.68 @ 25° C (Colorless)**

*Potassium Chloride and Hydrochloric Acid*

BS2168 500 mL  
BS2168 1 L

### **Buffer Standard, pH 2.00 @ 25° C (Colorless)**

*Potassium Chloride and Hydrochloric Acid*

BS2202 500 mL  
BS2202 1 L

### **Buffer Standard, pH 3.00 @ 25° C (Purple)**

*Potassium Hydrogen Phthalate – based buffer for Winery Lab use.*

**BS2300**      **1 L**  
**BS2300**      **3.8 L**

### **Buffer Standard, pH 4.01 @ 25° C (Red)**

*Potassium Hydrogen Phthalate, pH 4.01 ± 0.01 @ 25° C  
NIST Traceable Buffer. pH vs. Temperature on label.*

**BR2030**      **500 mL**  
**BR2030**      **1 L**  
**BR2030**      **3.8 L**  
**BR2030**      **4 x 3.8 L**  
**BR2030**      **20 L**

### **Buffer Standard, 4.75 @ 25° C (Orange)**

*Phthalate-based adjusted with Sodium Hydroxide Solution*

**BO2475**      **1 L**  
**BO2475**      **3.8 L**

### **Buffer Standard, pH 6.864 @ 25° C (Colorless)**

*Potassium Phosphate, Monobasic and Sodium Phosphate, Dibasic, NIST Traceable Buffer.*

**BC2040**      **500 mL**  
**BC2040**      **1 L**  
**BC2040**      **3.8 L**

### **Buffer Standard, pH 7.00 @ 25° C (Yellow)**

*Potassium Phosphate, Monobasic - Sodium Hydroxide  
pH vs. Temperature on label.*

**BY2050**      **500 mL**  
**BY2050**      **1 L**  
**BY2050**      **3.8 L**  
**BY2050**      **4 x 3.8 L**  
**BY2050**      **20L**

### **Buffer Standard, pH 8.0 @ 25° C (Colorless)**

*Potassium Phosphate, Monobasic - Sodium Hydroxide*

**BC2060**      **500 mL**

BC2060 1L  
BC2060 3.8 L

### **Buffer Standard, pH 9.186 @ 25° C (Colorless)**

*Sodium Borate Solution, NIST Traceable Buffer*

BS2187 500 mL  
BS2187 1 L  
BS2187 3.8 L

### **Buffer Standard, pH 10.00 @ 25° C (Blue)**

*Sodium Borate - Sodium Hydroxide*

*pH vs. Temperature on label.*

BB2070 500 mL  
BB2070 1 L  
BB2070 3.8 L  
BB2070 4 x 3.8 L  
BB2070 20 L

### **Buffer Standard, pH 12.0 @ 25° C (Colorless)**

*Potassium Chloride-Sodium Hydroxide*

BC2012 500 mL  
BC2012 1 L  
BC2012 3.8 L

### **Buffer Standard, pH 12.45 @ 25° C (Colorless)**

*Potassium Chloride-Sodium Hydroxide*

BC2080 500 mL  
BC2080 1 L  
BC2080 3.8 L

### **Ψ Butanol, Reagent Grade**

*C<sub>4</sub>H<sub>9</sub>OH F.W. 74.12 d= 0.8109 g/mL CAS 71-36-3 Assay: 99.9% min.*

*[1-Butanol; n-Butyl Alcohol] Flammable!*

BA9120 500 mL  
BA9120 1 L

### **Ψ Cadmium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Cadmium Acetate in 2% Nitric Acid; Verified NIST SRM 3108*

CD7740 100 mL  
CD7740 500 mL

## **Ψ Calcium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Calcium Carbonate in dilute Hydrochloric Acid; NIST SRM 3109*

**CA7750 100 mL**

**CA7750 500 mL**

## **Calcium Carbonate, Powder, A.C.S.**

*CaCO<sub>3</sub> F.W. 100.09 CAS 471-34-1 Assay: 99% min. Hygroscopic*

**CC9620 500 g**

**CC9620 2.5 kg**

## **Calcium Carbonate, Powder, USP Grade**

*CaCO<sub>3</sub> F.W. 100.09 CAS 471-34-1 Assay: 98.0 – 100.5% Hygroscopic*

**CC9505 500 g**

**CC9505 2.5 kg**

## **Calcium Chloride, 2.75% (w/v) Aqueous**

*For Biochemical Oxygen Demand (BOD), APHA 5210 B. 5-Day BOD Test*

**CC6050 500 ml**

**CC6050 3.8 L**

## **Calcium Chloride, Anhydrous, Technical Grade**

*CaCl<sub>2</sub> F.W. 110.98 CAS 10043-52-4*

**CC9401 500 g**

**CC9401 2.5 kg**

**CC9401 12.5 kg**

## **Calcium Chloride, Dihydrate, A.C.S.**

*CaCl<sub>2</sub>·2H<sub>2</sub>O F.W. 147.01 CAS 10035-04-8 Assay: 99.0 - 105.0%*

**CC9506 250 g**

**CC9506 500 g**

**CC9506 2.5 kg**

## **Ψ Cerium (IV) Sulfate, 0.1 N in Sulfuric Acid, 1 N Solution**

*0.1000N ± 0.0005 N (0.0995 - 0.1005 N) in Sulfuric Acid, 1.0 N [Ceric Sulfate]*

**CS1515 1 L**

**CS1515 3.8 L**

CS1515 4 x 3.8 L

### **Ψ Cesium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Cesium Nitrate in 2% Nitric Acid; Verified NIST SRM 3111*

CS7760 100 mL

CS7760 500 mL

### **Ψ Chloroform, A.C.S.**

*CHCl<sub>3</sub> F.W. 119.38 d= 1.492 g/mL CAS 67-66-3 Assay: 99.8% Min.  
[Trichloromethane]; Light-Sensitive; Toxic Liquid-Keep Away From Food!  
Stabilized with Ethanol or mixed Amylenes.*

CL9050 500 mL

CL9050 1 L

CL9050 3.8 L

CL9050 4 x 3.8 L

### **Ψ Chromatography Solvent for Wine Organic Acids**

*Paper or thin-film chromatography for Malo-Lactic Fermentation Progress by Kunkee  
Method. Bromocresol Green Indicator*

CS6240 1 L

CS6240 3.8 L

### **Ψ Chromatography Solvent with Bromophenol Blue (BPB)**

*Enhanced resolution of organic acids in wine. European formula!*

CS6245 500 mL

CS6245 1 L

### **Chromium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Potassium Dichromate in de-ionized Water; Verified NIST SRM 3112*

CR7770 100 mL

CR7770 500 mL

### **Citric Acid, Anhydrous, A.C.S.**

*C<sub>6</sub>H<sub>8</sub>O<sub>7</sub> F.W. 192.13 CAS 77-92-9 Assay: 99.5% Min.  
[2-Hydroxy-1,2,3-Propanetricarboxylic Acid]*

CA9630 500 g

CA9630 2.5 kg

CA9630 5 kg

CA9630 12 kg

### **Citric Acid, Monohydrate, A.C.S.**

$C_6H_8O_7 \cdot H_2O$  F.W. 210.14 CAS 5949-29-1  
[2-Hydroxy-1,2,3-Propanetricarboxylic Acid]

Assay: 99.0 – 102.0%.

CM9291 500 g

CM9291 2.5 kg

CM9291 5 kg

CM9291 12 kg

### **Citric Acid, Anhydrous, Technical Grade**

$C_6H_8O_7$  F.W. 192.13 CAS 77-92-9 Assay: 99.5% Min.  
[2-Hydroxy-1,2,3-Propanetricarboxylic Acid]

CA9444 500 g

CA9444 2.5 kg

CA9444 12 kg

### **Ψ Cobalt Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Cobalt Chloride, in dilute Hydrochloric Acid; Verified NIST SRM 3113*

CO7780 100 mL

CO7780 500 mL

*Conductivity Conversions: m is meter; mS is milliSiemens  
 $\mu$  is micro,  $\mu S/cm$  is microSiemens/centimeter  
 $1mS/m = 10 \mu S/cm$  and  $1 \mu S/cm = 1 \mu mhos/cm$*

### **Conductivity Standard, 10 $\mu S/cm$**

*Extremely dilute solution of Potassium Chloride.*

CS7311 500 mL

CS7311 1 L

### **Conductivity Standard, 46.7 $\mu S/cm$**

*Potassium Chloride Solution, 0.0001 M @ 25° C*

CS7926 500 mL

CS7926 1 L

### **Conductivity Standard, 73.9 $\mu S/cm$**

*Potassium Chloride Solution, 0.0005 M @ 25° C*



CS7900 500 mL  
CS7900 1 L

### **Conductivity Standard, 100 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution*

CS7302 500 mL  
CS7302 1 L

### **Conductivity Standard, 146.9 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution, 0.001 M @ 25° C*

CS7910 500 mL  
CS7910 1 L

### **Conductivity Standard, 1,000 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution*

CS7917 500 mL  
CS7917 1 L

### **Conductivity Standard, 1,413 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution, 0.01 M @ 25° C*

CS7920 500 mL  
CS7920 1 L

### **Conductivity Standard, 2,767 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution, 0.02 M @ 25° C*

CS7930 500 mL  
CS7930 1 L

### **Conductivity Standard, 6,668 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution, 0.05 M @ 25° C*

CS7940 500 mL  
CS7940 1 L

### **Conductivity Standard, 12,900 $\mu\text{S}/\text{cm}$**

*Potassium Chloride Solution, 0.1 M @ 25° C*

CS7950 500 mL  
CS7950 1 L

**CONDUCTIVITY STANDARDS OF ANY REASONABLE VALUE (<111.9mS/cm) ARE AVAILABLE-PLEASE INQUIRE.**

## ***Acid Copper Sulfate Plating Solutions***

***Copper Sulfate Plating Electrolytes are economical to prepare, operate, analyze and waste treat. They are used in printed circuit board manufacturing, electronics, metal finishing and plating on plastics. The chemistry of Acid Copper Plating is simple, with Copper (II) Sulfate, Sulfuric Acid and Chloride forming the ionized species in solution. Sulfuric Acid increases the conductivity of the solution and reduces anode and cathode polarizations. High Throwing Power formulations are available.***

## ***Copper Fluoroborate Plating Solutions***

***Copper Fluoroborate Solutions allow use of higher current densities and increased plating speed since copper fluoroborate is extremely soluble and large amounts can be dissolved in water.***

## ***Copper Pyrophosphate Plating Solutions***

***Copper Pyrophosphate Plating Solutions require more control and maintenance than the other solutions but their main use has been for plating on plastics and printed circuits. The chemistry is the formation of the potassium copper pyrophosphate complex from copper pyrophosphate and potassium pyrophosphate. Anode and cathode***

*efficiencies of copper pyrophosphate baths are essentially 100%.  
Maximum agitation is required for the best results.*

### **Ψ Copper Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Copper powder in 2% Nitric Acid; Verified NIST SRM 3114*

**CU7790      100 mL**

**CU7790      500 mL**

### **Copper Standard, 1,000 mg/L (ppm)**

*Cupric Sulfate, Pentahydrate (99.999% metals basis) dissolved in de-ionized water.*

**CS7791      100 mL**

**CS7791      500 mL**

### **Ψ Copper Sulfate with Hydrochloric Acid**

*Can Liner Rater solution for can manufacturers.*

**CS6822      3.8 L**

**CS6822      20 L**

### **Copper Sulfate Standard, 0.010 M**

*Cupric Sulfate, Pentahydrate (99.999% metals basis) dissolved in de-ionized water.*

**CS7801      1 L**

**CS7801      3.8 L**

### **Copper Sulfate Standard, 0.016 M**

*Cupric Sulfate, Pentahydrate (99.999% metals basis) dissolved in de-ionized water.*

**CS7802      1 L**

**CS7802      3.8 L**

### **Copper Sulfate Standard, 0.025 M**

*Cupric Sulfate, Pentahydrate (99.999% metals basis) dissolved in de-ionized water.*

**CS7803      1 L**

**CS7803      3.8 L**

### **Copper Sulfate Solution, 2% (w/v)**

*APHA 4500-NO<sub>3</sub> E, F*

*ASTM D3867-90 A, B*

*20 grams of Cupric Sulfate, Pentahydrate dissolved in de-ionized water.*

**CS6771      1 L**

**CS6771      3.8 L**

**CS6771      4 x 3.8 L**

CS6771 20 L

### **Ψ Cupric Sulfate, Pentahydrate, Crystal, A.C.S.**

$CuSO_4 \cdot 5H_2O$  F.W. 249.69 CAS 7758-99-8 Assay: 98.0 - 102.0% [Copperas]

CS9507 500 g

CS9507 2.5 kg

### **Dextrose, Anhydrous, USP/NF Grade**

$C_6H_{12}O_6$  F.W. 180.20 CAS 50-99-7 Assay: 99.5% min.

[D-Glucose; Corn sugar; Glucose]

DG9310 500 g

DG9310 2.5 kg

### **EthyleneDiamineTetraAcetic Acid (EDTA) Free Acid, A.C.S.**

$C_{10}H_{14}N_2O_8$  F.W. 292.25 CAS 60-00-4 Assay: 99.4 - 100.6%

[(Ethylenedinitrilo)tetraacetic Acid; Edetic Acid]

EA9597 125 g

EA9597 500 g

EA9597 2.5 kg

### **EDTA, Disodium, Dihydrate, A.C.S.**

$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$  F.W. 372.24 CAS 6381-92-6 Assay: 99.0 - 101.0%

[Edetate, Disodium; Ethylenedinitrilotetraacetic Acid, Sodium Salt]

ED9670 125 g

ED9670 500 g

ED9670 2.5 kg

### **EDTA Disodium, 0.01 M Solution**

1.0 mL = 1.0 mg  $CaCO_3$ ; 1.0 mL = 0.4008 mg Ca

ED1001 1 L

ED1001 3.8 L

ED1001 4 x 3.8 L

### **EDTA Disodium, 0.05 M Solution**

1.0 mL = 5.0 mg  $CaCO_3$ ; 1.0 mL = 2.004 mg Ca

ED1005 1 L

ED1005 3.8 L

ED1005 4 x 3.8 L

### **EDTA Disodium, 0.0575 M Solution**

*1.0 mL = 5.75 mg CaCO<sub>3</sub>; 1.0 mL = 2.3046 mg Ca*

**ED1575**      **1 L**  
**ED1575**      **3.8 L**  
**ED1575**      **4 x 3.8 L**

### **EDTA Disodium, 0.1 M Solution**

*1.0 mL = 10.0 mg CaCO<sub>3</sub>; 1.0 mL = 4.008 mg Ca*

**ED1006**      **1 L**  
**ED1006**      **3.8 L**  
**ED1006**      **4 x 3.8 L**

*Electrode filling solutions for many different pH electrode reference systems and Ion Specific Electrodes (ISE) are available!  
Call our Tech Service person now with your detailed requirements.*

### **Electrode Cleaning Solution (Proteins)**

*For Removal of Membrane/Junction Protein Deposits*

**ES6398**      **125 mL**  
**ES6398**      **500 mL**

### **Electrode Filling Solution, 3 M KCl with Silver Chloride**

*Saturated with Silver Chloride.*

*Never use filling solutions containing Silver in Ross™ electrodes!*

**EF6063**      **125 mL**

### **Electrode Filling Solution, 3 M KCl**

**EF6062**      **125 mL**

### **Electrode Filling Solution, 4 M KCl with Silver Chloride**

*Saturated with Silver Chloride.*

*Never use filling solutions containing Silver in Ross™ electrodes!*

**EF6060**      **125 mL**

### **Electrode Filling Solution, 4 M KCl**

**EF6070**      **125 mL**

### **Electrode Storage Solution, pH 4.0**

*For proper storage of glass membrane and combination pH electrodes.  
pH 4.0 buffer with Potassium Chloride as Ionic Strength Adjustor.*

**ES6080      500 mL**

**ES6080      1 L**

**ES6080      3.8 L**

### **Electrode Storage Solution, pH 7.0**

*pH 7.0 buffer with Potassium Chloride as Ionic Strength Adjustor.  
Never store pH combination electrodes in distilled or de-ionized water!*

**ES6090      500 mL**

**ES6090      1 L**

**ES6090      3.8 L**

### **Ethyl Alcohol Standard, 10.0% (v/v) Aqueous**

*Certified Traceable to National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) 136e, Potassium Dichromate, Oxidimetric Standard (99.984 ± 0.010%). Accuracy to ± 0.05% by volume at 20°C.*

**EA7800      60 mL**

**EA7800      500 mL**

**EA7800      1 L**

**EA7800      3.8 L**

### **Ethyl Alcohol Standard, 11.0% (v/v) Aqueous**

*Accuracy to ± 0.05% by volume at 20° C.*

**EA7810      60 mL**

**EA7810      500 mL**

**EA7810      1 L**

**EA7810      3.8 L**

### **Ethyl Alcohol Standard, 12.0% (v/v) Aqueous**

*Accuracy to ± 0.05% by volume at 20° C.*

**EA7820      60 mL**

**EA7820      500 mL**

**EA7820      1 L**

**EA7820      3.8 L**

### **Ethyl Alcohol Standard, 13.0% (v/v) Aqueous**

*Accuracy to ± 0.05% by volume at 20° C.*

<b>EA7830</b>	<b>60 mL</b>
<b>EA7830</b>	<b>500 mL</b>
<b>EA7830</b>	<b>1 L</b>
<b>EA7830</b>	<b>3.8 L</b>

### **Ethyl Alcohol Standard, 14.0% (v/v) Aqueous**

*Accuracy to ± 0.05% by volume at 20° C.*

<b>EA7840</b>	<b>60 mL</b>
<b>EA7840</b>	<b>500 mL</b>
<b>EA7840</b>	<b>1 L</b>
<b>EA7840</b>	<b>3.8 L</b>

### **Ethyl Alcohol Standard, 15.0% (v/v) Aqueous**

*Accuracy to ± 0.05% by volume at 20° C.*

<b>EA7850</b>	<b>60 mL</b>
<b>EA7850</b>	<b>500 mL</b>
<b>EA7850</b>	<b>1 L</b>
<b>EA7850</b>	<b>3.8 L</b>

### **Ethyl Alcohol Standard, 20.0% (v/v) Aqueous**

*Accuracy to ± 0.05% by volume at 20° C.*

<b>EA7871</b>	<b>60 mL</b>
<b>EA7871</b>	<b>500 mL</b>
<b>EA7871</b>	<b>1 L</b>
<b>EA7871</b>	<b>3.8 L</b>

### **Ψ Ethyl Alcohol, Anhydrous, Absolute, 200 Proof, USP Grade**

*C<sub>2</sub>H<sub>5</sub>OH F.W. 46.07 d= 0.810 g/mL CAS 64-17-5 Assay: 99.5% by volume minimum.  
[Ethanol, Undenatured; Dehydrated Ethanol]; Prices include Federal Excise tax.*

*Light Sensitive.*

<b>EA9320</b>	<b>500 mL</b>
<b>EA9320</b>	<b>1 L</b>
<b>EA9320</b>	<b>3.8 L</b>

### **Ψ Ethanol, Denatured, Technical Grade**

$CH_3CH_2OH$  F.W. 46.07  $d=0.785$  g/mL CAS 64-17-5

*Anhydrous, denatured Ethyl Alcohol may contain Benzene, Hydrocarbons even Gasoline, MethylIsobutylKetone (MIBK) as denaturants; it cannot be made non-poisonous!*

<b>ET9405</b>	<b>500 mL</b>
<b>ET9405</b>	<b>1 L</b>
<b>ET9405</b>	<b>3.8 L</b>
<b>ET9405</b>	<b>4 x 3.8 L</b>
<b>ET9405</b>	<b>20 L</b>

### **Ethylene Glycol, Reagent Grade**

$C_2H_6O_2$  F.W 62.07  $d=1.114$  g/mL CAS 107-21-1 Assay: 99.0% min.

<b>EG9450</b>	<b>500 mL</b>
<b>EG9450</b>	<b>3.8 L</b>
<b>EG9450</b>	<b>4 x 3.8 L</b>

### **Fehling's Solution "A"**

*For Reducing Sugars; Cupric Sulfate, Pentahydrate. Mix equal volumes of "A" with "B"*

<b>FA6250</b>	<b>500 mL</b>
<b>FA6250</b>	<b>1 L</b>

### **Ψ Fehling's Solution "B"**

*For Reducing Sugars; Alkaline Rochelle's salt solution.*

<b>FB6260</b>	<b>500 mL</b>
<b>FB6260</b>	<b>1 L</b>

### **Ferric Ammonium Sulfate, Dodecahydrate, A.C.S.**

$H_4FeNO_8S_2 \cdot 12H_2O$  F.W. 482.20 CAS 7783-83-7 Assay: 98.5 - 102.0% [Iron(III)

*Ammonium Sulfate, Hydrate]*

<b>FS9133</b>	<b>500 g</b>
<b>FS9133</b>	<b>2.5 kg</b>

### **Ferric Chloride, 0.025% (w/v)**

*For Biochemical Oxygen Demand (BOD), APHA 5210 B. 5-Day BOD Test*

<b>FC6100</b>	<b>500 mL</b>
<b>FC6100</b>	<b>1 L</b>
<b>FC6100</b>	<b>3.8 L</b>



### **Ferric Sulfate, Hydrate, Reagent Grade**

$Fe_2(SO_4)_3 \cdot xH_2O$  F.W. 399.98 +  $xH_2O$  CAS 10028-22-5 72% Min. [Iron(III) Sulfate, Hydrate]

**FS9045** 500 g

**FS9045** 2.5 kg

**FS9045** 12 kg

### **Ferric Sulfate, Hydrate, Technical Grade**

$Fe_2(SO_4)_3 \cdot xH_2O$  F.W. 399.98 +  $xH_2O$  CAS 10028-22-5 [Iron(III) Sulfate, Hydrate]

**FS9047** 500 g

**FS9047** 2.5 kg

### **Ferroun Indicator, 0.025 M**

1, 10 - Phenanthroline - Ferrous Sulfate; For Chemical Oxygen Demand (COD)

**FE4120** 60 mL

**FE4120** 100 mL

**FE4120** 500 mL

### **Ferrous Ammonium Sulfate, Hexahydrate, A.C.S.**

$FeSO_4(NH_4)_2SO_4 \cdot 6H_2O$  F.W. 392.14 CAS 7783-85-9 Assay: 98.5 - 101.5% [Iron(II) Ammonium Sulfate]

**FA9510** 500 g

**FA9510** 2.5 kg

### **Ferrous Sulfate, Heptahydrate, A.C.S.**

$FeSO_4 \cdot 7H_2O$  F.W. 278.02 CAS 7782-63-0 Assay: 99.0% min. [Iron(II) Sulfate]

**FS9640** 500 g

**FS9640** 2.5 kg

### **Fluoride Standard, 10 mg/L (ppm)**

1.0 mL = 0.010 mg Fluoride anion from high-purity Sodium Fluoride

**FS7195** 500 mL

**FS7195** 1 L

### **Fluoride Standard, 10 mg/L (ppm) Premixed with TISAB II**

1.0 mL = 0.010 mg Fluoride anion from high-purity Sodium Fluoride

**FS7196** 500 mL

**FS7196** 1 L

### **Fluoride Standard, 100 mg/L (ppm)**

*1.0 mL = 0.100 mg Fluoride anion from Sodium Fluoride*

**FS7190      500 mL**

**FS7190      1 L**

### **Fluoride Standard, 100 mg/L (ppm) Premixed with TISAB II**

*1.0 mL = 0.100 mg Fluoride anion from Sodium Fluoride*

**FS7191      500 mL**

**FS7191      1 L**

### **Fluoride Standard, 1,000 mg/L (ppm)**

*1.0 mL = 1.000 mg Fluoride anion*

**FS7200      500 mL**

**FS7200      1 L**

### **Ψ Formaldehyde, 37%, A.C.S.**

*CH<sub>2</sub>O   F.W. 30.03   d = 1.081-1.085 g/mL   CAS 50-00-0   Assay: 36.5% - 38.0%*

**FS9088      500 mL**

**FS9088      1 L**

**FS9088      3.8 L**

### **Ψ Formic Acid, 88%, A.C.S.**

*CH<sub>2</sub>O<sub>2</sub>   F.W. 46.03   d = 1.220 g/mL   CAS 64-18-6   Assay: 88% min.*

**FA9130      500 mL**

**FA9130      3.8 L**

### **Fructose Standard, 50 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 5.0 mg Fructose per 100 mL solution.*

**FU7590      100 mL**

### **Fructose Standard, 200 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 20 mg Fructose per 100 mL solution.*

**FU7600      100 mL**

### **Fructose Standard, 500 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 50 mg Fructose per 100 mL solution.*

**FU7610      100 mL**

**Fructose Standard, 600 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 60 mg Fructose per 100 mL solution.*

**FU7620      100 mL**

**Fructose Standard, 1,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 100 mg Fructose per 100 mL solution.*

**FU7630      100 mL**

**Fructose Standard, 1,500 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 150 mg Fructose per 100 mL solution.*

**FU7640      100 mL**

**Fructose Standard, 2,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 200 mg Fructose per 100 mL solution.*

**FU7650      100 mL**

**Fructose Standard, 3,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 300 mg Fructose per 100 mL solution.*

**FU7660      100 mL**

**Fructose Standard, 4,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 400 mg Fructose per 100 mL solution.*

**FU7670      100 mL**

**Fructose Standard, 6,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 600 mg Fructose per 100 mL solution.*

**FU7680      100 mL**

**Fructose Standard, 10,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 1.000 g Fructose per 100 mL solution.*

**FU7690      100 mL**

**Fructose Standard, 20,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 2.000 g Fructose per 100 mL solution.*

**FU7691      100 mL**

**Fructose Standard, 40,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 4.000 g Fructose per 100 mL solution.*

**FU7692**      **100 mL**

**Fructose Standard, 100,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 10.000 g Fructose per 100 mL solution.*

**FU7693**      **100 mL**

**Fructose Standard, 200,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 20.000 g Fructose per 100 mL solution.*

**FU7694**      **100 mL**

**Fructose Standard, 300,000 mg/L (ppm)**

*Fructose dissolved in 10% Ethanol; 30.000 g Fructose per 100 mL solution.*

**FU7695**      **100 mL**

**Gallic Acid, Monohydrate, Certified A.C.S.**

*C<sub>7</sub>H<sub>6</sub>O<sub>5</sub>-H<sub>2</sub>O F.W. 188.14 CAS 5995-86-8 Assay: 98.0% min. [3,4,5-Trihydroxybenzoic acid]*

**GA9650**      **10 g**

**Gallic Acid Equivalent (GAE) Standard, 100 mg/L (ppm)**

*Equivalent to 10.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7310**      **100 mL**

**Gallic Acid Equivalent Standard, 250 mg/L (ppm)**

*Equivalent to 25.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7320**      **100 mL**

**Gallic Acid Equivalent Standard, 500 mg/L (ppm)**

*Equivalent to 50.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7330**      **100 mL**

**Gallic Acid Equivalent Standard, 750 mg/L (ppm)**

*Equivalent to 75.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7340**      **100 mL**

**Gallic Acid Equivalent Standard, 1,000 mg/L (ppm)**

*Equivalent to 100.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7350**      **100 mL**

### **Gallic Acid Equivalent Standard, 1,500 mg/L (ppm)**

*Equivalent to 150.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7360      100 mL**

### **Gallic Acid Equivalent Standard, 2,000 mg/L (ppm)**

*Equivalent to 200.0 mg Gallic acid per 100 mL solution in 10% (v/v) Ethanol*

**GA7370      100 mL**

### **Glycerin, Natural, USP Grade**

*C<sub>3</sub>H<sub>8</sub>O<sub>3</sub> F.W. 92.10 d= 1.264 g/mL CAS 56-81-5 Assay: 99.0 - 101.0%*

**GY9314      1 L**

**GY9314      3.8 L**

**GY9314      4 x 3.8 L**

**GY9314      20 L**

### **Ψ Gold Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Gold metal ions in 10% Hydrochloric Acid Matrix; Verified NIST SRM 3121*

**AU7705      100 mL**

**AU7705      500 mL**

### **Gold Coast Solution #1**

*Copper Sulfate Solution, acidified*

**GC6281      500 mL**

**GC6281      1 L**

**GC6281      3.8 L**

### **Ψ Gold Coast Solution #2**

*Potassium Sodium Tartrate Solution, alkaline*

**GC6282      500 mL**

**GC6282      1 L**

**GC6282      3.8 L**

### **Gold Coast Solution #3**

*Potassium Iodide Solution, alkaline*

**GC6283      500 mL**

**GC6283      1 L**

**GC6283      3.8 L**

### **Ψ Gold Coast Solution #4**

*Sulfuric Acid Solution, 25% (v/v) [1+3]*

**GC6284      500 mL**

**GC6284      1 L**

**GC6284      3.8 L**

### **Gold Coast Solution #5**

*Starch in Potassium Iodide Solution, alkaline*

**GC6285      500 mL**

**GC6285      1 L**

**GC6285      3.8 L**

### **Gold Coast Solution #6**

*Sodium Thiosulfate Solution, alkaline*

**GC6286      500 mL**

**GC6286      1 L**

**GC6286      3.8 L**

### **Ψ Hardness Buffer Solution**

*For Water Hardness, APHA 2340 C. EDTA Titrimetric Method.*

*Ammonium Chloride-Ammonium Hydroxide with Disodium Magnesium EDTA*

**HB2110      500 mL**

**HB2110      1 L**

**HB2110      3.8 L**

### **Ψ Hexanes (n-Hexane) A.C.S.**

*Mixture of several isomers of hexane predominantly n-hexane, 2-methylpentane and 3-methylpentane, plus methylcyclopentane. Flammable!*

**HX9406      1 L**

**HX9406      3.8 L**

### **Hydrochloric Acid, 0.01 N (N/100)**

*N/100, 0.0100 N ± 0.0001 N ( 0.0099 - 0.0101 N) .*

*Standardized to pH 8.2 against Sodium Hydroxide that has been standardized against NIST SRM 84k, Potassium Hydrogen Phthalate.*

**HC1009      1 L**

**HC1009      3.8 L**

**HC1009      4 x 3.8 L**

**HC1009      20 L**

### **Hydrochloric Acid, 0.1 N (N/10)**

*N/10, 0.1000 N ± 0.0005 N (0.0995 - 0.1005 N)*

*Standardized to pH 8.2 against Sodium Hydroxide that has been standardized against NIST SRM 84k, Potassium Hydrogen Phthalate.*

**HC1020 1 L**  
**HC1020 3.8 L**  
**HC1020 4 x 3.8 L**  
**HC1020 20 L**

### **Hydrochloric Acid, 0.2 N (N/5)**

*(N/5) 0.2000 N ± 0.0005 N (0.1995 - 0.2005 N)*

**HC1028 1 L**  
**HC1028 3.8 L**  
**HC1028 4 x 3.8 L**

### **Ψ Hydrochloric Acid, 0.5 N (N/2)**

*0.500 N ± 0.002 N (0.495 - 0.505 N)*

**HC1027 1 L**  
**HC1027 3.8 L**  
**HC1027 4 x 3.8 L**

### **Ψ Hydrochloric Acid, 1.0 N**

*1.000 N ± 0.005 (0.995 - 1.005 N)*

*Standardized to pH 8.2 against Sodium Hydroxide that has been standardized against NIST SRM 84k, Potassium Hydrogen Phthalate.*

**HC1030 1 L**  
**HC1030 3.8 L**  
**HC1030 4 x 3.8 L**  
**HC1030 20 L**

### **Ψ Hydrochloric Acid, 2.0 N**

*2.000 N ± 0.005 N (1.995 - 2.005 N)*

*Standardized to pH 8.2 against Sodium Hydroxide that has been standardized against NIST SRM 84k, Potassium Hydrogen Phthalate.*

**HC1040 1 L**  
**HC1040 3.8 L**  
**HC1040 4 x 3.8 L**

## **Ψ Hydrochloric Acid, 6.0 N**

*6.00 N ± 0.05 N (5.95 – 6.05 N)*

*Standardized to pH 8.2 against Sodium Hydroxide that has been standardized against NIST SRM, 84k Potassium Hydrogen Phthalate.*

**HC1611      1 L**  
**HC1611      3.8 L**

## **Ψ Hydrochloric Acid, 10% (v/v) [1+9]**

*About 1.2 Normal*

**HC6110      1 L**  
**HC6110      3.8 L**  
**HC6110      4 x 3.8 L**

## **Ψ Hydrochloric Acid, 25%(v/v) [1+3]**

*About 3 Normal or Molar . Approximately 9% (w/w).*

**HC6120      1 L**  
**HC6120      3.8 L**  
**HC6120      4 x 3.8 L**

## **Ψ Hydrochloric Acid, 50%(v/v) [1+1]**

*About 6 Normal or Molar . Approximately 18% (w/w).*

**HC6120      1 L**  
**HC6120      3.8 L**  
**HC6120      4 x 3.8 L**

## **Ψ Hydrochloric Acid, A.C.S.**

*HCl F.W. 36.46 d 1.200 CAS 7647-01-0 Assay: 36.5 - 38.0% Corrosive!  
[Muriatic Acid; Hydrogen Chloride Solution ] DEA list 2 chemical.*

**HC9040      1 L**  
**HC9040      2.5 L**  
**HC9040      3.8 L**  
**HC9040      4 x 3.8 L**

## **Ψ Hydrochloric Acid, 20° Baume, Technical Grade**

*Sp. Gr. = 145 / (145 - ° Baume) for above 145/125 = 1.16 Approximately 30% (w/w)*

**HC9509      1 L**  
**HC9509      3.8 L**  
**HC9509      4 x 3.8 L**



## **Ψ Hydrofluoric Acid, 49%, A.C.S.**

*HF F.W. 20.01 d=1.150 mg/L CAS 7664-39-3*

*Assay: 48.0 - 51.0% Corrosive!*

**HF9250 3.8 L**

**HF9250 4 x 3.8 L**

## **Hydrogen Peroxide, 1% (v/v)**

*For testing sulfites in wine by Aeration - Oxidation method.*

**HP6565 500 mL**

**HP6565 1 L**

**HP6565 3.8 L**

## **Hydrogen Peroxide, 3% (v/v)**

*For testing sulfites in wine by Aeration-Oxidation method.*

**HP6300 500 mL**

**HP6300 1 L**

**HP6300 3.8 L**

## **Ψ Hydrogen Peroxide, A.C.S.**

*H<sub>2</sub>O<sub>2</sub> F.W. 34.01 d= 1.110 g/mL CAS 7722-84-1 Assay: 29.0 - 32.0% Oxidizer!*

*Contains minimum amount of Acetanilide as a stabilizer.*

**HP9050 500 mL**

**HP9050 1 L**

**HP9050 3.8 L**

**HP9050 4 x 3.8 L**

## **Ψ Hydrogen Peroxide, 35% (w/w) Technical Grade**

*H<sub>2</sub>O<sub>2</sub> F.W. 34.01 d= 1.110 g/mL CAS 7722-84-1 Oxidizer!*

*Contains minimum amount of stabilizer Acetanilide.*

**HP9055 500 mL**

**HP9055 1 L**

**HP9055 3.8 L**

**HP9055 4 x 3.8 L**

## **Ψ Hydroxylamine Hydrochloride, Crystal, A.C.S.**

*NH<sub>2</sub>OH-HCl F.W. 69.49 CAS 5470-11-1 Assay: 96.0% min. Corrosive, Toxic Solid!*

**HH9555 500 g**

**HH9555 2.5 kg**

### **Iodine Solution, 0.00564 N**

*0.00564 N ± 0.00005N, APHA 4500 – Cl C. Residual Chlorine Iodometric Method II,*

**IS1564            1 L**  
**IS1564            3.8 L**

### **Iodine Solution, 0.0156 N**

*0.0156 N ± 0.0005 N (0.0151 - 0.0161 N)*

**IS1410            500 mL**  
**IS1410            1 L**  
**IS1410            3.8 L**

### **Iodine Solution, 0.02 N (N/50)**

*N/50 0.0200 N ± 0.0005 ( 0.0195 - 0.0205 N)*

*Iodine in Potassium Iodide solution for titration of reducing agents such as Sulfites.*

**IS1400            500 mL**  
**IS1400            1 L**  
**IS1400            3.8 L**

### **Iodine Solution, 0.025 N ( N/40)**

*For Sulfide, APHA, Iodometric Method.*

**IS1405            500 mL**  
**IS1405            1 L**  
**IS1405            3.8 L**

### **Iodine Solution, 0.0282 N**

*0.0282 N ± 0. 0005 N (0.0277 - 0.0287 N)*

**IS1070            500 mL**  
**IS1070            1 L**  
**IS1070            3.8 L**

### **Iodine Solution, 0.1 N (N/10)**

*0.1000 N ± 0.0005 N (0.0995 - 0.1005 N)*

**IS1050            500 mL**  
**IS1050            1 L**  
**IS1050            3.8 L**

### **Iodine Solution, 0.2 N (N/5)**

*0.2000 N ± 0.0005 N (0.1995 - 0.2005 N)*

**IS1565            500 mL**

**IS1565            1 L**

**IS1565            3.8 L**

### **Ψ Iron Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Iron metal in 2% Nitric Acid; Verified NIST SRM 3126*

**FE7715            100 mL**

**FE7715            500 mL**

### **Ψ Iron Standard Solution as Fe, 200 mg/l (ppm)**

*Prepared from 1,000 ppm Iron standard by volumetric dilution with 2% Nitric Acid*

**FE7716            500 mL**

**FE7716            1 L**

### **Isopropyl Alcohol Internal Standard, 0.2% (v/v)**

*For use in the Gas Chromatography of Alcohols.*

**IA7717            100 mL**

### **Isopropyl Alcohol, 10% (v/v)**

*Semiconductor Isopropyl Alcohol (Class 10) in de-ionized water.*

**IA6257            3.8 L**

**IA6257            4 x 3.8 L**

### **Ψ Isopropyl Alcohol, 70% (v/v)**

*Isopropyl Alcohol commonly known as "rubbing alcohol".*

**IA6191            1 L**

**IA6191            3.8 L**

**IA6191            4 x 3.8 L**

**IA6191            20 L**

### **Ψ Isopropyl Alcohol, A.C.S.**

*C<sub>3</sub>H<sub>7</sub>OH F.W. 60.10 d = 0.781 g/mL CAS 67-63-0 Assay: 99.5% min.*

*[Isopropanol; 2-Propanol; IPA]*

**IA9060            500 mL**

**IA9060            1 L**

**IA9060            3.8 L**

**IA9060            4 x 3.8 L**

### **Ψ Isopropyl Alcohol, Technical Grade**

$C_3H_7OH$  F.W. 60.10  $d=0.781$  g/mL CAS 67-63-0 Assay: 99.0% min.

[Isopropanol; 2-Propanol; IPA]

IA9411 3.8 L

IA9411 4 x 3.8 L

IA9411 20 L

### **Lactic Acid Standard, 1,000 mg/L (ppm)**

Lactic Acid in de-ionized water. 100 mg of lactic acid per hundred milliliters of solution.

LA7721 100 mL

### **Lactic Acid Standard, 5,000 mg/L (ppm)**

500 mg Lactic acid dissolved in 100 mL of solution.

LA7722 100 mL

### **Lead Acetate Solution, Saturated, Neutral**

For sulfide removal before analysis and clarification in wine samples. About 44.3 g/100 mL

LA6301 100 mL

### **Ψ Lead Atomic Absorption Standard, 1,000 mg/L (ppm)**

Lead metal in 2% Nitric Acid; Verified NIST SRM 3128

PB7725 100 mL

PB7725 500 mL

### **Ψ Lithium Atomic Absorption Standard, 1,000 mg/L (ppm)**

Lithium Carbonate in 2% Nitric Acid; Verified NIST SRM 3129

LI7735 100 mL

LI7735 500 mL

### **Ψ Lithium Hydroxide, Monohydrate, Crystal, A.C.S.**

$LiOH \cdot H_2O$  F.W. 41.96 Assay: 98.0% Min.

LH9663 100 g

LH9663 500 g

## **Ψ Magnesium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Magnesium granules in 2% Nitric Acid; Verified NIST SRM 3131*

**MG7745            100 mL**

**MG7745            500 mL**

## **Magnesium Chloride, Hexahydrate, Technical Grade**

*MgCl<sub>2</sub>·6H<sub>2</sub>O F.W. 203.30 CAS 7791-18-6*

**MC9407            500 g**

**MC9407            2.5 kg**

## **Magnesium Sulfate, Heptahydrate, A.C.S.**

*MgSO<sub>4</sub>·7H<sub>2</sub>O F.W. 246.48 CAS 10034-99-8 Assay: 99.0 - 100.5% [Epsom Salts]*

**MS9513            500 g**

**MS9513            2.5 kg**

## **Magnesium Sulfate, Heptahydrate, USP Grade**

*MgSO<sub>4</sub>·7H<sub>2</sub>O F.W. 246.48 CAS 10034-99-8 Assay: 99.0 - 100.5% [Epsom Salts]*

**MS9735            500 g**

**MS9735            2.5 kg**

## **Magnesium Sulfate Solution, 2.25% (w/v)**

*For Biochemical Oxygen Demand (BOD), APHA 5210 B. 5-Day BOD Test.*

**MS6130            500 mL**

**MS6130            1 L**

## **Ψ Maleic Acid, Reagent**

*C<sub>4</sub>H<sub>4</sub>O<sub>4</sub> F.W. 116.08 Assay: 99% minimum (Dried Basis) CAS 110-16-7.*

**MA9464            100 g**

**MA9464            500 g**

## **Malic Acid Standard, 100 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 10 mg per 100 mL.*

**MA7723            100 mL**

## **Malic Acid Standard, 250 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 25 mg per 100 mL.*

**MA7724            100 mL**

**Malic Acid Standard, 500 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 50 mg per 100 mL*

**MA7726            100 mL**

**Malic Acid Standard, 750 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 75 mg per 100 mL*

**MA7727            100 mL**

**Malic Acid Standard, 1,000 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 100 mg per 100 mL*

**MA7728            100 mL**

**Malic Acid Standard, 1,500 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 150 mg per 100 mL*

**MA7729            100 mL**

**Malic Acid Standard, 2,000 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 200 mg per 100 mL*

**MA7731            100 mL**

**Malic Acid Standard, 3,000 mg/L (ppm)**

*L - Malic Acid in 10% v/v Ethanol; 300 mg per 100 mL*

**MA7732            100 mL**

**Ψ Manganese Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Manganese Acetate in 2% Nitric Acid; Verified NIST SRM 3132*

**MN7755            100 mL**

**MN7755            500 mL**

**Manganous Sulfate, 2.15 M Solution**

*APHA 4500-O C. Azide Modification for Dissolved Oxygen (DO), Manganese (II) Sulfate*

**MS6190            500 mL**

**MS6190            1 L**

## **Mannitol, USP/NF Grade**

$C_6H_{14}O_6$  F.W. 182.17 CAS 69-65-8 Assay: 96.0 - 101.5%  
[1,2,3,4,5,6-Hexanehexol; D-Mannitol; Mannite]

<b>ML9512</b>	<b>100 g</b>
<b>ML9512</b>	<b>500 g</b>
<b>ML9512</b>	<b>2.5 kg</b>

## **Ψ Mercury Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Mercuric Nitrate in 2% Nitric Acid; Verified NIST SRM 3133*

<b>HG7765</b>	<b>100 mL</b>
<b>HG7765</b>	<b>500 mL</b>

## **Mercuric Nitrate Titrant, 0.0141 N**

*1.00 mL = 0.500 mg Cl*

*For Chloride, APHA 4500-Cl C. Mercuric Nitrate Method*

<b>MN1410</b>	<b>500 mL</b>
<b>MN1410</b>	<b>1 L</b>
<b>MN1410</b>	<b>3.8 L</b>

## **Ψ Mercuric Nitrate Titrant, 0.1 N (N/10)**

*0.1000 N ± 0.0005 N (0.0995 - 0.1005 N)*

<b>MN1411</b>	<b>500 mL</b>
<b>MN1411</b>	<b>1 L</b>
<b>MN1411</b>	<b>3.8 L</b>

## **Ψ Mercuric Nitrate Titrant, 0.141 N**

*1.00 mL = 5.000 mg Cl*

*For Chloride, APHA 4500-Cl C. Mercuric Nitrate Method*

<b>MN1412</b>	<b>500 mL</b>
<b>MN1412</b>	<b>1 L</b>
<b>MN1412</b>	<b>3.8 L</b>

## **Ψ Methyl Alcohol, Absolute, A.C.S.**

$CH_3OH$  F.W. 32.04  $d = 0.787$  g/mL CAS 67-56-1 Assay: 99.8% min. Methanol

<b>MA9070</b>	<b>500 mL</b>
<b>MA9070</b>	<b>1 L</b>
<b>MA9070</b>	<b>3.8 L</b>
<b>MA9070</b>	<b>4 x 3.8 L</b>
<b>MA9070</b>	<b>20 L</b>

## **Ψ Methanol, Technical Grade**

*CH<sub>3</sub>OH F.W. 32.04 d= 0.787 g/mL CAS 67-56-1 Assay: 99.5% min. Flammable*

<b>MA9412</b>	<b>1 L</b>
<b>MA9412</b>	<b>3.8 L</b>
<b>MA9412</b>	<b>4 x 3.8 L</b>
<b>MA9412</b>	<b>20 L</b>

## **Methyl Orange, 0.1% (w/v) Aqueous**

*pH 3.2 (Red) to pH 4.4 (Yellow)*

<b>MO4191</b>	<b>500 mL</b>
<b>MO4191</b>	<b>1 L</b>
<b>MO4191</b>	<b>3.8 L</b>

## **1-Methyl-2-Pyrrolidinone, Electronic/Cleanroom Grade**

*N-Methyl Pyrrolidone; NMP Packaged in a cleanroom environment. BASF*

*C<sub>5</sub>H<sub>9</sub>NO F.W. 99.13 d=1.028 g/mL CAS 872-50-4*

<b>NM9443</b>	<b>3.8 L</b>
<b>NM9443</b>	<b>4 x 3.8 L</b>
<b>NM9443</b>	<b>20 L</b>

## **1-Methyl-2-Pyrrolidinone, Technical Grade**

*N-Methyl Pyrrolidone; NMP C<sub>5</sub>H<sub>9</sub>NO F.W. 99.13 d=1.028 g/mL CAS 872-50-4*

<b>NM9441</b>	<b>3.8 L</b>
<b>NM9441</b>	<b>4 x 3.8 L</b>
<b>NM9441</b>	<b>20 L</b>

## **Molybdenum Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Ammonium Molybdate in Water; Verified NIST SRM 3134*

<b>MO7775</b>	<b>100 mL</b>
<b>MO7775</b>	<b>500 mL</b>

## **Murexide Indicator on Sodium Chloride**

*Ammonium Purpurate on Sodium Chloride crystals. Complexometric Indicator for Calcium.*

*C<sub>8</sub>H<sub>8</sub>N<sub>6</sub>O<sub>6</sub> FW 284.19 [5, 5'-nitroindibarbituric acid monoammonium salt]*

<b>MU4900</b>	<b>100 g</b>
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*Nickel coatings for engineering purposes are usually prepared from solutions that deposit pure nickel. The property sought is corrosion resistance, but wear resistance, solderability, magnetic and other physical properties are relevant.*

*Controlling quality involves maintaining the purity of the plating solutions and the properties of the deposits.*

## **Nickel Plating Solutions      Please Inquire!**

### **Ψ Nickel Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Nickel Powder in 2% Nitric Acid; Verified NIST SRM 3136*

**NI7785                    100 mL**

**NI7785                    500 mL**

### **Nickel Sulfate, Hexahydrate, A.C.S.**

*NiSO<sub>4</sub>·6H<sub>2</sub>O F.W. 262.85 CAS 10101-97-0 Assay: 98.0 - 102.0%*

**NS9555                    500 g**

**NS9555                    2.5 kg**

### **Nickel Sulfate, 0.01 M**

*0.0100 M ± 0.0005 M (0.0095 - 0.0105 M)*

**NS6001                    1 L**

**NS6001                    3.8 L**

### **Ψ Nitric Acid, 1.0 M**

*M = N, 1.000 M ± 0.005 M (0.995 - 1.005 M)*

**NA1090                    500 mL**

**NA1090                    1 L**

### **Ψ Nitric Acid, 10% (v/v)**

*Prepared from Nitric Acid, A.C.S. dissolved in de-ionized water.*

*1.673 N d 1.0543*

**NA6810                    500 mL**

**NA6810                    1 L**

**NA6810                    2.5 L**

### **Ψ Nitric Acid, 20% (w/w)**

*Prepared from Nitric Acid, 70%, A.C.S. dissolved in de-ionized water.*

*3.359 N  $d = 1.1150$  g/mL*

**NA6820 500 mL**

**NA6820 6 x 500 mL**

**NA6820 1 L**

**NA6820 2.5 L**

### **Ψ Nitric Acid, 30% (w/w)**

*Prepared from Nitric Acid, A.C.S. dissolved in de-ionized water. 5.618 N  $d = 1.1801$  g/mL*

**NA6830 500 mL**

**NA6830 6 x 500 mL**

**NA6830 1 L**

**NA6830 2.5 L**

### **Ψ Nitric Acid, 40% (w/w)**

*Prepared from Nitric Acid, A.C.S. dissolved in de-ionized water. 7.913 N  $d = 1.2466$  g/mL*

**NA6840 500 mL**

**NA6840 6 x 500 mL**

**NA6840 1 L**

**NA6840 2.5 L**

### **Ψ Nitric Acid Solution, 50% (v/v) [1+1]**

*About 8 N; (1+1)  $d = 1.25$  g/mL*

**NA6650 500 mL**

**NA6650 1 L**

**NA6650 2.5 L**

### **Ψ Nitric Acid, Reagent, A.C.S.**

*HNO<sub>3</sub> F.W. 63.01  $d = 1.42$  g/cm<sup>3</sup> CAS 7697-37-2 Assay: 68.0 - 70.0% by weight.*

*[Aqua Fortis]*

**NA9080 500 mL**

**NA9080 1 L**

**NA9080 2.5 L**

**Nitrogen standards can be confusing because Nitrogen can exist in many forms. ACME Analytical Solutions, Inc. will name our products according to the species being measured by the analyst. For example, a standard which will be used to determine Ammonia will be named 'Ammonia Standard, 1000 ppm' while the same kind of standard for the determination of Nitrogen at 1000 ppm would be named 'Nitrogen Standard, 1000 ppm N (as NH<sub>3</sub>)'. If a solution is named 'Nitrogen Standard' in this catalog, the ppm value is the concentration of N and not the species present in solution such as Ammonia, Nitrate or Nitrite!**

**1000 mg/L (ppm) Nitrogen = 1216 ppm Ammonia = 3285 ppm Nitrite = 4427 ppm Nitrate**

### **Ammonia Standard, 1,000 mg/L (ppm)**

*1.00 mL = 1.00 mg Ammonia*

**NA7242            500 mL**

**NA7242            1 L**

### **Ammonia Standard, 100 mg/L (ppm)**

*1.00 mL = 0.100 mg Ammonia*

**NA7241            500 mL**

**NA7241            1 L**

### **Nitrate Standard, 1,000 mg/L (ppm)**

*1.00 mL = 1.00 mg Nitrate*

**NS7250            500 mL**

**NS7250            1 L**

### **Nitrate Standard, 100 mg/L (ppm)**

*1.00 mL = 0.100 mg Nitrate*

**NS7240            500 mL**

**NS7240            1 L**

### **Nitrite Standard, 1,000 mg/L (ppm)**

*1.00 mL = 1.00 mg Nitrite*

**NS7262            500 mL**

**NS7262            1 L**

### **Nitrite Standard, 100 mg/L (ppm)**

*1.00 mL = 0.100 mg Nitrite*

**NS7261            500 mL**

NS7261 1 L

### **Nitrogen Standard, 1,000 mg/L N-NH<sub>3</sub>**

*1.00 mL = 1.00 mg Nitrogen (as Ammonia), 1000 ppm N = 1216 ppm NH<sub>3</sub>*

NS7742 500 mL

NS7742 1 L

### **Nitrogen Standard, 1,000 mg/L N-NO<sub>2</sub><sup>-</sup>**

*1.00 mL = 1.00 mg Nitrogen (as Nitrite), 1000 ppm N = 3285 ppm NO<sub>2</sub><sup>-</sup>*

NS7762 500 mL

NS7762 1 L

### **Nitrogen Standard, 1,000 mg/L N-NO<sub>3</sub><sup>-</sup>**

*1.00 mL = 1.00 mg Nitrogen (as Nitrate), 1000 ppm N = 4427 ppm NO<sub>3</sub><sup>-</sup>*

NS7750 500 mL

NS7750 1 L

### **Oxidation-Reduction Potential (ORP) Standard, 200 mV**

*200 mV ± 10 mV with a Silver-Silver Chloride reference electrode filled with 4M KCl.*

OS7260 500 mL

OS7260 1 L

### **Ψ Oxidation-Reduction Potential (ORP) Standard, 400 mV**

*400 mV ± 10 mV with a Silver-Silver Chloride reference electrode filled with 4M KCl.*

OS7270 500 mL

OS7270 1 L

### **Ψ Oxidation-Reduction Potential (ORP) Standard, 475 mV**

*Light's Solution: Iron (II)/ Iron (III) Ammonium Sulfate Solution, For ORP, APHA*

*475 mV ± 10 mV with a Silver-Silver Chloride reference electrode filled with 4M KCl.*

LS7280 500 mL

LS7280 1 L

### **Ψ Oxidation-Reduction Potential (ORP) Standard, 600 mV**

*600 mV ± 10 mV with a Silver-Silver Chloride reference electrode filled with 4M KCl.*

OS7290 500 mL

OS7290 1 L

### **Ψ Oxalic Acid, Dihydrate, Crystal, A.C.S.**

$C_2H_2O_4 \cdot 2H_2O$  F.W. 90.04 CAS 6153-56-6 Assay: 99.5 - 102.5% [Ethanedioic Acid]

OA9567 500 g Corrosive

OA9567 2.5 kg

### **Ψ Palladium Atomic Absorption Standard, 1,000 mg/L (ppm)**

Ammonium Tetrachloropalladate in 10% Hydrochloric Acid; Verified NIST SRM 3138

PD7795 100 mL

PD7795 500 mL

### **Ψ PAN Indicator, 0.1% (w/v) in Isopropyl Alcohol**

[1-(2-Pyridylazo)-Naphthol]  $C_{15}H_{11}N_3O$  F.W. 249.27 CAS 85-85-8 Flammable

Absorption max: 462 nm

PI4266 100 mL

PI4266 500 mL

### **Ψ Perchloric Acid, 70% (w/w) Reagent (A.C.S.)**

$HClO_4$  F.W. 100.46 Assay: 69.0 - 72.0% CAS 7601-90-3 Oxidizer/ Corrosive

PA9102 500 ml

PA9102 6 x 500 mL

PA9102 2.5 L

PA9102 4 x 2.5 L

### **Ψ Phenolphthalein Indicator Solution, 1% (w/v) in Alcohol**

pH 8.3 (Colorless) - pH 10.0 (Red) Isopropanol

PH4070 500 ml

PH4070 1 L

PH4070 3.8 L

PH4070 4 x 3.8 L

### **Phenolphthalein, Powder, A.C.S.**

$C_{20}H_{14}O_4$  F.W. 318.33 CAS 77-09-8 Assay: 98.0 - 101.0%

PH9347 25 g

PH9347 100 g

PH9347 500 g

### **Phenol Red Indicator, 0.04% (w/v) Aqueous**

pH 6.8 (Yellow) - pH 8.2 (Red)

PR4080 500 mL

**PR4080**            **1 L**

**Phenylarsine Oxide, 0.00564 N**

*1.00 mL = 0.200 mg Chlorine*

*APHA 4500-Cl C. Iodometric Method II; [PAO]*

**PA1100**            **500 mL**

**PA1100**            **1 L**

**PA1100**            **3.8 L**

**Phosphate Buffer Solution, pH 7.0**

*For Residual Chlorine, APHA 4500-Cl D. Amperometric Titration Method*

**PB2120**            **500 mL**

**PB2120**            **1 L**

**PB2120**            **3.8 L**

**Phosphate Buffer Solution, pH 7.2**

*APHA for Media (Meets Specifications of ASTM D-4455)*

**PB2130**            **500 mL**

**PB2130**            **1 L**

**PB2130**            **3.8 L**

**Ψ Phosphoric Acid, 10% (v/v)**

*(1+9) APHA for Phenols, 5530 B. Cleanup Procedure (Meets Specifications for ASTM D-1783).*

**PA6140**            **500 mL**

**PA6140**            **1 L**

**PA6140**            **3.8 L**

**PA6140**            **4 x 3.8 L**

**Ψ Phosphoric Acid, 25% (v/v) [1+3]**

*About 3.7 M prepared by dissolving 1 part by volume of Phosphoric Acid, 85%, A.C.S. in 3 parts by volume de-ionized water. Corrosive*

**PA6025**            **1 L**

**PA6025**            **3.8 L**

**PA6025**            **4 x 3.8 L**

**PA6025**            **10 L**

**PA6025**            **20 L**



### **Potassium Bromide, Crystal, A.C.S.**

*KBr* F.W. 119.00 CAS 7758-02-3 Assay: 99.0% min. *Hygroscopic.*

**PB9205 500 g**

**PB9205 2.5 kg**

### **Potassium Chloride, Crystal, A.C.S.**

*KCl* F.W. 74.55 CAS 7447-40-7 Assay: 99.0 - 100.5% *Hygroscopic.*

**PC9520 500 g**

**PC9520 2.5 kg**

### **Ψ Potassium Chromate, Granular, A.C.S.**

*K<sub>2</sub>CrO<sub>4</sub>* F.W. 194.19 CAS 7789-00-6 Assay: 99.0% min.

**PC9523 500 g**

**PC9523 2.5 kg**

### **Ψ Potassium Chromate Indicator, 5% (w/v)**

*For Chloride, APHA 4500-Cl B. Argentometric Method. Aqueous Solution*

**PC4100 500 ml**

**PC4100 1 L**

### **Ψ Potassium Fluoride, 40% (w/v)**

*For Dissolved Oxygen, APHA 4500-O C. Azide Modification. 400 g KF per Liter*

**PF6150 500 mL**

**PF6150 1 L**

### **Potassium Hydrogen Biiodate, 0.1 N**

*KH(IO<sub>3</sub>)<sub>2</sub>* F.W. 389.91 CAS 13455-24-8 Assay: 99.95 - 100.05

**PB1700 1 L**

**PB1700 3.8 L**

### **Potassium Hydrogen Phthalate, Certified, A.C.S.**

*C<sub>8</sub>H<sub>5</sub>KO<sub>4</sub>* F.W. 204.22 CAS 877-24-7 Assay: 99.95 - 100.05%

*Acidimetric Primary Standard. Before use, this material should be lightly crushed and dried for 2 hrs. @ 120 ° C.*

*[Potassium Biphthalate; Potassium Acid Phthalate; Phthalic Acid, Monopotassium Salt].*

**KH9204 100 g**



**KH9204            500 g**

**Potassium Hydrogen Phthalate, 0.05 N (N/20)**

*0.0500 N ± 0.0005 N (0.0495 - 0.0505 N); N=M*

**PB1605            500 mL**

**PB1605            1 L**

**Potassium Hydrogen Phthalate, 0.1 N (N/10)**

*0.1000 N ± 0.0005 N (0.0995 - 0.1005 N); N=M*

**PB1600            500 mL**

**PB1600            1 L**

**Ψ Potassium Hydroxide, 0.5 N in Ethanol**

*0.500 N ± 0.003 (0.497 – 0.503 N) Certified*

**PH1255            1 L**

**PH1255            3.8 L**

**Ψ Potassium Hydroxide, 45% (w/w) Aqueous, Reagent Grade**

*KOH F.W. 56.11 d= 1.456 g/mL CAS 1310-58-3 Assay: 45% min. Corrosive*

**PH9045            1 L**

**PH9045            3.8 L**

**PH9045            4 x 3.8 L**

**Ψ Potassium Hydroxide, Pellets, A.C.S.**

*KOH F.W. 56.11 d= 1.456 g/mL CAS 1310-58-3 Assay: Not less than 85% KOH and not more than 2.0% K<sub>2</sub>CO<sub>3</sub> Corrosive*

**PH9677            500 g**

**PH9677            1 kg**

**PH9677            2.5 kg**

**Ψ Potassium Iodate, Powder, A.C.S.**

*KIO<sub>3</sub> F.W. 214.00 CAS 7758-05-6 Assay: 99.4 – 100.4% M = 6 N Oxidizer*

**PI9494            100 g**

**PI9494            500 g**

### **Potassium Iodate, 0.00564 N**

$0.00564 N \pm 0.00002 N (0.00562 - 0.00568 N)$

*Equivalent weight of KIO<sub>3</sub> is 35.6667 g so 1.0 N solution contains 35.6667 g per Liter.*

**PI1511            1 L**

**PI1511            3.8 L**

### **Potassium Iodate, 0.05 M Solution**

$M = 6 N \quad 0.0500 M \pm 0.0005 M (0.0495 - 0.0505 M)$

**PI1115            1 L**

**PI1115            3.8 L**

### **Potassium Iodate, 0.1 N (N/10)**

$M = 6N, \text{ therefore } 0.1 N = 0.0167 M$

**PI1117            1 L**

**PI1117            3.8 L**

### **Potassium Iodate Concentrate II**

*For Residual Chlorine at  $\pm 5$  ppm Deox® 2000 Analyzer, 0.68 N*

**PI1068            250 mL**

**PI1068            4 x 250 mL**

### **Potassium Iodate Concentrate I**

*For Residual Chlorine at  $\pm 10$  ppm Deox® 2000 Analyzer, 1.36 N*

**PI1136            250 mL**

**PI1136            4 x 250 mL**

### **Potassium Iodate - Iodide, 0.00794 N (N/126)**

$0.00794 N \pm 0.00005 N (0.00789 - 0.00799 N)$

**II1138            1 L**

**II1138            3.8 L**

### **Potassium Iodate-Iodide, 0.0156 N**

$M = 6 N \quad 0.0156 N \pm 0.0002 N (0.0154 - 0.0158 N)$

**II1500            1 L**

**II1500            3.8 L**

### **Potassium Iodate-Iodide, 0.02 N (N/50)**

$M = 6 N \quad 0.0200 N \pm 0.0002 N (0.0198 - 0.0202 N)$

**II1502**            **1 L**

**II1502**            **3.8 L**

### **Potassium Iodate-Iodide, 0.025 N (N/40)**

$M = 6 N \quad 0.0250 N \pm 0.0005 N (0.0245 - 0.0255 N)$

**II1102**            **1 L**

**II1102**            **3.8 L**

### **Potassium Iodate-Iodide, 0.1 N (N/10)**

$M = 6 N \quad 0.1000 N \pm 0.0005 N (0.0995 - 0.1005 N)$

**II1111**            **1 L**

**II1111**            **3.8 L**

### **Potassium Iodide, 5% (w/v)**

*Stabilized for Residual Chlorine, APHA 4500-Cl D. Amperometric Titration Method.*

**PI6160**            **500 mL**

**PI6160**            **1 L**

### **Potassium Iodide, 10% (w/v)**

*Stabilized. Light - Sensitive. Aqueous Solution*

**PI6165**            **500 mL**

**PI6165**            **1 L**

### **Potassium Iodide, Crystals, A.C.S.**

*KI F.W. 166.00 CAS 7681-11-0 Assay: 99.0% min. Light and Moisture Sensitive.*

**PI9530**            **500 g**

**PI9530**            **2.5 kg**

**PI9530**            **5 kg**

**PI9530**            **12 kg**

### **Ψ Potassium Nitrate, A.C.S.**

*KNO<sub>3</sub> F.W. 101.10 CAS 7757-79-1 Assay: 99.0% min. Oxidizer*

**PN9556**            **500 g**

**PN9556**            **2.5 kg**

### **Ψ Potassium Permanganate, Crystal, A.C.S.**

*KMnO<sub>4</sub> F.W. 158.03 CAS 7722-64-7 Assay: 99.0% min. Oxidizer*

**PP9540**            **500 g**

**PP9540**            **2.5 kg**

### **Ψ Potassium Permanganate, Crystal, USP Grade**

$KMnO_4$  F.W. 158.03 CAS 7722-64-7 Assay: 99.0% - 100.5% Oxidizer

PP9541 500 g

PP9541 2.5 kg

### **Potassium Permanganate, 0.1 N (N/10)**

$M = 5 N$  3.1606 grams  $KMnO_4$  dissolved per Liter in freshly boiled distilled water.

PP1987 1 L

PP1987 3.8 L

### **Potassium Permanganate, 0.5 N (N/2)**

$M = 5 N$  15.8030 grams  $KMnO_4$  dissolved per Liter in freshly boiled distilled water.

PP1986 1 L

PP1986 3.8 L

### **Potassium Permanganate, 1.0 N Aqueous**

$M = 5 N$  31.606 grams  $KMnO_4$  dissolved per Liter in freshly boiled distilled water.

PP1988 1 L

PP1988 3.8 L

### **Potassium Phosphate, Dibasic, Anhydrous, A.C.S.**

$K_2HPO_4$  F.W. 174.18 CAS 7758-11-4 Assay: 98.0% min.

PP9552 500 g

PP9552 2.5 kg

### **Potassium Phosphate, Monobasic, A.C.S.**

$KH_2PO_4$  F.W. 136.09 CAS 7778-77-0 Assay: 98.0 - 100.5% dried basis @ 105 C

PP9550 500 g

PP9550 2.5 kg

### **Potassium Sodium Tartrate, Tetrahydrate, A.C.S.**

$C_4H_4KNaO_6 \cdot 4H_2O$  F.W. 282.22 CAS 6381-59-5 Assay: 99.0 - 102.0% [Rochelle Salt]

PS9565 500 g

PS9565 2.5 kg

### **Potassium Sulfate, Crystal, A.C.S.**

$K_2SO_4$  F.W. 174.26 CAS 7778-80-5 Assay: 99.0% min.

PS9560 500 g

PS9560 2.5 kg

### **Potassium Thiocyanate, A.C.S.**

*KSCN F.W. 97.18 CAS 333-20-0 Assay: 98.5% min [Potassium Sulfocyanate]*

PT9699 500 g

PT9699 2.5 kg

### **Potassium Thiocyanate, 0.1 N**

*About 10 g per L, 0.1000 N ± 0.0005 N(0.0995 – 0.1005 N)*

PT1699 1 L

PT1699 3.8 L

### **Propylene Glycol, A.C.S.**

*C<sub>3</sub>H<sub>8</sub>O<sub>2</sub> F.W. 76.10 d 1.036 CAS 57-55-6 Assay: 99.5% min. [1,2-Propanediol]*

PG9315 1 L

PG9315 3.8 L

PG9315 4 x 3.8 L

### **Sand Equivalent Stock Solution**

*CalTrans Test 217 (November 1999) Method of Test for Sand Equivalent*

*OPW Catalog Number 6810-0090-3*

*Calcium Chloride Stock Solution with Glycerol.*

SE6500 500 mL

SE6500 1 L

SE6500 3.8 L

SE6500 4 x 3.8 L

### **Ψ Selenium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Selenium shot in 2% Nitric Acid; Verified NIST SRM 3149*

SE7797 100 mL

SE7797 500 mL

### **Silicon Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Ammonium Hexafluorosilicate in water; Verified NIST SRM 3150*

SI7798 100 mL

SI7798 500 mL

### **Ψ Silver Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Silver Nitrate in 2% Nitric Acid; Verified NIST SRM 3151 Light Sensitive.*

AG7799 100 mL

AG7799 500 mL

**Silver Nitrate, 0.0100 N (N/100)**

*0.0100 N ± 0.0005 N (0.0095 - 0.0105 N)*

SN1111 1 L

SN1111 3.8 L

**Silver Nitrate, 0.0141 N**

*0.0141 N ± 0.0005 N (1.00 mL = 0.50 mg Cl) For Chloride APHA 4500-Cl B. Argentometric Method.*

SN1110 500 mL

SN1110 1 L

SN1110 3.8 L

**Silver Nitrate, 0.1000 N (N/10)**

*0.1000 N ± 0.0005 N (0.0995 - 0.1005 N) NIST Traceable to SRM Potassium Chloride, 999b*

SN1710 500 mL

SN1710 1 L

SN1710 3.8 L

**Silver Nitrate, 1.000 N**

*1.000 N ± 0.005 N (0.995 - 1.005 N) Aqueous Solution*

SN1099 500 mL

SN1099 1 L

SN1099 3.8 L

**Ψ Silver Nitrate, Crystal, A.C.S.**

*AgNO<sub>3</sub> F.W. 169.87 CAS 7761-88-8 Assay: 99.0% min. Light Sensitive. Oxidizer*

SN9517 100 g

SN9517 500 g

**Ψ SO<sub>2</sub> Indicator for Aeration-Oxidation Method**

*Methyl Red and Methylene Blue in 50% Ethanol; pH 4.2 (mauve) to pH 6.3 (green); 5.1 gray*

SI4321 500 mL

SI4321 1 L

**Ψ Sodium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Sodium Carbonate in 2% Nitric Acid; Verified NIST SRM 3152*

NA7781 100 mL

NA7781 500 mL

### **Sodium Acetate, Trihydrate, A.C.S.**

$\text{NaC}_2\text{H}_3\text{O}_2 \cdot 3\text{H}_2\text{O}$  F.W. 136.08 CAS 6131-90-4 Assay: 99.0 - 101.0%

SA9570 500 g

SA9570 2.5 kg

### **Sodium Acetate, Anhydrous, A.C.S.**

$\text{NaC}_2\text{H}_3\text{O}_2$  F.W. 82.03 CAS 127-09-3 Assay: 99.0% min.

SA9571 500 g

SA9571 2.5 kg

### **Sodium Bicarbonate, Powder, USP/NF Grade**

$\text{NaHCO}_3$  F.W. 84.01 CAS 144-55-8 Assay: 99.0 - 100.5% [Baking Soda]

SB9377 500g \$18.55

SB9377 2.5 Kg \$49.45

### **Sodium Bisulfite, Granular, A.C.S.**

$\text{NaHSO}_3$  F.W. 104.06 CAS 7631-90-5 Assay: (SO<sub>2</sub>) 58.5% min. This product consists of varying proportions of Sodium Bisulfite,  $\text{NaHSO}_3$  and Sodium Metabisulfite,  $\text{Na}_2\text{S}_2\text{O}_5$ .

SB9387 500 g

SB9387 2.5 kg

### **Sodium Borate, Decahydrate, A.C.S.**

$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$  F.W. 381.37 CAS 1303-96-4 Assay: 99.5 - 105.0%

[Borax; Sodium Tetraborate] pH of a 0.01 M solution @ 25°C is in the range 9.15 to 9.20

SB9598 500 g

SB9598 2.5 kg

### **Sodium Carbonate, Anhydrous, A.C.S.**

$\text{Na}_2\text{CO}_3$  F.W. 105.99 CAS 497-19-8 Assay: 99.5% min. Hygroscopic

SA9580 500 g

SA9580 2.5 kg

### **Sodium Carbonate, Technical Grade**

$\text{Na}_2\text{CO}_3$  F.W. 105.99 CAS 497-19-8

Hygroscopic

SC9427 500 g

SC9427 2.5 kg

## **Sodium Carbonate, 20% (w/v) Solution**

*For Total Phenolics in wine and must by the Colorimetric Method.*

SC6820            1 L  
SC6820            3.8 L

## **Sodium Chloride, Crystal, A.C.S.**

*NaCl F.W. 58.44 CAS 7647-14-5 Assay: 99.0% min. [Salt]*

SC9590            500 g  
SC9590            2.5 kg

## **Sodium Chloride, 1% (w/v) Solution**

SC6819            3.8 L  
SC6819            4 x 3.8 L  
SC6819            20 L

## **Ψ Sodium Chromate, Tetrahydrate, A.C.S.**

*Na<sub>2</sub>CrO<sub>4</sub>·4H<sub>2</sub>O F.W. 234.06 CAS 10034-82-9 Assay: 99.0% min. [Disodium Chromate]*

SC9592            500 g  
SC9592            2.5 kg

## **Sodium Chromate, 4.2% (w/v) Indicator Solution**

SC4513            500 mL  
SC4513            1 L

## **Ψ Sodium Dichromate, Dihydrate, A.C.S.**

*Na<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>·2H<sub>2</sub>O F.W. 298.00 CAS 7789-12-0 Assay: 99.5% min. [Sodium Bichromate]*

SD9593            500 g  
SD9593            2.5 kg

## **Sodium Hydroxide, 0.01 N (N/100)**

*0.0100 N ± 0.0005 N (0.0095 - 0.0105 N) Aqueous Solution*

SH1130            1 L  
SH1130            3.8 L  
SH1130            4 x 3.8 L  
SH1130            20 L



## **Sodium Hydroxide, 0.0167 N**

*For Volatile Acidity in wine.*

<b>SH1167</b>	<b>1 L</b>
<b>SH1167</b>	<b>3.8 L</b>
<b>SH1167</b>	<b>4 x 3.8 L</b>

## **Sodium Hydroxide, 0.02 N (N/50)**

*(N/50) 0.0200 N ± 0.0002 N (0.0198 - 0.0202 N) Aqueous Solution*

*Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k*

<b>SH1140</b>	<b>1 L</b>
<b>SH1140</b>	<b>3.8 L</b>
<b>SH1140</b>	<b>4 x 3.8 L</b>
<b>SH1140</b>	<b>20 L</b>

## **Sodium Hydroxide, 0.05 N (N/20)**

*(N/20) 0.0500 N ± 0.0005 N (0.0495 - 0.0505 N) Aqueous Solution*

*Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k*

<b>SH1150</b>	<b>1 L</b>
<b>SH1150</b>	<b>3.8 L</b>
<b>SH1150</b>	<b>20 L</b>

## **Sodium Hydroxide, 0.0667 N**

*For Total Titratable Acidity in wine. AOAC 962.12 Aqueous Solution*

<b>SH1667</b>	<b>1 L</b>
<b>SH1667</b>	<b>3.8 L</b>
<b>SH1667</b>	<b>4 x 3.8 L</b>

## **Sodium Hydroxide, 0.10 N (N/10)**

*(N/10) 0.1000 N ± 0.0005 N (0.0995 - 0.1005 N) Aqueous Solution*

<b>SH1160</b>	<b>1 L</b>
<b>SH1160</b>	<b>3.8 L</b>
<b>SH1160</b>	<b>10 L</b>
<b>SH1160</b>	<b>4 x 3.8 L</b>
<b>SH1160</b>	<b>20 L</b>

### **Sodium Hydroxide, 0.133 N**

5.32 g of Sodium Hydroxide, Pellets, A.C.S. per Liter of solution.  
Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k

SH1133 1 L  
SH1133 3.8 L  
SH1133 4 x 3.8 L

### **Sodium Hydroxide, 0.2 N (N/5)**

8 grams Sodium Hydroxide per Liter of solution; 0.2000 N  $\pm$  0.0005 N.

SH1155 1 L  
SH1155 3.8 L  
SH1155 4 x 3.8 L

### **Ψ Sodium Hydroxide, 0.25 N (N/4)**

(N/4) 0.2500 N  $\pm$  0.0005 N (0.2495 - 0.2505 N) Aqueous  
Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k

SH1170 1 L  
SH1170 3.8 L  
SH1170 4 x 3.8 L  
SH1170 20 L

### **Ψ Sodium Hydroxide, 0.5 N (N/2)**

(N/2) 0.500 N  $\pm$  0.002 N (0.498 - 0.502 N) Aqueous Solution  
Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k

SH1089 1 L  
SH1089 3.8 L  
SH1089 4 x 3.8 L  
SH1089 20 L

### **Ψ Sodium Hydroxide, 1.0 N**

1.000 N  $\pm$  0.005 N (0.995 - 1.005 N) Aqueous Solution  
Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k

SH1180 1 L  
SH1180 3.8 L  
SH1180 4 x 3.8 L  
SH1180 20 L

### **Ψ Sodium Hydroxide, 3.0 N**

*3.00 N ± 0.05 N (2.95 - 3.05 N) Aqueous Solution*

*Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k*

<b>SH1185</b>	<b>1 L</b>
<b>SH1185</b>	<b>3.8 L</b>
<b>SH1185</b>	<b>4 x 3.8 L</b>
<b>SH1185</b>	<b>20 L</b>

### **Ψ Sodium Hydroxide, 5.0 N**

*5.00 N ± 0.05 N (4.95 - 5.05 N) Aqueous Solution*

*Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k*

<b>SH1190</b>	<b>1 L</b>
<b>SH1190</b>	<b>3.8 L</b>
<b>SH1190</b>	<b>4 x 3.8 L</b>
<b>SH1190</b>	<b>20 L</b>

### **Ψ Sodium Hydroxide, 6.0 N**

*6.00 N ± 0.05 N (5.95 - 6.05 N) Aqueous Solution*

*Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k*

<b>SH1200</b>	<b>1 L</b>
<b>SH1200</b>	<b>3.8 L</b>
<b>SH1200</b>	<b>4 x 3.8 L</b>
<b>SH1200</b>	<b>20 L</b>

### **Ψ Sodium Hydroxide, 10.0 N**

*10.00 N ± 0.05 N (9.95 - 10.05 N) Aqueous Solution*

*Standardized with Potassium Hydrogen Phthalate, NIST SRM 84k*

<b>SH1210</b>	<b>1 L</b>
<b>SH1210</b>	<b>3.8 L</b>
<b>SH1210</b>	<b>4 x 3.8 L</b>
<b>SH1210</b>	<b>20 L</b>

### **Ψ Sodium Hydroxide, 2% (w/v)**

*20 grams Sodium Hydroxide per Liter of solution. ~ 0.5 Molar Aqueous Solution*

<b>SH6585</b>	<b>1 L</b>
<b>SH6585</b>	<b>3.8 L</b>
<b>SH6585</b>	<b>4 x 3.8 L</b>
<b>SH6585</b>	<b>20 L</b>

### **Ψ Sodium Hydroxide, 3% (w/v)**

*[CalTrans Test 213] Aqueous Solution*

*30 grams Sodium Hydroxide per Liter of solution ~ 0.75 Molar*

*(Method of Test for Organic Impurities in Concrete Sand)*

**SH6117            1 L**

**SH6117            3.8 L**

### **Ψ Sodium Hydroxide, 5% (w/v)**

*50 grams Sodium Hydroxide per Liter of solution. ~ 1.25 Molar Aqueous Solution*

**SH6530            1 L**

**SH6530            3.8 L**

**SH6530            4 x 3.8 L**

**SH6530            20 L**

### **Ψ Sodium Hydroxide, 10% (w/v)**

*100 grams Sodium Hydroxide per liter of solution. ~ 2.5 Molar*

**SH6595            1 L**

**SH6595            3.8 L**

**SH6595            20 L**

### **Ψ Sodium Hydroxide, 17.5% (w/v)**

*175 grams of Sodium Hydroxide per Liter of solution.*

*4.375 N ± 0.0438 N (± 1% by weight)*

**SH6550            1 L**

**SH6550            3.8 L**

**SH6550            10 L**

**SH6550            20 L**

### **Ψ Sodium Hydroxide, 20% (w/v)**

*200 g Sodium Hydroxide per Liter of solution. 5 N*

**SH6720            1 L**

**SH6720            3.8 L**

**SH6720            4 x 3.8 L**

## **Ψ Sodium Hydroxide, 30% (w/w), Technical Grade**

9.958 Molar (Normal)  $d= 1.3277$  g/mL

**SH6530 3.8 L**

**SH6530 4 x 3.8 L**

**SH6530 20 L**

## **Ψ Sodium Hydroxide, 40% (w/v)**

400 g Sodium Hydroxide per Liter of solution. For Kjeldahl Nitrogen. 10 N

**SH6170 3.8 L**

**SH6170 4 x 3.8 L**

**SH6170 20 L**

## **Ψ Sodium Hydroxide, 50% (w/v)**

500 g Sodium Hydroxide per Liter of solution. 12.5 N

**SH6180 3.8 L**

**SH6180 4 x 3.8 L**

**SH6180 20 L**

## **Ψ Sodium Hydroxide, 50% (w/w) Technical Grade**

Approximately 19 N, ~763 g Sodium Hydroxide per Liter (76.3% w/v)  $d=1.53$  g/mL  
Difference between 50% (w/w) and 50% (w/v) is 263 grams/L of Sodium Hydroxide!

**SH9150 1 L**

**SH9150 3.8 L**

**SH9150 4 x 3.8 L**

## **Ψ Sodium Hydroxide, Pellets, A.C.S.**

NaOH F.W. 40.00 CAS 1310-73-2 Assay: 97.0% min. [Caustic Soda] Corrosive

**SH9595 500 g**

**SH9595 2.5 kg**

## **Ψ Sodium Hydroxide, Beads, Technical Grade**

NaOH F.W. 40.00 CAS 1310-73-2 Assay: 97.0% min. [Caustic Soda] Corrosive

**SH9445 500 g**

**SH9445 2.5 kg**

**SH9445 12 kg**

## **Ψ Sodium Hypochlorite Solution, 5% Available Chlorine**

*NaOCl F.W. 74.44 d 1.097 CAS 7681-52-9 contains ~ 2.5% NaOH*

**SH9438 1 L**

**SH9438 3.8 L**

## **Sodium Phosphate, Dibasic, Anhydrous, A.C.S.**

*Na<sub>2</sub>HPO<sub>4</sub> F.W. 141.96 CAS 7558-79-4 Assay: 99.0% min.*

*[Disodium Hydrogen Phosphate]*

**SP9515 500 g**

**SP9515 2.5 kg**

## **Sodium Salicylate, Crystal, Reagent Grade**

*C<sub>7</sub>H<sub>5</sub>NaO<sub>3</sub> F.W. 160.10 CAS 54-21-7 Assay: 99.0% min. [2-Hydroxybenzoic Acid*

*Sodium Salt]*

**SS9482 500 g**

**SS9482 2.5 kg**

## **Sodium Sulfate, Anhydrous, A.C.S.**

*Na<sub>2</sub>SO<sub>4</sub> F.W. 142.04 CAS 7757-82-6 Assay: 99.0% min. Hygroscopic*

**SS9525 500 g**

**SS9525 2.5 kg**

## **Sodium Sulfate, Anhydrous, Technical Grade**

*Na<sub>2</sub>SO<sub>4</sub> F.W. 142.04 CAS 7757-82-6 Assay: 99.0% min. Hygroscopic*

**SS9425 500 g**

**SS9425 2.5 kg**

## **Sodium Sulfate, 2% (w/v) Aqueous**

*Can Liner Rater Electrolyte 470*

**SS6821 3.8 L**

**SS6821 4 x 3.8 L**

**SS6821 20 L**

## **Sodium Sulfate, 2% (w/v) Dry Powder in HDPE Container**

*Just add 5 gallons of Distilled Water! Why pay freight for water?*

**SS6824                    20 L**

## **Sodium Sulfate, Saturated, Solution**

*[CalTrans Test 214]*

*281 g Sodium Sulfate per Liter at 20°C (Method of Test for the Soundness of Aggregates)*

**SS6136                    1 L**

**SS6136                    3.8 L**

## **Sodium Sulfite, Anhydrous, A.C.S.**

*Na<sub>2</sub>SO<sub>3</sub> F.W. 126.04 CAS 7757-83-7 Assay: 98.0% min. Moisture Sensitive*

**SS9535                    500 g**

**SS9535                    2.5 kg**

## **Sodium Sulfite, Technical Grade**

*Na<sub>2</sub>SO<sub>3</sub> F.W. 126.04 CAS 7757-83-7 Assay: 98.0% min. Moisture Sensitive*

**SS9543                    500 g**

**SS9543                    2.5 kg**

## **Sodium Sulfite, 1.0 M**

*For de-chlorination 126.04 grams of Sodium Sulfite, Anhydrous, A.C.S. per Liter of solution.*

**SS1911                    1 L**

**SS1911                    3.8 L**

## **Sodium Thiosulfate, 0.01 N (N/100)**

*0.0100 N ± 0.0005 N (0.0095 - 0.0105 N)*

*Standardized with Potassium Dichromate, NIST SRM 136e*

**ST1220                    500 mL**

**ST1220                    1 L**

**ST1220                    3.8 L**

## **Sodium Thiosulfate, 0.025 N (N/40)**

*0.0250 N ± 0.0005 N (0.0245 - 0.0255 N)*

*Standardized with Potassium Dichromate, NIST SRM 136e*

ST1230 500 mL  
ST1230 1 L  
ST1230 3.8 L

### **Sodium Thiosulfate, 0.0375 N**

$0.0375 N \pm 0.0005 N (0.0370 - 0.0380 N)$

*Standardized with Potassium Dichromate, NIST SRM 136e*

ST1240 500 mL  
ST1240 1 L  
ST1240 3.8 L

### **Sodium Thiosulfate, 0.1 N (N/10)**

$0.1000 N \pm 0.0005 N (0.0995 - 0.1005 N)$

*Standardized with Potassium Dichromate, NIST SRM 136e*

ST1250 500 mL  
ST1250 1 L  
ST1250 3.8 L  
ST1250 4 x 3.8 L

### **Sodium Thiosulfate, 1.0 N**

$1.000 N \pm 0.005 N (0.995 - 1.005 N)$

*Standardized with Potassium Dichromate, NIST SRM 136e*

ST1260 500 mL  
ST1260 1 L  
ST1260 3.8 L

### **Sodium Thiosulfate, Pentahydrate, A.C.S.**

$Na_2S_2O_3 \cdot 5H_2O$  F.W. 248.19 CAS 10102-17-7 Assay: 99.5 - 101.0%

[Sodium Hyposulfite]

ST9545 500 g  
ST9545 2.5 kg  
ST9545 5 kg  
ST9545 12 kg

### **Sodium Thiosulfate, Pentahydrate, Photo Grade**

$Na_2S_2O_3 \cdot 5H_2O$  F.W. 248.19 CAS 10102-17-7 Assay: 99.5 - 101.0%

[Sodium Hyposulfite]

ST9545 500 g



ST9545 2.5 kg  
ST9545 5 kg  
ST9545 12 kg

### **Sorbic Acid Standard, 250 mg/L (ppm)**

*Potassium Sorbate in Ethanol, 10% (v/v) approximately.*

SS7123 100 mL  
SS7123 500 mL

### **Starch, Soluble, Powder, A.C.S.**

$(C_6H_{10}O_5)_n$  CAS 9005-84-9 *Suitable for Iodometry.*

ST9585 500 g  
ST9585 2.5 kg

### **Starch Indicator, 1% (w/v) Aqueous**

*Contains a proprietary preservative!*

SI4990 500 mL  
SI4990 1 L  
SI4990 3.8 L

### **Ψ Strontium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Strontium Carbonate in 2% Nitric Acid; Verified NIST SRM 3153*

SR7782 100 mL  
SR7782 500 mL

### **Sulfuric Acid, 0.02 N (N/50)**

$0.0200 N \pm 0.0005 N (0.0195 - 0.0205 N)$

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1270 1 L  
SA1270 3.8 L  
SA1270 4 x 3.8 L

### **Sulfuric Acid, 0.04 N (N/25)**

$0.0400 N \pm 0.0005 N (0.0395 - 0.0405 N)$  *For APHA Nitrogen as Ammonia (ASTM D-3327).*

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1275 1 L

**SA1275 3.8 L**  
**SA1275 4 x 3.8 L**

### **Sulfuric Acid, 0.1 N (N/10)**

*0.1000 N ± 0.0005 N (0.0995 - 0.1005 N)*

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

**SA1290 1 L**  
**SA1290 3.8 L**  
**SA1290 4 x 3.8 L**

### **Sulfuric Acid, 0.2 N (N/5)**

*0.2000 N ± 0.0005 N (0.1995 - 0.2005 N)*

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

**SA1300 1 L**  
**SA1300 3.8 L**  
**SA1300 4 x 3.8 L**

### **Sulfuric Acid, 0.5 N (N/2)**

*0.5000 N ± 0.0005 N (0.4995 - 0.5005 N)*

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

**SA1310 1 L**  
**SA1310 3.8 L**  
**SA1310 4 x 3.8 L**

### **Ψ Sulfuric Acid, 1.0 N**

*1.000 N ± 0.005 N (0.995 - 1.005 N)*

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

**SA1320 1 L**  
**SA1320 3.8 L**  
**SA1320 4 x 3.8 L**

### **Ψ Sulfuric Acid, 2.0 N**

*2.000 N ± 0.005 N (1.995 - 2.005 N)*

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1330 1 L  
SA1330 3.8 L  
SA1330 4 x 3.8 L

### **Ψ Sulfuric Acid, 5.0 N**

$5.000 N \pm 0.005 N (4.995 - 5.005 N)$

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1340 1 L  
SA1340 3.8 L  
SA1340 4 x 3.8 L

### **Ψ Sulfuric Acid, 5.25 N**

$5.250 \pm 0.005 N (5.245 - 5.255 N)$

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1350 1 L  
SA1350 3.8 L  
SA1350 4 x 3.8 L

### **Ψ Sulfuric Acid, 10.0 N**

$10.00 N \pm 0.05 N (9.95 - 10.05 N)$

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1360 1 L  
SA1360 3.8 L  
SA1360 4 x 3.8 L

### **Ψ Sulfuric Acid, 19.2 N**

$19.20 N \pm 0.05 N (19.15 - 19.25 N)$

*Standardized with Sodium Hydroxide that has been standardized with Potassium Hydrogen Phthalate*

SA1370 1 L  
SA1370 3.8 L  
SA1370 4 x 3.8 L

### **Ψ Sulfuric Acid, 10% (w/w)**

$1.087 M = 2.174 N \quad d = 1.0661 \text{ g/mL}$

SA6610 1 L

SA6610 3.8 L

### **Ψ Sulfuric Acid, 20% (v/v), [1 + 4]**

*M = 2 N This is about 7.2 N and d=1.655 g/mL*

SA6489 1 L  
SA6489 3.8 L  
SA6489 4 x3.8 L  
SA6489 10 L  
SA6489 20 L

### **Ψ Sulfuric Acid, 25% (v/v), [1 + 3]**

*M = N This is about 9 N and is equivalent to Gold Coast Solution 4.*

GC6284 1 L  
GC6284 3.8 L  
GC6284 4 x3.8 L  
GC6284 10 L  
GC6284 20 L

### **Ψ Sulfuric Acid, 18% (w/w)**

*2.064 Molar = 4.128 N d= 1.1245 g/mL*

SA6813 3.8 L  
SA6813 4 x 3.8 L

### **Ψ Sulfuric Acid, 30% (w/w)**

*3.729 M = 7.458 N d= 1.2191 g/mL*

SA6482 1 L  
SA6482 3.8 L  
SA6482 4 x 3.8 L

### **Ψ Sulfuric Acid, 36% (w/w) Technical Grade**

*4.656 M = 9.312 N d= 1.2685 g/mL*

SA9436 1 L  
SA9436 3.8 L  
SA9436 4 x 3.8 L

### **Ψ Sulfuric Acid, 40% (w/w)**

*5.313 M = 10.626 N d= 1.3028 g/mL*

SA6488 1 L

SA6488 3.8 L  
SA6488 4 x 3.8 L

### **Ψ Sulfuric Acid, 50% (w/w)**

$7.113 M = 14.226 N$   $d = 1.3952 \text{ g/mL}$

SA6483 1 L  
SA6483 3.8 L  
SA6483 4 x 3.8 L

### **Ψ Sulfuric Acid, 50% (v/v) [1+1]**

$9 M = 18 N$   $d = 1.4931 \text{ g/mL}$

SA6677 1 L  
SA6677 3.8 L  
SA6677 4 x 3.8 L

### **Ψ Sulfuric Acid, A.C.S.**

$H_2SO_4$  F.W. 98.08  $d = 1.840 \text{ g/mL}$  CAS 7664-93-9 Assay: 95.0 - 98.0% [Oil of Vitriol]  
 $M = 2 N$ ; concentrated Sulfuric Acid is about 36 N. Corrosive

SA9090 500 mL  
SA9090 1 L  
SA9090 2.5 L  
SA9090 3.8 L  
SA9090 4 x 3.8 L

### **Ψ Sulfuric Acid, 66° Baume**

$H_2SO_4$  F.W. 98.08  $d = 1.820 \text{ g/mL}$  CAS 7664-93-9 Assay: 91.0 - 95.0% [Oil of Vitriol]  
About 93% (w/w) Corrosive

SA9233 1 L  
SA9233 3.8 L  
SA9233 4 x 3.8 L

### **Thorium Nitrate, 0.0005 Molar Aqueous**

$Th(NO_3)_4 \cdot 4H_2O$  F.W. 552.12 CAS 13470-07-0 For Fluoride and Phosphonates by titration.

TN1305 1 L  
TN1305 3.8 L

### **Thorium Nitrate, 0.001 Molar Aqueous**

$Th(NO_3)_4 \cdot 4H_2O$  F.W. 552.12 CAS 13470-07-0 For Fluoride and Phosphonates by titration.

**TN1310** 1 L  
**TN1310** 3.8 L

### **Thorium Nitrate, 0.003 Molar Aqueous**

*Th(NO<sub>3</sub>)<sub>4</sub>·4H<sub>2</sub>O F.W. 552.12 CAS 13470-07-0 For Fluoride and Phosphonates by titration.*

**TN1310** 1 L  
**TN1310** 3.8 L

### **Thorium Nitrate, 0.1 Molar Aqueous**

*Th(NO<sub>3</sub>)<sub>4</sub>·4H<sub>2</sub>O F.W. 552.12 CAS 13470-07-0 For Fluoride and Phosphonates by titration.*

**TN1432** 1 L  
**TN1432** 3.8 L

### **Ψ Tin Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Tin shot in 20% Hydrochloric Acid; Verified NIST SRM 3161*

**SN7783** 100 mL  
**SN7783** 500 mL

### **Total Ionic Strength Adjustment Buffer (TISAB II)**

*For Fluoride Ion-Specific Electrode (ISE) contains 1, 2-Cyclohexylenediaminetetraacetic Acid (CDTA).*

**TI2140** 1 L  
**TI2140** 3.8 L  
**TI2140** 20 L

### **Triton™ X-100 Surfactant**

*Octylphenol Ethoxylate a nonionic surfactant with excellent wetting and dispersant properties.*

*Sp. Gr. 1.065 Viscosity (Brookfield) 240 cS Color (APHA) 100 max*

**TX9442** 500 mL  
**TX9442** 1 L  
**TX9442** 3.8 L

### **Tungsten Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Sodium Tungstate in water; Verified NIST SRM 3163*

**W7784** 100 mL  
**W7784** 500 mL

## **Urea, A.C.S.**

$CH_4N_2O$  F.W. 60.06 CAS 57-13-6 Assay: 99.0 - 100.5% [Carbamide; Carbonyl Diamide]

**UR9409** 500 g

**UR9409** 2.5 kg

## **Water, Type III ASTM D-1193**

Resistivity: 4.0 M $\Omega$ -cm; Total Organic Carbon (TOC): 200 (ppb) max.

Silica: 500 (ppb) max.; Chlorides: 10 (ppb) max.; Sodium: 10 (ppb) max.

**DI7063** 1 L

**DI7063** 3.8 L

**DI7063** 20 L

## **Water, Type II ASTM D-1193**

Resistivity: 1.0 M $\Omega$ -cm; Total Organic Carbon (TOC): 50 (ppb) max.

Silica: 3 ppb max.; Chlorides: 5 ppb max.; Sodium: 5(ppb) max. From Distilled Water.

**DI7062** 1 L

**DI7062** 3.8 L

**DI7062** 20 L

## **Water, Type I ASTM D-1193**

Resistivity: 18.0 M $\Omega$ -cm; Total Organic Carbon (TOC): 50 (ppb) max.

Silica: 3 ppb max.; Chlorides: 1 ppb max.; Sodium: 1(ppb) max.

**DI7061** 1 L

**DI7061** 3.8 L

**DI7061** 20 L

## **Ψ Xylenes, Laboratory Grade**

$C_8H_{10}$  F.W. 106.17 d 0.860 g/mL CAS 1330-20-7 [Dimethylbenzenes; Xylol]

This reagent is a mixture of ortho-, meta-, and para- isomers and may contain ethylbenzene.

**XY9295** 3.8 L

**XY9295** 4 x 3.8 L

## **Ψ Zinc Atomic Absorption Standard, 1,000 mg/L (ppm)**

Zinc in 2% Nitric Acid; Verified NIST SRM 3168

**ZN7784** 100 mL

**ZN7784** 500 mL

### **Ψ Zinc Metal, Granular, 20 Mesh, A.C.S.**

*Zn* A.W. 65.39 CAS 7440-66-6

**ZN9015 100 g**

**ZN9015 500 g**

**ZN9015 2.5 kg**

### **Zinc Sulfate, Heptahydrate, A.C.S.**

*ZnSO<sub>4</sub>-7H<sub>2</sub>O* F.W. 287.56 CAS 7446-20-0 Assay: 99.0 - 103.0% Hygroscopic

**ZS9587 500 g**

**ZS9587 2.5 kg**

### **Ψ Zirconium Atomic Absorption Standard, 1,000 mg/L (ppm)**

*Zirconyl Nitrate in 10% Nitric Acid; Verified NIST SRM 3169*

**ZR7786 100 mL**

**ZR7786 500 mL**



**Legend:**

**A.C.S. - American Chemical Society**

**AOAC - Association of Official Analytical Chemists**

**APHA - American Public Health Association**

**ASTM - American Society for Testing and Materials**

**BOD - Biochemical Oxygen Demand**

**CAS - Chemical Abstract Service Registry Number**

**°C - Degrees Centigrade or Celsius ( $1.8 \times ^\circ\text{F} + 32$ )**

**COD - Chemical Oxygen Demand**

**d - Density, grams per milliliter**

**DEA - Drug Enforcement Agency**

**EDTA - Ethylenediaminetetraacetic Acid; Ethylenedinitrilotetraacetic Acid**

**F.W. - Formula Weight**

**g – grams**

**HDPE – High Density PolyEthylene**

**kg - kilograms (1000 grams = 2.2 pounds)**

**l - Levorotatory ( rotates linearly polarized light to the left or in a counter-clockwise direction)**

**L - Liter (1000 mL = 1000 cubic centimeters ~ 1.0568 quarts)**

**µS/cm - MicroSiemens per centimeter or micromhos per centimeter (unit of conductivity)**

**m - Molal or gram-moles of solute per kg of water**

**M - Molar or gram-molecular weight of solute per liter of solution**

**N - Normal or gram-equivalent weight of solute per liter of solution**

**NIST - National Institute of Standards and Technology (formerly National Bureau of Standards)**

**ppb - parts per billion =  $\mu\text{g}$  per kg ( $\mu\text{g/L}$  approximately)**

**ppm - parts per million = mg per kg (mg/L approximately).**

**SRM - Standard Reference Material.**

**TOC - Total Organic Carbon**

**USP - United States Pharmacopeia**

**v/v - volume solute per volume of solution**

**w/v - weight of solute per volume of solution**

**w/w - weight of solute per weight of solution**