

Solutions for Environmental Applications

RICCA CHEMICAL COMPANY offers an extensive breadth of line for environmental testing products. Our products are manufactured according to the latest APHA Standard Methods and EPA specifications. In addition, we offer the tightest specifications and best service in the industry.



RICCA is a reliable source for standards and solutions for your refining needs.

- ISO 9001:2008 certified, cGMP registered, and DEA licensed
- Standardized and certified traceable to NIST Standard Reference Material as appropriate
- Round robin tests are performed between plants as an additional layer of quality assurance consistency
- Unique lot numbers and expiration dates printed on each label
- Wide range of packaging options available in a variety of sizes
- Complete range of pH Buffers available from a single source and accurate to \pm at 25°C (\pm 0.002 for most Precision Buffers)
- Detailed Certificates of Analysis available on all products

Source with Ricca and you can expect...

- Multiple facilities nationwide.
- Products are assigned a unique lot number at manufacture.
- MSDSs and CofAs available on our website.
- Ample supply of raw materials and finished goods so we can quickly ship your items.
- Strategic Sourcing Partners that provide us with quality materials at competitive prices to ensure our customers receive quality solutions at competitive prices.
- The tightest specifications available in the industry with low lot-to-lot variance.
- The ability to create custom solutions to meet your every need.

Environmental Testing Solutions

- Large product offering for use in water and solid waste analysis
- Reagents for Water Hardness testing, Residual Chlorine, Total Organic Carbon (TOC), Biochemical Oxygen Demand, and Dissolved Oxygen analysis
- Environmental Testing Solutions for ORP, Hardness, Nitrogen (Ammonia/Nitrite/Nitrate), Phosphate and Chloride
- AAA and ICP Standards are available in various concentrations and matrices
- Reference calibration buffers with consistent specifications across all pH ranges



RIGHT • READY • RICCA

EPA 110.1 & 110.2 Color

223016	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 500
223000216	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 2
223000316	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 3
223000516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 5
223001516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 15
223002516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 25
2230516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 10
13622615	Sodium Hydroxide, 10.0 Normal

EPA 130.1 & 130.2 Hardness

623516	Ammonia-Ammonium Chloride Buffer TS
6421	Ammonium Hydroxide, 1.00 Normal
178016	Calcium Chloride Standard, 1 mL = 1 mg CaCO ₃ (0.4 mg Ca), 1000 ppm CaCO ₃ (400 ppm Ca), 0.0100 M Ca ²⁺ , 0.0200 N Ca ²⁺
27001	EDTA Titrant, 0.0100 Molar (M/100)
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution
521216	Monomagnesium EDTA, 0.2 g/L, for Hardness
92001	Water Hardness Buffer, with Magnesium EDTA
930016	Water Hardness Indicator, 0.5% (w/v) Eriochrome Black T in 2-Methoxyethanol

EPA 200.7, 200.8, 200.9 Trace Elements/Multi-Elements

53505PT	Nitric Acid, 50% (v/v) Aqueous Solution (1 + 1)
91511	Water, ACS Reagent Grade, ASTM Type I, ASTM Type II Packaged in glass containers
RICVSTD7500	Initial Calibration Verification Standard 7, CLP
RLPC1500	Lab Performance Check, Method 200.7
PAU1KH500	Gold ICP Standard, 1 mL = 1 mg Au (1,000 ppm Au) Au in 3% HCl

EPA 245.1 & 245.5 Mercury

63601	Potassium Permanganate, 5% (w/v) Aqueous Solution, Mercury Free
64001	Potassium Permanganate, 0.100 Normal (N/10), 0.0200 Molar (M/50)
645016	Potassium Persulfate, 5% (w/v) Aqueous Solution
719416	Sodium Chloride-Hydroxylamine Sulfate Solution, for Cold Vapor Atomic Absorption Analysis
7996532	Stannous Chloride Suspension, 10% (w/v) in 0.5 Normal Sulfuric Acid
81505	Sulfuric Acid, 10% (v/v) Aqueous Solution (1 + 9)
82801	Sulfuric Acid, 0.500 Normal (N/2)
83101	Sulfuric Acid, 2.00 Normal

EPA 305.1, 305.2 and 310.1 Acidity/Alkalinity

35951	Hydrochloric Acid, 0.0200 Normal (N/50)
36001	Hydrochloric Acid, 0.100 Normal (N/10)
71751	Sodium Carbonate, 0.0200 Normal (N/50), 1 mL = 1 mg CaCO ₃
718516	Sodium Carbonate, 0.0500 Normal (N/20), 1 mL = 2.5 mg CaCO ₃
73001	Sodium Hydroxide, 0.0200 Normal (N/50), 1 mL = 1 mg CaCO ₃
74501	Sodium Hydroxide, 1.00 Normal
82001	Sulfuric Acid, 0.0200 Normal (N/50)
82501	Sulfuric Acid, 0.100 Normal (N/10)

EPA 325.1, 325.2, & 325.3 Chloride

195016	Chloride Standard, 1 mL = 0.5 mg Cl ⁻ , 500 ppm Cl ⁻ (0.0141 Normal)
261016	Diphenylcarbazone-Bromophenol Blue Mixed Indicator, for Chloride Determination
386516	Hydroquinone, 1% (w/v) Aqueous Solution (10 g/L)
47051	Mercuric Nitrate, 0.0141 Normal, 0.00705 Molar, 1 mL = 0.5 mg Cl ⁻
471532	Mercuric Nitrate, 0.0250 Normal (N/40)
47401	Mercuric Nitrate, 0.141 Normal, 0.0705 Molar, 1 mg = 5 mL Cl ⁻
47851	Mercuric Thiocyanate Stock Solution, 4.17 g/L in Methanol
530816	Nitric Acid, 0.3% (v/v) Aqueous Solution (3 + 997)
722216	Sodium Chloride, 0.0250 Normal (N/40)
72431	Sodium Hydroxide, 1% (w/v) Aqueous Solution (10 g/L)

EPA 330.1, 330.2, 330.3, & 330.4 Chlorine Total Residual

501	Acetate Buffer, pH 4.0, for Residual Chlorine Analysis
26551	DPD Indicator Solution, for Residual Chlorine Analysis
31441	Ferrous Ammonium Sulfate, 0.00282 Normal (0.00282 Molar), 1 mL = 0.1 mg Cl ₂
39801	Iodine (Iodine-Iodide), 0.0282 Normal, 1 mL = 1 mg Cl ₂
40001	Iodine (Iodine-Iodide), 0.100 Normal (N/10)
57501	Phenylarsine Oxide (PAO) Titrant, 0.00564 Normal, Stabilized, 1 mL = 0.2 mg Cl ₂
576016	Phenylarsine Oxide (PAO) Titrant, 0.0375 Normal, Stabilized
58051	Phosphate Buffer Solution, for Chlorine Determination (DPD Methods)
587916	Potassium Biiodate, 0.100 Normal (N/10)
60601	Potassium Dichromate, 0.100 Normal (N/10), 0.0167 Molar (M/60)
62901	Potassium Iodide, 5% (w/v) Aqueous Solution, Stabilized
714016	Sodium Arsenite, 0.5% (w/v) Aqueous Solution

EPA 330.1, 330.2, 330.3, & 330.4 Chlorine Total Residual

80501	Starch Indicator, 1% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
81651	Sulfuric Acid, 20% (v/v) Aqueous Solution (1 + 4), Reagent Grade
81701	Sulfuric Acid, 25% (v/v) Aqueous Solution (1 + 3)

EPA 335.2 & 335.3 Cyanides Total

192616	Chloramine-T, 1% (w/v)
254316	Cyanide Standard, 1 mL = 1 mg CN, 1000 ppm CN
256016	p-Dimethylaminobenzalrhodanine, 0.02% (w/v) in Acetone, Indicator for Argentimetric Titrations
44701	Magnesium Chloride, 51% (w/v) Aqueous Solution
658416	Pyridine-Barbituric Acid Reagent, for Cyanide Determination
69101	Silver Nitrate, 0.0192 Normal (0.0192 Molar), 1 mL = 1 mg CN ⁻
72501	Sodium Hydroxide, 5% (w/v) Aqueous Solution (50 g/L)
83431816	Sulfuric Acid, 18.0 Normal
74501	Sodium Hydroxide, 1.00 Normal

**EPA 350.1, 350.2, 350.3, 351.1, 351.2, 351.3, 351.4, 352.1, 353.2, 353.3, Nitrogen/
Ammonia, Nitrogen, Nitrate, Nitrite**

138255HP	Acetic Acid, 25% (v/v) Aqueous Solution (1 + 3)
6261	Ammonium Chloride-EDTA Solution, for Nitrate by the Cadmium Reduction Method
10401	Borate Buffer, pH 9.5, for Ammonia and Organic Nitrogen Analysis
10651	Boric Acid, 2% (w/v) Aqueous Solution
142016	Brucine-Sulfanilic Acid Solution, for Nitrate Analysis
22331	Color Reagent, for Nitrate Determination
23171	Copper Sulfate, 2% (w/v) Aqueous Solution
25501	Digestion Reagent, with Mercury Catalyst, for Kjeldahl Nitrogen Analysis
266916	EDTA Reagent, 5% Aqueous with Sodium Hydroxide, for Ammonia Nitrogen Determination
37501	Hydrochloric Acid, 6.00 Normal
516416	Mixed Indicator Solution, Methyl Red-Methylene Blue
525016	Nessler Reagent, for Ammonia Nitrogen Determination

**EPA 350.1, 350.2, 350.3, 351.1, 351.2, 351.3, 351.4, 352.1, 353.2, 353.3, Nitrogen/
Ammonia, Nitrogen, Nitrate, Nitrite**

545016	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Ammonia (12.2 ppm NH ₃)
54551	Nitrogen Standard, 1 mL = 1 mg N, 1000 ppm N as Ammonia (1216 ppm NH ₃)
545616	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Nitrate (44.27 ppm NO ₃ ⁻)
545716	Nitrogen Standard, 1 mL = 0.1 mg N, 100 ppm N as Nitrate (442.7 ppm NO ₃ ⁻)
545932	Nitrogen Standard, 1 mL = 1 mg N, 1000 ppm N as Nitrate (4427 ppm NO ₃ ⁻)
546116	Nitrogen Standard, 1 mL = 1 mg N, 1000 ppm N as Nitrite (3285 ppm NO ₂ ⁻)
5461116	Nitrogen Standard, 1 mL = 0.1 mg N, 100 ppm N as Nitrite (328.5 ppm NO ₂ ⁻)
663832	Rochelle Salt, 20% (w/v) Aqueous Solution
72201	Sodium Chloride, 30% (w/v) Aqueous Solution
72705	Sodium Hydroxide, 20% (w/v) Aqueous Solution (200 g/L)
72741	Sodium Hydroxide, 30% (w/v) Aqueous Solution
72801	Sodium Hydroxide, 40% (w/v) Aqueous Solution, Nitrogen Free, Suitable for Kjeldahl Nitrogen Analysis
74501	Sodium Hydroxide, 1.00 Normal
74661	Sodium Hydroxide, 6.00 Normal
74705HP	Sodium Hydroxide, 10.0 Normal
747932	Sodium Hydroxide, 40% (w/v), with Sodium Iodide and EDTA
74951	Sodium Hydroxide-Thiosulfate, 50%-2.5% (w/v) Aqueous Solution, for Kjeldahl Nitrogen Analysis using Copper Catalyst
749511	Sodium Hypochlorite Solution, 2.5% (w/w) NaOCl
749816	Sodium Nitroprusside, 0.5 g/L Aqueous Solution
75181	Sodium Phenate Solution, for Ammonia Nitrogen Analysis
754016	Sodium Potassium Tartrate, 10% (w/v) Aqueous Solution, pH 5.2
755332	Salicylate / Nitroprusside Solution, EPA for Kjeldahl Nitrogen Determination
82001	Sulfuric Acid, 0.0200 Normal (N/50)
83251	Sulfuric Acid, 5.00 Normal
83631	Synthetic Seawater, ASTM D 1141 Substitute Ocean Water, without Heavy Metals
962016	Zinc Sulfate, 10% (w/v) Aqueous Solution

EPA 360.2, 410.1, 410.2, 410.3 & 410.4 Chemical Oxygen Demand/Dissolved Oxygen

5401	Alkaline-Iodide-Azide, Alsterberg Formulation, for Dissolved Oxygen (DO) Analysis
314016	Ferroun Indicator, 0.025 Molar Phenanthroline Ferrous Sulfate Complex
31501	Ferrous Ammonium Sulfate, 0.250 Normal (N/4), 0.250 Molar (M/4)
46201	Manganous Sulfate Solution, 364 g/L
576016	Phenylarsine Oxide (PAO) Titrant, 0.0375 Normal, Stabilized
586816	Potassium Acid Phthalate Standard, 1 mL = 1 mg Chemical Oxygen Demand (COD), 1000 ppm COD
60501	Potassium Dichromate, 0.0250 Normal (N/40)
60701	Potassium Dichromate, 0.250 Normal (N/4), 0.04167 Molar (M/24)
61001	Potassium Fluoride, 40% (w/v) Aqueous Solution
79251	Sodium Thiosulfate, 0.0375 Normal
80501	Starch Indicator, 1% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
83504	Sulfuric Acid-Silver Sulfate Reagent, for Chemical Oxygen Demand (COD) Analysis

EPA 365.1, 365.2 & 365.4 Phosphorous

66516	Ammonium Molybdate, 4% (w/v) Aqueous Solution
25501	Digestion Reagent, with Mercury Catalyst, for Kjeldahl Nitrogen Analysis
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
583016	Phosphate Standard, 1 mL = 0.05 mg P, 50 ppm P (153 ppm PO ₄ ³⁻)
587216	Potassium Antimonyl Tartrate, 0.2743% (w/v) Aqueous Solution (1.3715 g/500 mL)
74501	Sodium Hydroxide, 1.00 Normal
83251	Sulfuric Acid, 5.00 Normal

EPA 375.2, 375.3, 375.4, 376.1, 376.2 & 377.1 Sulfate/Sulfide/Sulfite

R0609900120	Amine-sulfuric acid stock solution, for Sulfide Determination (Methylene Blue Method)
69016	Ammonium Phosphate Solution, 400 g (NH ₄) ₂ HPO ₄ + 800 mL Water
85016	Barium Chloride, 10% (w/v) Aqueous Solution
223516	Conditioning Reagent, for Sulfate Analysis (Turbidimetric)
266516	EDTA (Disodium), 2.5% (w/v) Aqueous Solution
313016	Ferric Chloride, 100% (w/v) Aqueous Solution (100 g + 40 mL Water)

EPA 375.2, 375.3, 375.4, 376.1, 376.2 & 377.1 Sulfate/Sulfide/Sulfite

35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
37501	Hydrochloric Acid, 6.00 Normal
39751	Iodine (Iodine-Iodide), 0.0250 Normal (N/40), 1 mL = 0.4008 mg S ²⁻
490516	Methylene Blue Solution I, 0.05 mL (1 drop) = 1 mg/L Sulfide
491016	Methylene Blue Solution II, 0.05 mL (1 drop) = 0.1 mg/L Sulfide
506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution
57551	Phenylarsine Oxide (PAO) Titrant, 0.0250 Normal (N/40), Stabilized
62801	Potassium Iodate-Iodide, 0.0125 Normal (N/80), 1 mL = 0.5 mg SO ₃ ²⁻
704516	Silver Nitrate-Nitric Acid Reagent, for Sulfate Determination
718516	Sodium Carbonate, 0.0500 Normal (N/20), 1 mL = 2.5 mg CaCO ₃
72831	Sodium Hydroxide, 50% (w/v) Aqueous Solution, Analytical Reagent Grade, Suitable for Orsat Gas Analysis
80501	Starch Indicator, 1% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
811016	Sulfate Standard, 1 mL = 0.1 mg SO ₄ ²⁻ , 100 ppm SO ₄ ²⁻
811216	Sulfate Standard, 1 mL = 1 mg SO ₄ ²⁻ , 1000 ppm SO ₄ ²⁻
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)

EPA/600/4-90/027F

Toxicity

86611	Synthetic Fresh Water, Very Soft 25.9 ppm TDS as Fresh Water Ions, 10 - 13 mg/L Hardness as CaCO ₃
86621	Synthetic Fresh Water, Soft 104 ppm TDS as Fresh Water Ions, 40 - 48 mg/L Hardness as CaCO ₃
86631	Synthetic Fresh Water, Moderately Hard 207 ppm TDS as Fresh Water Ions, 80 - 100 mg/L Hardness as CaCO ₃
86641	Synthetic Fresh Water, Hard 415 ppm TDS as Fresh Water Ions, 160 - 180 mg/L Hardness as CaCO ₃
86651	Synthetic Fresh Water, Very Hard 830 ppm TDS as Fresh Water Ions, 280 - 320 mg/L Hardness as CaCO ₃

EPA

Metals

64316	Ammonium Hydroxide, 2.00 Normal
135716	Bromophenol Blue TS, 0.1% (w/v) in dilute Alcohol
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
5305PT	Nitric Acid, 50% (v/v) Aqueous Solution (1 + 1)

EPA 340.1, 340.2 & 340.3 Fluoride

317016	Fluoride Standard, 1 mL = 0.01 mg F, 10 ppm F ⁻
317116	Fluoride Standard, 1 mL = 0.1 mg F, 100 ppm F ⁻
317316	Fluoride Standard, 1 mL = 1 mg F ⁻ , 1000 ppm F ⁻
37101	Hydrochloric Acid, 2.00 Normal
71301	Sodium Acetate, 2.00 Molar, 2.00 Normal
74651	Sodium Hydroxide, 5.00 Normal
86701	Total Ionic Strength Adjustment Buffer (TISAB II), with CDTA, for Fluoride Analysis using Ion Selective Electrodes

EPA (SW-846)
Analysis of Wastes
61/7195/7197
Hexavalent Chromium

62001	Potassium Hydroxide, 0.100 Normal (N/10)
62301	Potassium Hydroxide, 0.500 Normal (N/2)
540016	Nitric Acid, 0.100 Normal (N/10)
91511	Water, ACS Reagent Grade, ASTM Type I, ASTM Type II Packaged in glass containers
1351	Acetic Acid, 10% (v/v) Aqueous Solution (1 + 9)
63151	Ammonium Hydroxide, 10% (v/v) Aqueous Solution (1 + 9)
135716	Bromophenol Blue TS, 0.1% (w/v) in dilute Alcohol
74501	Sodium Hydroxide, 1.00 Normal

50
Isokinetic HCl/Cl₂

79661	Sodium Thiosulfate, 0.500 Normal (N/2)
82501	Sulfuric Acid, 0.100 Normal (N/10)
82561	Sulfuric Acid 0.125 Normal
73501	Sodium Hydroxide, 0.100 Normal (N/10)

51
Midget Impinger HCl/Cl₂

82501	Sulfuric Acid, 0.100 Normal (N/10)
82561	Sulfuric Acid, 0.125 Normal
73501	Sodium Hydroxide, 0.100 Normal (N/10)
79661	Sodium Thiosulfate, 0.500 Normal (N/2)

1311 Toxicity

37001	Hydrochloric Acid, 1.00 Normal
543016	Nitric Acid, 1.00 Normal
74501	Sodium Hydroxide, 1.00 Normal
83771	TCLP Extraction Fluid 1, pH 4.93 ± 0.05 at 25°C, for use in EPA 1311 Toxicity Characteristic Leaching Procedure
83781	TCLP Extraction Fluid 2, pH 2.88 ± 0.05 at 25°C, for use in EPA 1311 Toxicity Characteristic Leaching Procedure

3535 Organic Compounds

81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
13622615	Sodium Hydroxide, 10.0 Normal

3542 Semivolatile Analytes

13622615	Sodium Hydroxide, 10.0 Normal
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)

6010 Multielement-CLP

RICVSTD7500	Initial Calibration Verification Standard 7, CLP
RLPC1500	Lab Performance Check, Method 200.7

9013/9014/9213/7.3.3.2/9010B/9012A Cyanides

1351	Acetic Acid, 10% (v/v) Aqueous Solution (1 + 9)
8201	Arsenite Standard, 0.100 Normal (N/10)
254316	Cyanide Standard, 1 mL = 1 mg CN, 1000 ppm CN
256016	p-Dimethylaminobenzalrhodanine, 0.02% (w/v) in Acetone, Indicator for Argentimetric Titrations
44701	Magnesium Chloride, 51% (w/v) Aqueous Solution

9013/9014/9213/7.3.3.2/9010B/9012A Cyanides

658416	Pyridine-Barbituric Acid Reagent, for Cyanide Determination
69101	Silver Nitrate, 0.0192 Normal (0.0192 Molar), 1 mL = 1 mg CN ⁻
72501	Sodium Hydroxide, 5% (w/v) Aqueous Solution (50 g/L)
72831	Sodium Hydroxide, 50% (w/v) Aqueous Solution, Analytical Reagent Grade, Suitable for Orsat Gas Analysis
73701	Sodium Hydroxide, 0.250 Normal (N/4)
74501	Sodium Hydroxide, 1.00 Normal
13622615	Sodium Hydroxide, 10.0 Normal
81961	Sulfuric Acid, 0.0100 Normal (N/100)
83431816	Sulfuric Acid, 18.0 Normal

9031/9034/9036/9038/9030B Extractable Sulfides/Acid-Soluble and Acid Insoluble Sulfides/Sulfate

223516	Conditioning Reagent, for Sulfate Analysis (Turbidimetric)
37501	Hydrochloric Acid, 6.00 Normal
39751	Iodine (Iodine-Iodide), 0.0250 Normal (N/40), 1 mL = 0.4008 mg S ²⁻
57551	Phenylarsine Oxide (PAO) Titrant, 0.0250 Normal (N/40), Stabilized
718516	Sodium Carbonate, 0.0500 Normal (N/20), 1 mL = 2.5 mg CaCO ₃
72831	Sodium Hydroxide, 50% (w/v) Aqueous Solution, Analytical Reagent Grade, Suitable for Orsat Gas Analysis
R7286000500	Sodium Hydroxide, 60% (w/v) Aqueous Solution
74501	Sodium Hydroxide, 1.00 Normal
74661	Sodium Hydroxide, 6.00 Normal
79001	Sodium Thiosulfate, 0.0250 Normal (N/40)
R79080001A	Sodium Thiosulfate, 0.028 Normal
80551	Starch Indicator, 2% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
811016	Sulfate Standard, 1 mL = 0.1 mg SO ₄ ²⁻ , 100 ppm SO ₄ ²⁻
811216	Sulfate Standard, 1 mL = 1 mg SO ₄ ²⁻ , 1000 ppm SO ₄ ²⁻
945016	Zinc Acetate, 2 Normal (220 g + 870 mL Water)

6020/7472/7470A/7471A Mercury/Mercury in Liquid Waste/Mercury in Solid and Semisolid Waste

36001	Hydrochloric Acid, 0.100 Normal (N/10)
63601	Potassium Permanganate, 5% (w/v) Aqueous Solution, Mercury Free
645016	Potassium Persulfate, 5% (w/v) Aqueous Solution
719416	Sodium Chloride-Hydroxylamine Sulfate Solution, for Cold Vapor Atomic Absorption Analysis
7996532	Stannous Chloride Suspension, 10% (w/v) in 0.5 Normal Sulfuric Acid
82801	Sulfuric Acid, 0.500 Normal (N/2)

APHA Methods**APHA 2310 B/2320B Acidity/Alkalinity**

12051	Bromocresol Green Indicator, 0.1% (w/v) Aqueous Solution
12151	Bromocresol Green-Methyl Red Mixed Indicator, Aqueous
12201	Bromocresol Green-Methyl Red Mixed Indicator, Alcoholic
135316	Bromophenol Blue Indicator, 0.1% (w/v) Aqueous Solution
240516	m-Cresol Purple TS, 0.1% (w/v) Aqueous Solution
35951	Hydrochloric Acid, 0.0200 Normal (N/50)
36001	Hydrochloric Acid, 0.100 Normal (N/10)
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
58701	Potassium Acid Phthalate, 0.0500 Normal (N/20)
718516	Sodium Carbonate, 0.0500 Normal (N/20), 1 mL = 2.5 mg CaCO ₃
73001	Sodium Hydroxide, 0.0200 Normal (N/50), 1 mL = 1 mg CaCO ₃
73501	Sodium Hydroxide, 0.100 Normal (N/10)
79501	Sodium Thiosulfate, 0.100 Normal (N/10)
82001	Sulfuric Acid, 0.0200 Normal (N/50)
82501	Sulfuric Acid, 0.100 Normal (N/10)

APHA 5210 B Biochemical Oxygen Demand

62316	Ammonium Chloride, 1.15 g/L, pH 7.20, for BOD
136925	Bromothymol Blue Absorbance Standard - 23.2 μM in dilute buffer pH 8.0
17201	Calcium Chloride, 2.75% (w/v) Aqueous Solution
31001	Ferric Chloride, 0.025% (w/v) Aqueous Solution
325516	Glucose-Glutamic Acid Solution, Standard Check Solution for Biochemical Oxygen Demand (BOD)
453016	Magnesium Sulfate, 2.25% (w/v) Aqueous Solution
58001	Phosphate Buffer, pH 7.2, for Biochemical Oxygen Demand (BOD) Testing
74501	Sodium Hydroxide, 1.00 Normal
83001	Sulfuric Acid, 1.00 Normal

APHA 114C/409D/4500-Cl B/4500-Cl C/4500-Cl D/4500-Cl E/4500-Cl F/4500-Cl G/ 411 A/411 B/ 4500-ClO₂ C/4500-ClO₂ D/4500-ClO₂ E/ Residual Chlorine, Chlorine Dioxide, Chlorine Requirement

501	Acetate Buffer, pH 4.0, for Residual Chlorine Analysis
8201	Arsenite Standard, 0.100 Normal (N/10)
8844	Barium Diphenylaminesulfonate, 0.1% (w/v) Aqueous Solution
26551	DPD Indicator Solution, for Residual Chlorine Analysis
31441	Ferrous Ammonium Sulfate, 0.00282 Normal (0.00282 Molar), 1 mL = 0.1 mg Cl ₂
32824	Glycine, 7% (w/v) Aqueous Solution, APHA for Ozone
328316	Glycine, 10% (w/v) Aqueous Solution
328416	Glycine, 20% (w/v) Aqueous Solution
37151	Hydrochloric Acid, 2.50 Normal
39801	Iodine (Iodine-Iodide), 0.0282 Normal, 1 mL = 1 mg Cl ₂
40001	Iodine (Iodine-Iodide), 0.100 Normal (N/10)
57501	Phenylarsine Oxide (PAO) Titrant, 0.00564 Normal, Stabilized, 1 mL = 0.2 mg Cl ₂
58031	Phosphate Buffer, pH 7, for Amperometric Determination of Residual Chlorine and Chlorine Dioxide
58051	Phosphate Buffer Solution, for Chlorine Determination (DPD Methods)
5851532	Phosphoric Acid, 30% (v/v) Aqueous Solution
585416	Phosphoric Acid - Sulfamic Acid Solution, for Residual Chlorine Determination
60601	Potassium Dichromate, 0.100 Normal (N/10), 0.0167 Molar (M/60)
627016	Potassium Iodate, 0.00564 Normal, 1 mL = 0.2 mg Cl ₂ (200 ppm Cl ₂ equivalent)
628716	Potassium Iodide, 0.5% (w/v) Aqueous Solution
62901	Potassium Iodide, 5% (w/v) Aqueous Solution, Stabilized
R63543001C	Potassium Permanganate Standard, 891 mg/L 1000 ppm (mg/L) as Cl ₂

**APHA 114C/409D/4500-Cl B/4500-Cl C/4500-Cl D/4500-Cl E/4500-Cl F/4500-Cl G/ 411 A/411 B/
4500-ClO₂ C/4500-ClO₂ D/4500-ClO₂ E/ Residual Chlorine, Chlorine Dioxide, Chlorine Requirement**

714016	Sodium Arsenite, 0.5% (w/v) Aqueous Solution
7140132	Sodium Arsenite, 1% (w/v) Aqueous Solution
71551	Sodium Carbonate, 5% (w/v) Aqueous Solution
74661	Sodium Hydroxide, 6.00 Normal
758516	Sodium Sulfite, 10% (w/v) Aqueous Solution
78901	Sodium Thiosulfate, 0.0100 Normal (N/100)
79001	Sodium Thiosulfate, 0.0250 Normal (N/40)
79501	Sodium Thiosulfate, 0.100 Normal (N/10)
80001	Starch Indicator, 0.5% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
814916	Sulfuric Acid, 5% (v/v) Aqueous Solution (1 + 19)
816216	Sulfuric Acid, 16.7% (v/v) Aqueous Solution (1 + 5)
83301	Sulfuric Acid, 6.00 Normal
839316	Thioacetamide, 0.25% (w/v) Aqueous Solution
86401	o-Tolidine Reagent, 0.135% (w/v) in 15% (v/v) Hydrochloric Acid

APHA 413B/4500-CN- B/4500-CN- C/4500-CN- D/ Cyanide

5216	Acetate Buffer, pH 4.5, for Cyanide Determination
1351	Acetic Acid, 10% (v/v) Aqueous Solution (1 + 9)
623116	Ammonium Chloride, 5.4 g/L
192616	Chloramine-T, 1% (w/v)
250516	Cuprous Chloride Reagent, for Cyanide Determination
254316	Cyanide Standard, 1 mL = 1 mg CN, 1000 ppm CN
256016	p-Dimethylaminobenzalrhodanine, 0.02% (w/v) in Acetone, Indicator for Argentimetric Titrations
311316	Ferric Chloride Oxidizing Solution, 1% (w/v) Aqueous, with 1.6% (w/v) Sulfamic Acid, for Cyanide Determination
313516	Ferric Nitrate Solution, 404 g/L in dilute Nitric Acid
35701	Hydrochloric Acid, 10% (v/v) Aqueous Solution (1 + 9)
4470	Magnesium Chloride, 51% (w/v) Aqueous Solution
462216	MBTH Indicator, 0.05% (w/v) Aqueous Solution

APHA 413B/4500-CN- B/4500-CN- C/4500-CN- D/ Cyanide

506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution
540016	Nitric Acid, 0.100 Normal (N/10)
545016	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Ammonia (12.2 ppm NH ₃)
54551	Nitrogen Standard, 1 mL = 1 mg N, 1000 ppm N as Ammonia (1216 ppm NH ₃)
581016	Phosphate Buffer, for Cyanide
631916	Potassium Nitrate, 10%, pH 12 Filling Solution for Cyanide ISE
658416	Pyridine-Barbituric Acid Reagent, for Cyanide Determination
685416	Pyridine-Barbituric Acid Reagent, for Cyanide Determination
69101	Silver Nitrate, 0.0192 Normal (0.0192 Molar), 1 mL = 1 mg CN ⁻
72471	Sodium Hydroxide, 4% (w/v) Aqueous Solution (40 g/L)
72501	Sodium Hydroxide, 5% (w/v) Aqueous Solution (50 g/L)
13622615	Sodium Hydroxide, 10.0 Normal
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
83001	Sulfuric Acid, 1.00 Normal
839416	Thiocyanate Standard, 1 mL = 0.01 mg SCN ⁻ , 10 ppm SCN ⁻
839516	Thiocyanate Standard, 1 mL = 1 mg SCN ⁻ , 1000 ppm SCN ⁻
944016	Zinc Acetate Solution, 100 g/L

APHA 2340C
Hardness

178016	Calcium Chloride Standard, 1 mL = 1 mg CaCO ₃ (0.4 mg Ca), 1000 ppm CaCO ₃ (400 ppm Ca), 0.0100 M Ca ²⁺ , 0.0200 N Ca ²⁺
183016	Calmagite Indicator, 0.1% (w/v) Aqueous Solution
27001	EDTA Titrant, 0.0100 Molar (M/100)
73501	Sodium Hydroxide, 0.100 Normal (N/10)
R75730001C	Sodium Sulfide, 5% (w/v) Aqueous Solution
92001	Water Hardness Buffer, with Magnesium EDTA
930016	Water Hardness Indicator, 0.5% (w/v) Eriochrome Black T in 2-Methoxyethanol

APHA 4500-O C/4500-O D/4500-O E/4500-O F/407 B Dissolved Oxygen/Carbon Dioxide

5401	Alkaline-Iodide-Azide, Alsterberg Formulation, for Dissolved Oxygen (DO) Analysis
54116	Alkaline-Iodide-Azide, for Dissolved Oxygen (DO) Analysis
55816	Alum, 10% (w/v) Aqueous Solution

APHA 4500-O C/4500-O D/4500-O E/4500-O F/407 B Dissolved Oxygen/Carbon Dioxide

236032	Copper Sulfate-Sulfamic Acid, Inhibitor for Dissolved Oxygen testing
46201	Manganous Sulfate Solution, 364 g/L
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
58751	Potassium Biiodate, 0.0250 Normal (N/40), 0.002083 Molar (M/480)
61001	Potassium Fluoride, 40% (w/v) Aqueous Solution
632016	Potassium Oxalate, 2% (w/v) Aqueous Solution (20 g/L)
718016	Sodium Carbonate, 0.0454 Normal, 1 mL = 1 mg CO ₂
73101	Sodium Hydroxide, 0.0227 Normal, 1 mL = 1 mg CO ₂
79001	Sodium Thiosulfate, 0.0250 Normal (N/40)
80551	Starch Indicator, 2% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations

APHA 5310B**Total Organic Carbon**

184516	Inorganic Carbon Standard, 1 mL = 1 mg C, 1000 ppm C APHA/ASTM/EPA - for Total Organic Carbon (TOC)
184716	Organic Carbon Standard, 1 mL = 1 mg C, 1000 ppm C APHA/EPA - for Total Organic Carbon (TOC)

APHA 4500-Cl⁻ B/4500-Cl⁻ C/4500-Cl⁻ D/4500-Cl⁻ E Chloride

58016	Aluminum Hydroxide Suspension, for Chloride Determination in Highly Colored Samples
19401	Chloride Color Reagent, for Chloride Determination by the Automated Ferricyanide Method
195016	Chloride Standard, 1 mL = 0.5 mg Cl ⁻ , 500 ppm Cl ⁻ (0.0141 Normal)
195516	Chloride Standard, 1 mL = 1 mg Cl ⁻ , 1000 ppm Cl ⁻ (0.0282 Normal)
261016	Diphenylcarbazone-Bromophenol Blue Mixed Indicator, for Chloride Determination
262016	Diphenylcarbazone-Xylene Cyanol Mixed Indicator (not acidifier), for low level Chloride determination
31341	Ferric Nitrate Solution, Stock, 202 g/L in dilute Nitric Acid
47051	Mercuric Nitrate, 0.0141 Normal, 0.00705 Molar, 1 mL = 0.5 mg Cl ⁻
47401	Mercuric Nitrate, 0.141 Normal, 0.0705 Molar, 1 mg = 5 mL Cl ⁻
47851	Mercuric Thiocyanate Stock Solution, 4.17 g/L in Methanol
540016	Nitric Acid, 0.100 Normal (N/10)
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
60001	Potassium Chromate, 5% (w/v) Aqueous Solution, Chloride Free, Indicator for Argentometric Titrations
68601	Silver Nitrate, 0.0141 Normal (0.0141 Molar), 1 mL = 0.5 mg Cl ⁻

APHA 4500-Cl- B/4500-Cl- C/4500-Cl- D/4500-Cl- E Chloride

73501	Sodium Hydroxide, 0.100 Normal (N/10)
74501	Sodium Hydroxide, 1.00 Normal
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
83001	Sulfuric Acid, 1.00 Normal

APHA 4500-I C
Iodide

82116	Arsenious Acid, 0.1 Normal
655016	Potassium Thiocyanate, 4% (w/v) Aqueous Solution
721816	Sodium Chloride, 10% (w/w) Aqueous Solution
7218616	Sodium Chloride, 20% (w/v) Aqueous Solution
7219216	Sodium Chloride, 20% (w/w) Aqueous Solution

APHA 311B/3500-Pb B
Lead

6201	Ammonium Acetate, 40% (w/w) Aqueous Solution
6401	Ammonium Hydroxide, 50% (v/v) Aqueous Solution (1 + 1)
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
604016	Potassium Cyanide, 10% (w/v) Aqueous Solution
785016	Sodium Tartrate, 10% (w/v) Aqueous Solution
841016	Thymol Blue Indicator, 0.4% (w/v) Aqueous Solution
63151	Ammonium Hydroxide, 10% (v/v) Aqueous Solution (1 + 9)
21121	Citrate-Cyanide Reducing Solution, for Lead Determination
40001	Iodine (Iodine-Iodide), 0.100 Normal (N/10)
429516	Lead Standard, 1 mL = 0.1 mg Pb, 100 ppm Pb
532616	Nitric Acid, 20% (v/v) Aqueous Solution (1 + 4)
758016	Sodium Sulfite, 5% (w/v) Aqueous Solution

APHA 3500-Hg C**Mercury**

392516	Hydroxylamine Hydrochloride, 50 g + 100 mL Water
588016	Potassium Bromide, 40 g + 100 mL Water
63601	Potassium Permanganate, 5% (w/v) Aqueous Solution, Mercury Free
645016	Potassium Persulfate, 5% (w/v) Aqueous Solution
82701	Sulfuric Acid, 0.250 Normal (N/4)

APHA 419/419 D/4500-NH₃ B/4500-NH₃ C/4500-NH₃ D/4500-NH₃ F/4500-NH₃ G/4500-NO₂- B/4500-NO₃- D/4500-NO₃- E/4500-NO₃- F/4500-NO₃- G/4500-NO₃- H/4500-Norg B/4500-Norg C
Nitrogen as Ammonia, Nitrate, Nitrite and Organic

625216	Ammonium Chloride, 8.5% (w/v) Aqueous Solution, with Brij®35
6261	Ammonium Chloride-EDTA Solution, for Nitrate by the Cadmium Reduction Method
10401	Borate Buffer, pH 9.5, for Ammonia and Organic Nitrogen Analysis
10641	Boric Acid, 2% (w/v) Aqueous Solution with Mixed Indicator, for Ammonia and Kjeldahl Nitrogen Analysis
10651	Boric Acid, 2% (w/v) Aqueous Solution
142016	Brucine-Sulfanilic Acid Solution, for Nitrate Analysis
147316	Buffer Solution, for Nitrate Determination using Ion Selective Electrode
218016	Cobalt Chloride, 1.2% (w/v) Aqueous Solution with 10% (v/v) Hydrochloric Acid
22331	Color Reagent, for Nitrate Determination
2233516	Color Reagent, for Nitrite Determination Sulfanilamide / N-(1-Naphthyl)ethylenediamine Dihydrochloride Solution
23171	Copper Sulfate, 2% (w/v) Aqueous Solution
25501	Digestion Reagent, with Mercury Catalyst, for Kjeldahl Nitrogen Analysis
25511	Digestion Reagent, with Copper Catalyst, for Kjeldahl Nitrogen Analysis
266916	EDTA Reagent, 5% Aqueous with Sodium Hydroxide, for Ammonia Nitrogen Determination
314316	Ferrous Ammonium Sulfate, 0.0500 Normal (N/20)
37001	Hydrochloric Acid, 1.00 Normal
37501	Hydrochloric Acid, 6.00 Normal
461516	Manganous Sulfate, 0.00300 Molar
478016	Mercuric Sulfate Solution, 80 g/L Red Mercuric Oxide in 6 Normal Sulfuric Acid
516416	Mixed Indicator Solution, Methyl Red-Methylene Blue
525016	Nessler Reagent, for Ammonia Nitrogen Determination

APHA 419/419 D/4500-NH₃ B/4500-NH₃ C/4500-NH₃ D/4500-NH₃ F/4500-NH₃ G/4500-NO₂- B/4500-NO₃- D/4500-NO₃- E/4500-NO₃- F/4500-NO₃- G/4500-NO₃- H/4500-Norg B/4500-Norg C
Nitrogen as Ammonia, Nitrate, Nitrite and Organic

545016	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Ammonia (12.2 ppm NH ₃)
54551	Nitrogen Standard, 1 mL = 1 mg N, 1000 ppm N as Ammonia (1216 ppm NH ₃)
545616	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Nitrate (44.27 ppm NO ₃ ⁻)
545716	Nitrogen Standard, 1 mL = 0.1 mg N, 100 ppm N as Nitrate (442.7 ppm NO ₃ ⁻)
546016	Nitrogen Standard, 1 mL = 0.25 mg N, 250 ppm N as Nitrite (821 ppm NO ₂ ⁻), Equivalent to 1 mL = 821.1 ppm Nitrite (NO ₂ ⁻)
574516	Phenylarsine Oxide Dechlorinating Agent, 1.2 g/L
63901	Potassium Permanganate, 0.0500 Normal (N/20), 0.0100 Molar (M/100)
664016	Rochelle Salt Stabilizer, for Ammonia Determination
714016	Sodium Arsenite, 0.5% (w/v) Aqueous Solution
7140132	Sodium Arsenite, 1% (w/v) Aqueous Solution
72201	Sodium Chloride, 30% (w/v) Aqueous Solution
73501	Sodium Hydroxide, 0.100 Normal (N/10)
74501	Sodium Hydroxide, 1.00 Normal
74661	Sodium Hydroxide, 6.00 Normal
13622615	Sodium Hydroxide, 10.0 Normal
747816	Sodium Hydroxide - EDTA Solution, 10 N
74951	Sodium Hydroxide-Thiosulfate, 50%-2.5% (w/v) Aqueous Solution, for Kjeldahl Nitrogen Analysis using Copper Catalyst
749511	Sodium Hypochlorite Solution, 2.5% (w/w) NaOCl
749551	Sodium Hypochlorite Solution, 5% available Chlorine
749816	Sodium Nitroprusside, 0.5 g/L Aqueous Solution
7499516	Sodium Oxalate, 0.0250 Molar (M/40), 0.0500 Normal (N/20)
75181	Sodium Phenate Solution, for Ammonia Nitrogen Analysis
754016	Sodium Potassium Tartrate, 10% (w/v) Aqueous Solution, pH 5.2
82001	Sulfuric Acid, 0.0200 Normal (N/50)
82151	Sulfuric Acid, 0.0400 Normal (N/25), 0.0200 Molar (M/50)
83001	Sulfuric Acid, 1.00 Normal
83251	Sulfuric Acid, 5.00 Normal

APHA 426 C/4500-S2- B/4500-S2- C/4500-S2- D/4500-S2- E/4500-S2- F/4500-SO32- B/4500-SO32- C/4500-SO42- C/4500-SO42- D/4500-SO42- E Sulfide, Sulfate, Sulfite

57016	Aluminum Chloride, 6 Normal
R0609900120	Amine-sulfuric acid stock solution, for Sulfide Determination (Methylene Blue Method)
69016	Ammonium Phosphate Solution, 400 g (NH ₄) ₂ HPO ₄ + 800 mL Water
85016	Barium Chloride, 10% (w/v) Aqueous Solution
147516	Buffer Solution A, for Sulfate Analysis (Turbidimetric Method)
147632	Buffer Solution B, for low level Sulfate Analysis (Turbidimetric Method)
223516	Conditioning Reagent, for Sulfate Analysis (Turbidimetric)
266516	EDTA (Disodium), 2.5% (w/v) Aqueous Solution
313016	Ferric Chloride, 100% (w/v) Aqueous Solution (100 g + 40 mL Water)
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
37501	Hydrochloric Acid, 6.00 Normal
39751	Iodine (Iodine-Iodide), 0.0250 Normal (N/40), 1 mL = 0.4008 mg S ²⁻
490516	Methylene Blue Solution I, 0.05 mL (1 drop) = 1 mg/L Sulfide
491016	Methylene Blue Solution II, 0.05 mL (1 drop) = 0.1 mg/L Sulfide
506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution
62801	Potassium Iodate-Iodide, 0.0125 Normal (N/80), 1 mL = 0.5 mg SO ₃ ²⁻
704516	Silver Nitrate-Nitric Acid Reagent, for Sulfate Determination
72951	Sodium Hydroxide, 0.0100 Normal (N/100)
74501	Sodium Hydroxide, 1.00 Normal
74661	Sodium Hydroxide, 6.00 Normal
79001	Sodium Thiosulfate, 0.0250 Normal (N/40)
80001	Starch Indicator, 0.5% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
811016	Sulfate Standard, 1 mL = 0.1 mg SO ₄ ²⁻ , 100 ppm SO ₄ ²⁻
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
945016	Zinc Acetate, 2 Normal (220 g + 870 mL Water)

APHA 2120 B/ 2122 B/ 2123 B/ 2124 B/ 2125 B/ 2126 B/ 2127 B/ 2128 B Color

223016	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 500
223000516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 5
2230516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 10

APHA 2120 B/ 2122 B/ 2123 B/ 2124 B/ 2125 B/ 2126 B/ 2127 B/ 2128 B Color

223001516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 15
223002016	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 20
223002516	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 25
223003016	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 30
223005016	Color Standard, APHA / Hazen (Platinum-Cobalt), Color = 50

APHA 2530 E
Oxidant Demand

628816	Potassium Iodide, 2% (w/v) Aqueous Solution
79501	Sodium Thiosulfate, 0.100 Normal (N/10)
80001	Starch Indicator, 0.5% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
83101	Sulfuric Acid, 2.00 Normal

APHA 3112 B/ 3113 B
Metals

63601	Potassium Permanganate, 5% (w/v) Aqueous Solution, Mercury Free
645016	Potassium Persulfate, 5% (w/v) Aqueous Solution
719416	Sodium Chloride-Hydroxylamine Sulfate Solution, for Cold Vapor Atomic Absorption Analysis
7996532	Stannous Chloride Suspension, 10% (w/v) in 0.5 Normal Sulfuric Acid
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
53505PT	Nitric Acid, 50% (v/v) Aqueous Solution (1 + 1)
58501	Phosphoric Acid, 10% (v/v) Aqueous Solution (1 + 9)
5851532	Phosphoric Acid, 30% (v/v) Aqueous Solution

APHA 3500-Ca B
Calcium

6241	Ammonium Chloride, 2% (w/v) Aqueous Solution
68251	Ammonium Oxalate, 4% (w/v) Aqueous Solution
27001	EDTA Titrant, 0.0100 Molar (M/100)
2902100	Eriochrome Blue Black R Indicator, 0.2% (w/w) in Sodium Chloride
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution

APHA 3500-Ca B**Calcium**

5220100	Murexide Indicator, 0.2% (w/w) in Sodium Chloride
522116	Murexide Indicator, 0.15% (w/w) in Ethylene Glycol
63901	Potassium Permanganate, 0.0500 Normal (N/20), 0.0100 Molar (M/100)
74501	Sodium Hydroxide, 1.00 Normal
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)

APHA 3500-Cr B/3500-Cr C**Chromium**

259016	Diphenylcarbazide, 0.5% (w/v) in Acetone
49801	Methyl Orange Indicator, 0.05% (w/v) Aqueous Solution
635916	Potassium Permanganate, 4% (w/v) Aqueous Solution
714416	Sodium Azide, 0.5% (w/v) Aqueous Solution
74501	Sodium Hydroxide, 1.00 Normal
82601	Sulfuric Acid, 0.200 Normal (N/5)
83301	Sulfuric Acid, 6.00 Normal
83431816	Sulfuric Acid, 18.0 Normal
20954	Hexavalent Chromium Standard, 100 mg/L Cr ⁶⁺ (100 ppm Cr ⁶⁺)

APHA 3500-Fe B**Iron**

601	Acetate Buffer, for Iron Analysis (Phenanthroline Method)
390016	Hydroxylamine Hydrochloride, 10% (w/w) Aqueous Solution
419016	Iron Standard, 1 mL = 0.2 mg Fe, 200 ppm Fe
552016	1,10-Phenanthroline, 0.1% (w/v) Aqueous Solution
64101	Potassium Permanganate, 0.500 Normal (N/2)
71201	Sodium Acetate, 20% (w/w) Aqueous Solution

APHA 5220 B/ 5220 C/ 5220 D**Chemical Oxygen Demand**

314016	Ferriin Indicator, 0.025 Molar Phenanthroline Ferrous Sulfate Complex
31501	Ferrous Ammonium Sulfate, 0.250 Normal (N/4), 0.250 Molar (M/4)
60701	Potassium Dichromate, 0.250 Normal (N/4), 0.04167 Molar (M/24)
83504	Sulfuric Acid-Silver Sulfate Reagent, for Chemical Oxygen Demand (COD) Analysis
31451	Ferrous Ammonium Sulfate, 0.100 Normal (N/10), 0.100 Molar (M/10)

APHA 510 B/ 5530 B/ 5530 C Phenols

62516	Ammonium Chloride, 5% (w/v) Aqueous Solution (50 g/L)
6411	Ammonium Hydroxide, 0.500 Normal (N/2)
11701	Bromate-Bromide Solution, 0.100 Normal (N/10)
49801	Methyl Orange Indicator, 0.05% (w/v) Aqueous Solution
574016	Phenol Standard, 1 mL = 1 mg Phenol, 0.100% (w/w) C ₆ H ₅ OH
580716	Phosphate Buffer Solution, pH 6.8, for Determination of Phenols
58501	Phosphoric Acid, 10% (v/v) Aqueous Solution (1 + 9)
5851532	Phosphoric Acid, 30% (v/v) Aqueous Solution
74571	Sodium Hydroxide, 2.50 Normal
79001	Sodium Thiosulfate, 0.0250 Normal (N/40)
80001	Starch Indicator, 0.5% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations
83001	Sulfuric Acid, 1.00 Normal

APHA 4500-P B/4500-P C/ 4500-P D/ 4500-P E/ 4500-P F Phosphorous

35032	Alcoholic Sulfuric Acid, for Phosphorus
66516	Ammonium Molybdate, 4% (w/v) Aqueous Solution
67216	Ammonium Molybdate Reagent I, for Phosphorus Determination by the Stannous Chloride Method (without extraction)
67316	Ammonium Molybdate Reagent II, for Phosphorus Determination by the Stannous Chloride Method (with extraction)
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
49801	Methyl Orange Indicator, 0.05% (w/v) Aqueous Solution
583016	Phosphate Standard, 1 mL = 0.05 mg P, 50 ppm P (153 ppm PO ₄ ³⁻)
587216	Potassium Antimonyl Tartrate, 0.2743% (w/v) Aqueous Solution (1.3715 g/500 mL)
74501	Sodium Hydroxide, 1.00 Normal
74661	Sodium Hydroxide, 6.00 Normal
799716	Stannous Chloride Reagent I, for Phosphate Analysis (without extraction)
799816	Stannous Chloride Reagent II, for Phosphate Analysis (with extraction)
808016	Strong Acid Solution, for Phosphorus Analysis

APHA 4500-P B/4500-P C/ 4500-P D/ 4500-P E/ 4500-P F Phosphorous

816016	Sulfuric Acid, 14% (v/v) Aqueous Solution
83251	Sulfuric Acid, 5.00 Normal
898016	Vanadate-Molybdate Reagent, for Phosphorus Analysis

APHA 8010 E Toxicity

86611	Synthetic Fresh Water, Very Soft 25.9 ppm TDS as Fresh Water Ions, 10 - 13 mg/L Hardness as CaCO ₃
86621	Synthetic Fresh Water, Soft 104 ppm TDS as Fresh Water Ions, 40 - 48 mg/L Hardness as CaCO ₃
86631	Synthetic Fresh Water, Moderately Hard 207 ppm TDS as Fresh Water Ions, 80 - 100 mg/L Hardness as CaCO ₃
86641	Synthetic Fresh Water, Hard 415 ppm TDS as Fresh Water Ions, 160 - 180 mg/L Hardness as CaCO ₃
86651	Synthetic Fresh Water, Very Hard 830 ppm TDS as Fresh Water Ions, 280 - 320 mg/L Hardness as CaCO ₃

APHA 3500-Zn D/3500-Zn E Zinc

7016	Acetate Buffer, Purified, for Zinc Analysis (Dithizone Method)
35951	Hydrochloric Acid, 0.0200 Normal (N/50)
71301	Sodium Acetate, 2.00 Molar, 2.00 Normal
506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution
54405PT	Nitric Acid, 6.00 Normal
723016	Sodium Citrate, 10% (w/w) Aqueous Solution (10 g + 90 mL Water)
757016	Sodium Sulfide, 3% (w/v) Aqueous Solution

APHA 3500-Cu B/3500-Cu C Copper

6441	Ammonium Hydroxide, 5.00 Normal
229016	Copper Standard, 1 mL = 0.02 mg Cu, 20 ppm Cu
229516	Copper Standard, 1 mL = 0.2 mg Cu, 200 ppm Cu
390016	Hydroxylamine Hydrochloride, 10% (w/w) Aqueous Solution
524016	Neocuproine Reagent, 0.1% (w/v) Methanolic Solution
724016	Sodium Citrate, 30% (w/v) Aqueous Solution
90516	Bathocuproine, 0.1% (w/v) Aqueous Solution
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)

APHA 3500-Mg D/3500-Mn B Magnesium and Manganese

6281	Ammonium Hydroxide, 5% (v/v) Aqueous Solution (1 + 19)
6893016	Ammonium Phosphate Dibasic, 30% (w/v) Aqueous Solution (Diammonium hydrogen phosphate solution), APHA for Magnesium
35601	Hydrochloric Acid, 1% (v/v) Aqueous Solution (1 + 99)
35701	Hydrochloric Acid, 10% (v/v) Aqueous Solution (1 + 9)
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
506016	Methyl Red Indicator, 0.1% (w/v) Aqueous Solution
477532	Mercuric Sulfate-Silver Nitrate Special Reagent, for Manganese Determination
64001	Potassium Permanganate, 0.100 Normal (N/10), 0.0200 Molar (M/50)
714916	Sodium Bisulfite, 10% (w/v) Aqueous Solution
749716	Sodium Nitrite, 5% (w/w) Aqueous Solution

APHA 4500-F C/ 4500-F D Fluoride

317016	Fluoride Standard, 1 mL = 0.01 mg F ⁻ , 10 ppm F ⁻
317116	Fluoride Standard, 1 mL = 0.1 mg F ⁻ , 100 ppm F ⁻
86701	Total Ionic Strength Adjustment Buffer (TISAB II), with CDTA, for Fluoride Analysis using Ion Selective Electrodes
714016	Sodium Arsenite, 0.5% (w/v) Aqueous Solution
7140132	Sodium Arsenite, 1% (w/v) Aqueous Solution
799016	SPADNS Reference Solution, for Fluoride Determination
985016	Zirconyl-SPADNS Reagent, for Fluoride Analysis

APHA 4500-O₃ B/423 B Ozone

32824	Glycine, 7% (w/v) Aqueous Solution, APHA for Ozone
394716	Indigo Stock Solution, APHA for Ozone
45854	Malonic Acid Reagent, APHA for Ozone
461016	Manganous Sulfate, 0.31% (w/v) Aqueous Solution
86401	o-Tolidine Reagent, 0.135% (w/v) in 15% (v/v) Hydrochloric Acid

APHA 7500-Ra C/7500-Ra B/7500-Ra D Radium

6441	Ammonium Hydroxide, 5.00 Normal
12051	Bromocresol Green Indicator, 0.1% (w/v) Aqueous Solution
21311	Citric Acid, 1.00 Molar
26751	EDTA Decontaminating Solution
38191	Hydrogen Peroxide, 3% (w/w) Aqueous Solution, Stabilized Reagent Grade
49801	Methyl Orange Indicator, 0.05% (w/v) Aqueous Solution
50001	Methyl Orange Indicator, 0.1% (w/v) Aqueous Solution
543016	Nitric Acid, 1.00 Normal
NC0253335	Nitric Acid, 6.00 Normal
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
74501	Sodium Hydroxide, 1.00 Normal
13622615	Sodium Hydroxide, 10.0 Normal
83431816	Sulfuric Acid, 18.0 Normal

APHA 425 C/4500-SiO₂ C/4500-SiO₂ D/4500-SiO₂ E/4500-Si C Silica and Silicon

609216	Aminonaphtholsulfonic Acid Solution, Reducing Agent for Silica
6701	Ammonium Molybdate, 10% (w/v) Aqueous Solution, pH adjusted
105016	Borax, 1% (w/v) Aqueous Solution
35801	Hydrochloric Acid, 50% (v/v) Aqueous Solution (1 + 1)
5465516	Oxalic Acid, 5% (w/v) Aqueous Solution
54671	Oxalic Acid, 7.5% (w/v) Aqueous Solution
54701	Oxalic Acid, 10% (w/v) Aqueous Solution
599016	Potassium Chromate, 0.063% (w/v) Aqueous Solution
674016	Silica Standard, 1 mL = 0.01 mg SiO ₂ , 10 ppm SiO ₂ (4.67 ppm Si)
675016	Silica Standard, 1 mL = 1 mg SiO ₂ , 1000 ppm SiO ₂ (467 ppm Si)
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
82501	Sulfuric Acid, 0.100 Normal (N/10)
83001	Sulfuric Acid, 1.00 Normal

APHA 3500-As B/ 3114 B Arsenic and Selenium

37101	Hydrochloric Acid, 2.00 Normal
4293416	Lead Acetate, 10% (w/v) Aqueous Solution
645016	Potassium Persulfate, 5% (w/v) Aqueous Solution
681016	Silver Diethyldithiocarbamate, 0.3% (w/v) in Chloroform
71291	Sodium Acetate, 0.200 Molar (M/5)
83151	Sulfuric Acid, 2.50 Normal
83431816	Sulfuric Acid, 18.0 Normal



In the United States:
For customer service, call 1-800-766-7000.
To fax an order, use 1-800-926-1166.
To order online: www.fishersci.com

In Canada:
For customer service, call 1-800-234-7437.
To fax an order, use 1-800-463-2996.
To order online: www.fishersci.ca

RIGHT • READY • RICCA