# Solutions for the Food & Beverage Industry

#### Source with RICCA and you can expect...

- · Products are assigned a unique lot number at manufacture.
- · MSDSs and CofAs available on our website.
- Ample raw materials and finished goods so we can quickly manufacture and 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.
- · The ability to create custom solutions to meet your every need.
- · A technical service team staffed with degreed chemists.
- Products are Standardized and certified traceable to NIST Standard Reference Material as appropriate.



### Products include:

### **HPLC Reagents**

- HPLC Grade Water, Alcohols, and other Organic Solvents
- Large range of HPLC Mobile Phases, Buffers, and Eluents
- Custom Eluents and Mobile Phases made to your specifications

#### Titrants and Standards

- Large range of standardized Acids and Bases for Acidity/Alkalinity testing and applicable indicators
- · Conductivity, pH, Acidity and Chloride Standards
- Titrants are NIST traceable
- Both Aqueous and Nonaqueous Titrants

### Reagents for Specific Test Methods

- Nitrogen Free reagents for Kjeldahl Digestions for determining Protein Content
- Babcock Sulfuric Acid to determine Fat Content in Milk
- AOAC Compendial Reagents
- pH Control Buffers for managing reactions during analysis

### **Spectroscopy Reagents**

- AA/ICP/ICP-MS standards for metals and other elemental testing
- Spectroscopy reagents for instrument maintenance
- Our Spectroscopy line is tested according to rigorous internal protocols

### **Buffers**

- Calibration buffers with consistent specifications across all pH ranges
- Test strips for quick pH determination
- Available in clear or color-coded formulations

### Microbiology Reagents

- Reagents for microbial test methods such as Gram Staining, Bacteria, Yeast, Mold Counts and Indole testing
- Stains utilized are certified by the BSC



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## **Acidity and Alkalinity**

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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 <sub>3</sub>
73001	Sodium Hydroxide, 0.0200 Normal (N/50), 1 mL = 1 mg CaCO <sub>3</sub>
73501	Sodium Hydroxide, 0.100 Normal (N/10)
82001	Sulfuric Acid, 0.0200 Normal (N/50)
82501	Sulfuric Acid, 0.100 Normal (N/10)
73485	Sodium Hydroxide, 0.0833 Normal

## Iodine Absorption Number of Fats and Oils

410016	Iodine-Bromine Solution, Hanus, for Iodine Absorption Number of Fats and Oils
41101	lodine Monochloride Solution, Wijs, for Iodine Absorption Number of Fats and Oils

## Kjeldahl Reagents for Nitrogen and Protein Analysis

10641	Boric Acid, 2% (w/v) Aqueous Solution with Mixed Indicator, for Ammonia and Kjeldahl Nitrogen Analysis
25511	Digestion Reagent, with Copper Catalyst, for Kjeldahl Nitrogen Analysis
25501	Digestion Reagent, with Mercury Catalyst, for Kjeldahl Nitrogen Analysis
36101	Hydrochloric Acid, 0.1142 Normal, for Kjeldahl Analysis of Proteins
72801	Sodium Hydroxide, 40% (w/v) Aqueous Solution, Nitrogen Free, Suitable for Kjeldahl Nitrogen Analysis
74801	Sodium Hydroxide-Sulfide, for Kjeldahl Nitrogen Analysis using Mercury Catalyst
74951	Sodium Hydroxide-Thiosulfate, 50%-2.5% (w/v) Aqueous Solution, for Kjeldahl Nitrogen Analysis using Copper Catalyst
82551	Sulfuric Acid, 0.1142 Normal, Suitable for Kjeldahl Nitrogen Analysis of Feed Grains

# **Microbial Testing**

345016	Gram's Iodine, dilute Lugol's Iodine, for Gram Staining
32401	Gentian Violet, Hucker Formulation, for Gram Staining
66601	Safranine, 1% (w/v) Aqueous Solution, Counterstain for Gram Staining
66801	Safranine, Aqueous-Alcoholic, Counterstain for Gram Staining
2001	Acetone-Alcohol, 1 + 1 Decolorizer Solution, for use in Gram Staining
488016	Methylene Blue, Loeffler Formulation (Loeffler's Alkaline Methylene Blue), for Staining and Differentiation of Acid Fast Organisms in Smears
489016	Methylene Blue Milk Smear Stain, Modified Newman-Lampert Formulation, for Microscopic Bacterial Examination of Milk
279016	Ehrlich Aldehyde Reagent, Alcoholic, for Indole Test
42601	Kovac's Aldehyde Reagent, for Detection of Indole Producing Bacteria

# Wine Analysis - Acidity

35741	Hydrochloric Acid, 20% (v/v) Aqueous Solution (1 + 4)
35901	Hydrochloric Acid, 0.0100 Normal (N/100)
36001	Hydrochloric Acid, 0.100 Normal (N/10)
36201	Hydrochloric Acid, 0.200 Normal (N/5)
37001	Hydrochloric Acid, 1.00 Normal
38001	Hydrochloric Acid, 0.100 Normal (N/10) in Isopropyl Alcohol
35681	Hydrochloric Acid, 5% (v/v) Aqueous Solution (1 + 19)
42701	Lactic Acid, 10% (v/v) Aqueous Solution
58501	Phosphoric Acid, 10% (v/v) Aqueous Solution (1 + 9)
82001	Sulfuric Acid, 0.0200 Normal (N/50)
82501	Sulfuric Acid, 0.100 Normal (N/10)
82801	Sulfuric Acid, 0.500 Normal (N/2)
83001	Sulfuric Acid, 1.00 Normal
82721	Sulfuric Acid, 0.255 Normal (12.5 g/L), Suitable for Crude Fiber Analysis of Food and Feed
81701	Sulfuric Acid, 25% (v/v) Aqueous Solution (1 + 3)
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
83251	Sulfuric Acid, 5.00 Normal



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15011	Buffer, Reference Standard, pH 4.00 ± 0.01 at 25°C (Color Coded Red)
15511	Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)
16011	Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)
148516	Buffer, Reference Standard, pH 0.50 ± 0.01 at 25°C
148825	Buffer, Reference Standard, pH 0.95 ± 0.01 at 25°C
14891	Buffer, Reference Standard, pH 1.00 ± 0.01 at 25°C
14901	Buffer, Reference Standard, pH 1.07 ± 0.01 at 25°C
14921	Buffer, Reference Standard, pH 1.68 ± 0.01 at 25°C
14931	Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C
R1494200500	Buffer, Reference Standard, pH 2.70 ± 0.01 at 25°C
14951	Buffer, Reference Standard, pH 3.00 ± 0.01 at 25°C
149816	Buffer, Reference Standard, pH 3.56 ± 0.01 at 25°C
15001	Buffer, Reference Standard, pH 4.00 ± 0.01 at 25°C
150216	Buffer, Precision Reference Standard, pH 4.000 ± 0.002 at 25°C (Color Coded Red)
150241	Buffer, Reference Standard, pH 4.45 ± 0.01 at 25 °C
150416	Buffer, Reference Standard, pH 4.63 ± 0.01 at 25°C
15051	Buffer, Reference Standard, pH 5.00 ± 0.01 at 25°C
15101	Buffer, Reference Standard, pH 6.00 ± 0.01 at 25°C
151316	Buffer, Precision Reference Standard, pH 6.000 ± 0.002 at 25°C
154016	Buffer, Reference Standard, pH 6.86 ± 0.01 at 25°C
15501	Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C
155141	Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Green)
155216	Buffer, Precision Reference Standard, pH 7.000 ± 0.002 at 25°C (Color Coded Yellow)
15631	Buffer, Reference Standard, pH 7.38 ± 0.01 at 25°C
15651	Buffer, Reference Standard, pH 7.40 ± 0.01 at 25°C
15761	Buffer, Reference Standard, pH 7.70 ± 0.01 at 25 °C
15801	Buffer, Reference Standard, pH 8.00 ± 0.01 at 25°C
15901	Buffer, Reference Standard, pH 9.00 ± 0.01 at 25°C
159516	Buffer, Reference Standard, pH 9.18 ± 0.01 at 25°C
16001	Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C
160216	Buffer, Precision Reference Standard, pH 10.000 ± 0.005 at 25°C
16101	Buffer, Reference Standard, pH 11.00 ± 0.01 at 25°C
16151	Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C
13622601	Buffer, Reference Standard, pH 12.45 ± 0.01 at 25°C
16251	Buffer, Reference Standard, pH 13.00 ± 0.01 at 25°C

### **Chloride Determination**

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 CΓ, 500 ppm CΓ (0.0141 Normal)
195516	Chloride Standard, 1 mL = 1 mg CΓ, 1000 ppm CΓ (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 CΓ
47401	Mercuric Nitrate, 0.141 Normal, 0.0705 Molar, 1 mg = 5 mL CΓ
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 CΓ
73501	Sodium Hydroxide, 0.100 Normal (N/10)
81801	Sulfuric Acid, 50% (v/v) Aqueous Solution (1 + 1)
83001	Sulfuric Acid, 1.00 Normal

### **Lead Determination**

6201	Ammonium Acetate, 40% (w/w) Aqueous Solution
63151	Ammonium Hydroxide, 10% (v/v) Aqueous Solution (1 + 9)
6401	Ammonium Hydroxide, 50% (v/v) Aqueous Solution (1 + 1)
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)
56001	Phenolphthalein Indicator, 0.5% (w/v) in 50% (v/v) Alcohol, Neutralized
604016	Potassium Cyanide, 10% (w/v) Aqueous Solution
758016	Sodium Sulfite, 5% (w/v) Aqueous Solution
785016	Sodium Tartrate, 10% (w/v) Aqueous Solution
841016	Thymol Blue Indicator, 0.4% (w/v) Aqueous Solution



## **Mercury Determination**

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)

## Phosphorous/Phosphate Determination

35032	Alcoholic Sulfuric Acid, for Phosphorus
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
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
816016	Sulfuric Acid, 14% (v/v) Aqueous Solution
83251	Sulfuric Acid, 5.00 Normal
898016	Vanadate-Molybdate Reagent, for Phosphorus Analysis

### **Calcium Determination**

6241	Ammonium Chloride, 2% (w/v) Aqueous Solution
6851	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
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)

## Iron Determination

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

# Nitrogen Content (not in Kjeldahl Digestion)

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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
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 Dihydro-chloride Solution
23171	Copper Sulfate, 2% (w/v) Aqueous Solution
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
545016	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Ammonia (12.2 ppm NH <sub>3</sub> )
545511	Nitrogen Standard, 1 mL = 1 mg N, 1000 ppm N as Ammonia (1216 ppm NH <sub>3</sub> )
545616	Nitrogen Standard, 1 mL = 0.01 mg N, 10 ppm N as Nitrate (44.27 ppm NO <sub>3</sub> )
545716	Nitrogen Standard, 1 mL = 0.1 mg N, 100 ppm N as Nitrate (442.7 ppm NO <sub>3</sub> )
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



## Nitrogen Content (not in Kjeldahl Digestion)

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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
13822615	Sodium Hydroxide, 10.0 Normal
747816	Sodium Hydroxide - EDTA Solution, 10 N
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
810316	Sulfanilamide Reagent, 1% (w/v) in 10% (v/v) Hydrochloric Acid
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
595016	Potassium Chloroplatinate, 0.2% (w/v) in 10% (v/v) Hydrochloric Acid

### **Arsenic Determination**

37101	Hydrochloric Acid, 2.00 Normal
4293416	Lead Acetate, 10% (w/v) Aqueous Solution
681016	Silver Diethyldithiocarbamate, 0.3% (w/v) in Chloroform
71291	Sodium Acetate, 0.200 Molar (M/5)

### **Magnesium Determination**

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)

# Conductivity

58850516	Potassium Chloride Conductivity Standard, 5 μs/cm (5 μmho/cm) at 25°C
22471	Conductivity/TDS Standard, 20 µs/cm (20,000 µs/cm) at 20°C, 11,000 ppm as NaCl
R5885050	Potassium Chloride Conductivity Standard, 5 $\mu$ S/cm (5 $\mu$ mho/cm) at 25°C
R2247000	Conductivity/TDS Standard, 20 mS/cm (20,000 µmho/cm) at 25°C, 11,000 ppm as NaCl

# **HPLC Reagents**

R01950004C	Acetone/Acetonitrile, 80/20, HPLC Grade
R48280004C	Methanol, HPLC Grade
67201	SFA Buffer, for HPLC
91531	Water, HPLC Grade, ACS Reagent Grade, Suitable for Ultraviolet Spectrophotometry and Liquid Chromatography





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