

Analytical Methods

Avantor offers a range of products for use in fluorescence spectrophotometry applications. J.T.Baker HPLC solvents are controlled for high assay and low UV absorption, fluorescence, residue, and

water. Selected J.T.Baker LC/MS solvents are also controlled for fluorescence and residue and are filtered through a 0.2 μm filter. Macron Fine Chemicals UltimAR solvents also are tested for fluorescence

interferences and controlled for residue.

For more information on these products, please see the Analytical Chromatography section of this catalog starting on page 22.

Wet Chemical Analysis

Wet chemical analysis refers to classical chemistry-based analytical methods that exclude the use of instrumentation. These methods are generally done in the liquid phase using relatively larger quantities of reagents than required by many instrumental techniques. Many wet chemical analysis applications are widely used today across all types of industries and have been effectively automated and computerized for efficiency.

Avantor offers a broad range of general reagents and specialty products for use in wet chemical analysis applications. Our products are sometimes designed with a specific application in mind, such as Karl Fischer titrations. Other products take a more generalized approach, such as our volumetric solutions, which aren't for a specific application, but are traceable to NIST standards to assure reliability in all applications. Whatever your wet chemistry application, you can have confidence that J.T.Baker and Macron Fine Chemicals brand products are of the highest purity and lot-to-lot consistency, and are among the finest chemicals available for wet chemical analysis in the market today.

Water Determination (Karl Fischer)

Water determination by Karl Fischer titration is a technique used in many industries in both research and quality control applications. The Karl Fischer



method has several major advantages over alternative methods, including speed, accuracy, and reliability. The method is highly selective for water, requires small sample sizes, has a short analysis time, and is suitable for automation.

The J.T.Baker HYDRA-POINT product line was developed with a pyridine-free formulation specifically for use in Karl Fischer volumetric and coulometric titrations. In comparison studies with other brands of Karl Fischer Reagents, HYDRA-POINT titers have been shown to be more stable and have less drift, helping to save time and reduce reagent usage.

HYDRA-POINT Karl Fischer Reagents

J.T.Baker HYDRA-POINT Karl Fischer reagents make water determination easy and

trouble-free. Products are formulated to give you consistent and reliable results for all types of samples. HYDRA-POINT products reach endpoint quickly, accurately, and with reproducibility, allowing you to perform more titrations in less time.

Volumetric Reagents

HYDRA-POINT volumetric reagents are pyridine-free, eliminating the hazards and unpleasant odor of pyridine-based solvents in the laboratory. These products are available as two-component systems with the reactants in two separate solutions, or as a one-component system where all reactants are in a single reagent, and the sample is placed in a methanol solution. We also offer dry methanol and a buffer solution for use in volumetric determinations.

J.T.Baker HYDRA-POINT Volumetric Reagents

One-Component Systems

Product	Product Number
HYDRA-POINT Comp 5	8890
HYDRA-POINT Comp 2	8891
HYDRA-POINT Comp 5K	8892
HYDRA-POINT Methanol Dry	8898
HYDRA-POINT Comp Buffer	8899

Two-Component Systems

Product	Product Number
HYDRA-POINT Titrant 5	8844
HYDRA-POINT Titrant 2	8845
HYDRA-POINT Solvent G	8855

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

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Coulometric Reagents

HYDRA-POINT coulometric reagents are designed to deliver faster analyses, lower detection limits, and increased accuracy. These products feature lower background noise that gives a better signal/noise ratio, resulting in a significant increase in the lower detection limit—to as low as 1 ppm. High imidazole concentration assures faster reaction kinetics, and therefore faster analyses. HYDRA-POINT coulometric Gen and Oven reagents are also halogen-free to help protect the environment.

J.T.Baker HYDRA-POINT Coulometric Reagents

Product	Product Number
HYDRA-POINT Coulometric Gen	8860
HYDRA-POINT Coulometric Oven	8861
HYDRA-POINT Coulometric Anode	8862
HYDRA-POINT Cathode Solution	8863

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Titrimetry

Titrimetry, also known as titration or volumetric analysis, is a common laboratory method of quantitative chemical analysis. In this method, measured volumes of a titrant are added to a vial containing a known reactant to determine the concentration of the reactant. The endpoint of the reaction can be determined by color change, pH change, precipitation, or a variety of other means.

Avantor offers a range of J.T.Baker and Macron Fine Chemicals products for titrimetric applications, including volumetric solutions that are traceable to NIST, volumetric concentrates that are diluted to create fresh standard solutions, primary standards, indicators, and general ACS reagents that are suitable for use in testing products using USP/NF or PhEur monographs.



J.T.Baker Titrimetry Products

Product	Product Number
Acetate Buffer pH 4.5 DILUT-IT Dissolution Media Concentrate	D017
Ammonia, T.S.	5905
Ammonia-Ammonium Chloride Buffer, T.S.	5904
Ammonium Hydroxide, 5N Volumetric Solution	5604
Ammonium Hydroxide, 5N Volumetric Solution	5604
Ammonium Oxalate, T.S.	5906
Ammonium Sulfate, 3% (w/v) Solution	0332
Ammonium Sulfate, 38% (w/w) Solution	0791
Ammonium Sulfate, 6% (w/v) Solution	0333
Ammonium Thiocyanate, 0.1N Volumetric Solution	5627
Barium Chloride, T.S.	5907
Bromine (Bromide-Bromate), 0.1N Volumetric Solution	5625
Bromocresol Green, T.S.	5908
Bromocresol Purple, T.S.	5909
Bromophenol Blue, T.S.	5910
Buffer Concentrate (Biphthalate), pH 4, DILUT-IT	4795
Buffer Concentrate (Carbonate), pH 10, DILUT-IT	4797
Buffer Concentrate (Phosphate), pH 7, DILUT-IT	4796
Buffer Solution (Biphthalate), pH 4	5606
Buffer Solution (Biphthalate), pH 4 (Color Coded Red)	5657
Buffer Solution (Borate), pH 10	5609
Buffer Solution (Borate), pH 10 (Color Coded Blue)	5655
Buffer Solution (Phosphate), pH 7	5608
Buffer Solution (Phosphate), pH 7 (Color Coded Yellow)	5656
Calcium Chloride, T.S.	5912
Ceric Sulfate, 0.1N Volumetric Solution	5626

J.T.Baker Titrimetry Products

Product	Product Number
Congo Red, T.S.	5914
Cresol Red, T.S.	5916
Crystal Violet, 0.1% Aqueous Solution	0399
Crystal Violet, T.S.	5917
Decalcifying Solution, Krajian	G161
EDTA Standard Solution (1 mL = 1 mg CaCO ₃)	5648
EDTA, Disodium Salt, Dihydrate, 0.1M Volumetric Solution	5632
EDTA, Disodium Salt, DILUT-IT Analytical Concentrate, 0.1M	4653
Eriochrome Black, T.S.	5920
Fehling's Solution (A), T.S.	5918
Fehling's Solution (B), T.S.	5919
Ferric Ammonium Sulfate, T.S.	5930
Ferric Chloride, T.S.	5921
Formalin, 10% w/v Solution	M518
Giemsa Blood Staining Solution, Stock	M708
Hydrochloric Acid 0.01N DILUT-IT Dissolution Media Concentrate	D010
Hydrochloric Acid 0.1N DILUT-IT Dissolution Media Concentrate	D011
Hydrochloric Acid, 0.01N Volumetric Solution	5611
Hydrochloric Acid, 0.02N Volumetric Solution	5614
Hydrochloric Acid, 0.1N Volumetric Solution	5621
Hydrochloric Acid, 0.2N Volumetric Solution	5612
Hydrochloric Acid, 0.5N Volumetric Solution	5622
Hydrochloric Acid, 1N Volumetric Solution	5620
Hydrochloric Acid, 2N Volumetric Solution	5616
Hydrochloric Acid, 5N Volumetric Solution	5618
Hydrochloric Acid, 6N Volumetric Solution	5619
Hydrochloric Acid, DILUT-IT Analytical Concentrate, 0.1N	4655
Hydrochloric Acid, DILUT-IT Analytical Concentrate, 0.5N	4654
Hydrochloric Acid, DILUT-IT Analytical Concentrate, 1N	4657
Iodine (Iodine-Iodide), 0.01N Volumetric Solution	5689
Iodine (Iodine-Iodide), 0.1N Volumetric Solution	5623
Iodine (Iodine-Iodide), 1N Volumetric Solution	5688
Iodine (Iodine-Iodide), DILUT-IT Analytical Concentrate, 0.01N	4660
Iodine (Iodine-Iodide), DILUT-IT Analytical Concentrate, 0.1N	4662
Iodine and Potassium Iodide, T.S.	5923
Iodine Monochloride, T.S.	5922
Iodochloride, T.S.	5924
Lanthanum, 1% w/v	6947
Lanthanum, 1% w/v	6948
m-Cresol Purple, T.S.	5915
Methyl Orange, T.S.	5925
Methyl Red, T.S.	5926

Product	Product Number
New Methylene Blue N, Brecher Formula	R769
Nitric Acid, 0.1N Volumetric Solution	5600
Nitric Acid, 2N Volumetric Solution	5639
Nitric Acid, DILUT-IT Analytical Concentrate, 0.1N	4712
Oxalic Acid, 0.1N Volumetric Solution	5628
Oxalic Acid, DILUT-IT Analytical Concentrate, 0.1N	4665
Perchloric Acid, 0.1N in Glacial Acetic Acid Volumetric Solution	5624
Phenolphthalein, T.S.	5927
Phosphate Buffer, M/15, pH 6.8	U033
Platinum Chloride Solution	2896
Potassium Bromate, 0.1N Volumetric Solution	5629
Potassium Dichromate, DILUT-IT Analytical Concentrate, 0.1N	4671
Potassium Hydroxide, 0.1N in Ethanol Volumetric Solution	5645
Potassium Hydroxide, 0.1N in Methanol Volumetric Solution	5650
Potassium Hydroxide, 0.1N Volumetric Solution	5603
Potassium Hydroxide, 0.1N Volumetric Solution	5603
Potassium Hydroxide, 0.5N in Ethanol Volumetric Solution	5644
Potassium Hydroxide, 0.5N in Methanol Volumetric Solution	5631
Potassium Hydroxide, 1N Volumetric Solution	5602
Potassium Hydroxide, 1N Volumetric Solution	5602
Potassium Hydroxide, DILUT-IT Analytical Concentrate, 0.1N	4673
Potassium Hydroxide, DILUT-IT Analytical Concentrate, 1N	4674
Potassium Iodate, DILUT-IT Analytical Concentrate, 0.1N	4676
Potassium Iodide, T.S.	5931
Potassium Permanganate, 0.1N Volumetric Solution	5651
Potassium Permanganate, DILUT-IT Analytical Concentrate, 0.1 N	4677
Potassium Phosphate pH 5.8 DILUT-IT Dissolution Media Concentrate	D012
Potassium Phosphate pH 6.0 DILUT-IT Dissolution Media Concentrate	D013
Potassium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate	D014
Potassium Phosphate pH 7.2 DILUT-IT Dissolution Media Concentrate	D015
Potassium Phosphate pH 7.4 DILUT-IT Dissolution Media Concentrate	D019
Potassium Phosphate pH 7.5 DILUT-IT Dissolution Media Concentrate	D016
Schiff Reagent, Hotchkiss and McManus	U973
Silver Nitrate Standard Solution (1 mL = 1 mg Chloride)	5652
Silver Nitrate Standard Solution (1 mL = 1 mg Chloride)	5652
Silver Nitrate, 0.1 N Volumetric Solution	5630
Silver Nitrate, DILUT-IT Analytical Concentrate, 0.1N	4681
Simulated Gastric Fluid (without enzyme)	D020

Analytical Methods

J.T.Baker Titrimetry Products

Product	Product Number
Sodium Carbonate, 1N Volumetric Solution	5646
Sodium Carbonate, DILUT-IT Analytical Concentrate, 0.1N	4683
Sodium Chloride, DILUT-IT Analytical Concentrate, 0.1N	4684
Sodium Hydroxide, 0.01N Volumetric Solution	5663
Sodium Hydroxide, 0.02N Volumetric Solution	5653
Sodium Hydroxide, 0.05N Volumetric Solution	5664
Sodium Hydroxide, 0.1N Volumetric Solution	5636
Sodium Hydroxide, 0.25N Volumetric Solution	5638
Sodium Hydroxide, 0.2N Volumetric Solution	5665
Sodium Hydroxide, 0.5N Volumetric Solution	5634
Sodium Hydroxide, 0.6N Volumetric Solution	5667
Sodium Hydroxide, 10N Volumetric Solution	5674
Sodium Hydroxide, 1N Volumetric Solution	5635
Sodium Hydroxide, 2.5N Volumetric Solution	5666
Sodium Hydroxide, 25% (w/w) Solution	5661
Sodium Hydroxide, 2N Volumetric Solution	5633
Sodium Hydroxide, 4N Volumetric Solution	5669
Sodium Hydroxide, 5N Volumetric Solution	5671
Sodium Hydroxide, 6N Volumetric Solution	5672
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.02N	4715
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.1N	4687
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 0.5N	4691
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 1N	4689

Product	Product Number
Sodium Hydroxide, DILUT-IT Analytical Concentrate, 5N	4690
Sodium Lauryl Sulfate 0.50% DILUT-IT Dissolution Media Concentrate	D018
Sodium Phosphate pH 6.8 DILUT-IT Dissolution Media Concentrate	D021
Sodium Thiosulfate, 0.1N Volumetric Solution	5637
Sodium Thiosulfate, 1N Volumetric Solution	5654
Sodium Thiosulfate, DILUT-IT Analytical Concentrate, 0.01N	4693
Sodium Thiosulfate, DILUT-IT Analytical Concentrate, 0.1N	4695
Sulfuric Acid, 0.02N Volumetric Solution	5693
Sulfuric Acid, 0.125N Volumetric Solution	5692
Sulfuric Acid, 0.1N Volumetric Solution	5641
Sulfuric Acid, 0.2N Volumetric Solution	5690
Sulfuric Acid, 0.5N Volumetric Solution	5640
Sulfuric Acid, 1N Volumetric Solution	5642
Sulfuric Acid, 3.5N Volumetric Solution	5951
Sulfuric Acid, 50% (w/w) Solution	9696
Sulfuric Acid, 5N Volumetric Solution	5691
Sulfuric Acid, DILUT-IT Analytical Concentrate, 0.02N	4704
Sulfuric Acid, DILUT-IT Analytical Concentrate, 0.1N	4699
Sulfuric Acid, DILUT-IT Analytical Concentrate, 1N	4700
Thymol Blue, T.S.	5929
Thymolphthalein, T.S.	5932

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

Macron Fine Chemicals Titrimetry Products

Product	Product Number
Ammonium Chloride - Hydroxide Buffer (APHA)	H004
Buffer pH 10.00 Reference Solution	0032
Buffer pH 10.00 Reference Solution	0099
Buffer pH 4.01 Reference Solution	0029
Buffer pH 4.01 Reference Solution	0097
Buffer pH 7.0 Reference Solution	0031
Buffer pH 7.0 Reference Solution	0098
Decalcifying Solution, Krajian	E068
EDTA Titrant (Disodium), 0.0575 Molar Volumetric Solution	H109
EDTA Titrant, 0.01 Molar (M/100) Volumetric Solution (APHA)	H105
EDTA Titrant, 0.05 Molar (M/20) Volumetric Solution	H115
EDTA Titrant, 0.1 Molar (M/10) Volumetric Solution	H100
Fehling's Solution A	H118
Fehling's Solution B	H125
Ferroun Indicator	H119

Product	Product Number
Formaldehyde Solution, 10% (w/v) in Aqueous Phosphate Buffer	H121
Giemsa Blood Staining Solution, Stock	E052
Hydrochloric Acid 10%	H151
Hydrochloric Acid, 0.1 Normal (N/10) Volumetric Solution	2853
Hydrochloric Acid, 1.0 Normal Volumetric Solution	6388
Hydrochloric Acid, 6.0 Normal Volumetric Solution	H168
Iodine, 0.01 Normal (N/100) Volumetric Solution	H175
Iodine, 0.0282 Normal Volumetric Solution (APHA)	H169
Iodine, 0.10 Normal (N/10) Volumetric Solution	2962
Iodine, 1.0 Normal Volumetric Solution	H185
Iodine-Monochloride Solution	H180
Lead Acetate Cotton	H220
Nessler Reagent	H261
New Methylene Blue N, Brecher Formula	E069
Nitric Acid, 10%	H262

Macron Fine Chemicals Titrimetry Products

Product	Product Number
Oxalic Acid, 10% (w/v) Aqueous (APHA)	H281
Perchloric Acid, 0.10 Normal (in Glacial Acetic Acid) Volumetric Solution	H301
Phenol Red, 0.04% (w/v) Aqueous, pH 6.8-8.2	H308
Phenol Solution (1 ml = 1 mg Phenol)	H302
Phenolphthalein, 0.5% in 50% Alcohol (APHA), pH 8.0-10.0	H297
Phenolphthalein, 1.0% in 50% Alcohol	H295
Phenolphthalein, 1.0% in 95% Alcohol (APHA), pH 8.0-10.0	H306
Platinum Cobalt Color Standard (APHA 500)	H296
Potassium Chloride, Saturated Aqueous	H300
Potassium Hydroxide, 10% (w/v) Aqueous	H320
Potassium Hydroxide, 45% Solution	6671
Potassium Permanganate, 1.0 Normal Volumetric Solution	6139
Schiff Reagent, Hotchkiss and McManus	E070
Silver Nitrate, 0.0141 Normal Volumetric Solution (APHA)	H383
Silver Nitrate, 0.0171 Normal Volumetric Solution	H394
Silver Nitrate, 0.10 Normal (N/10) Volumetric Solution	6142
Silver Nitrate, 0.171 Normal Volumetric Solution	H391

Product	Product Number
Sodium Hydroxide, 0.10 Normal (N/10) Volumetric Solution	6146
Sodium Hydroxide, 0.5 Normal (N/2) Volumetric Solution	H380
Sodium Hydroxide, 1.0 Normal Volumetric Solution	4693
Sodium Hydroxide, 10.0 Normal Volumetric Solution	H385
Sodium Thiosulfate, 0.01 Normal (N/100) Volumetric Solution	H362
Sodium Thiosulfate, 0.025 Normal (N/40) Volumetric Solution	H371
Sodium Thiosulfate, 0.1 Normal (N/10) Volumetric Solution	4682
Sodium Thiosulfate, 0.20 Normal (N/5) Volumetric Solution	5531
Sodium Thiosulfate, 1.0 Normal Volumetric Solution	6840
Starch Indicator, 0.5% (w/v) Aqueous (APHA)	H365
Sulfuric Acid, 1.0 Normal Volumetric Solution	7610
Sulfuric Acid, 10% (w/v) R.S.	H378
Sulfuric Acid, 10.0 Normal Volumetric Solution	H379
Sulfuric Acid, 18 Normal	2878
Sulfuric Acid, 2.0 Normal Volumetric Solution	H381

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

Ion Determination

The determination of specific ions in a sample is an analytical method done in a wide variety of industries. From field testing of water or other liquid samples to checking for peroxide levels in laboratory reagents, there is often a need for a fast, semi-quantitative determination of ion presence.

J.T.Baker BAKER TESTRIPS are the viable alternative to time-consuming and costly wet chemical methods in these cases. These strips or kits are suitable for testing solvents, acids, bases, and aqueous solutions in the lab or the field. If sample preparation is required, the BAKER TESTRIP kit contains the necessary reagents. Strips are dipped in the solution for up to 30 seconds and the results are read by comparing the strips to the color scale printed on the package.

J.T.Baker BAKER TESTRIPS

Product	Range	Product Number
BAKER TESTRIPS For Ammonium (NH ₄ ⁺)	10–400 mg/L (ppm)	4408
BAKER TESTRIPS For Ascorbic Acid	50–2000 mg/L (ppm)	4409
BAKER TESTRIPS For Copper (Cu ⁺ , Cu ²⁺)	10–1000 mg/L (ppm)	4412
BAKER TESTRIPS For Nickel (Ni ²⁺)	10–1000 mg/L (ppm)	4414
BAKER TESTRIPS For Nitrite (NO ₂ ⁻)	1–80 mg/L (ppm)	4415
BAKER TESTRIPS For Peroxide (H ₂ O ₂)	1–100 mg/L (ppm)	4416
BAKER TESTRIPS for Potassium (K ⁺)	200–1500 mg/L (ppm)	4417
BAKER TESTRIPS For Sulfite (SO ₃ ²⁻)	10–1000 mg/L (ppm)	4418
BAKER TESTRIPS For Water Hardness	90–450 mg CaCO ₃ /L (ppm)	4420

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com.

Analytical Methods

pH Measurement

J.T.Baker BAKER-pHIX pH test strips, BAKER-pHIX indicator sticks and DUAL-TINT pH papers all provide fast, easy, accurate results with a broad selection of pH ranges. Each type of indicator has different performance features, as indicated below. We also offer prepared J.T.Baker and Macron Fine Chemicals pH buffer solutions and J.T.Baker DILUT-IT buffer concentrates that make it easy to prepare fresh solutions whenever needed.

BAKER-pHIX pH Paper with Color Scale

The color scale is printed right on the pH paper for quick, accurate readings without referring to a separate scale. This is useful where pH papers are shared, and it also has other advantages. Both the indicator and color scale are wetted at the same time and are side-by-side, making comparison easier and more accurate. This is especially important when testing colored solutions. Each box contains 200 strips.

BAKER-pHIX pH Papers with Color Scale

pH Range	pH Gradation	Product Number
1-12	1	4399-01
1.8-3.8	0.2/0.3	4400-01
2.8-4.6	0.2/0.3	4401-01
3.8-5.5	0.2/0.3	4402-01
4.0-9.0	0.5	4403-01
5.2-6.8	0.2/0.3	4404-01
6.0-8.1	0.3	4405-01
7.2-8.8	0.2/0.3	4406-01
8.0-9.7	0.2/0.3	4407-01

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

BAKER-pHIX pH Indicator Sticks

These pH indicator sticks feature up to four color-fixed test zones on a durable plastic strip. Additionally, these indicator sticks contain a larger scale and well-separated

dyes to make them easier to read. They are made with color-fixed, non-bleeding dyes that will not contaminate your samples.

Solutions do not need to be buffered before testing. Each box contains 100 sticks, four boxes per case.

BAKER-pHIX Indicator Sticks

pH Range	pH Gradation	Product Number
0-14	1	4390-01
0.0-6.0	0.5	4391-01
1.7-3.8	0.3	4392-01
2.0-9.0	0.5	4393-01
3.6-6.1	0.3/0.5	4394-01
4.5-10	0.5	4395-01
6.0-7.7	0.3/0.4	4396-01
7.0-14	0.5	4397-01
7.5-9.5	0.2/0.4	4398-01

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

DUAL-TINT pH Papers

This pH paper is in a rolled 17-foot strip, $\frac{3}{8}$ " wide in a refillable dispenser complete with color scale. DUAL-TINT pH papers offer easy-to-read, precise pH indication. Two different indicator zones on one strip separated by a white center division guarantees clear color gradations and reliable pH values. The papers are also available as refills for the dispenser in packs of three rolls.

J.T.Baker DUAL-TINT pH Papers

pH Range	pH Gradation	Product Number	Price Box*
1-12	1	2867-01	\$35.10
3.5-6.8	0.3	2871-01	33.55
5.0-8.0	0.3	2869-01	33.55
7.0-10.0	0.3	2868-01	33.55
9.5-14.0	0.3	2880-01	33.55

*A rolled 17-foot strip, $\frac{3}{8}$ " wide in a refillable dispenser.

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker DUAL-TINT Refills

pH Range	pH Gradation	Product Number	Price Box*
1-12	1	2873-01	\$61.20
1.0-4.3	0.3	2879-01	57.25
3.5-6.8	0.3	2876-01	57.25
5.0-8.0	0.3	2875-01	57.25

*Each box contains 3 rolls.

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

pH Buffer Solutions and Concentrates

You can eliminate the time and expense of preparing and standardizing solutions with our pH buffer solutions and concentrates.

J.T.Baker buffer solutions are manufactured

J.T.Baker pH Buffer Solutions

Description	Product Number
Buffer Solution (Biphthalate), pH 4	5606
Buffer Solution (Biphthalate), pH 4 (Color-coded Red)	5657
Buffer Solution (Phosphate), pH 7	5608
Buffer Solution (Phosphate), pH 7 (Color-coded Yellow)	5656
Buffer Solution (Borate), pH 10	5609
Buffer Solution (Borate), pH 10 (Color-coded Blue)	5655

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

J.T.Baker DILUT-IT Buffer Concentrates

Description	Size	Product Number
Buffer Solution Biphthalate, pH 4	Ampoule for dilution to 500 mL	4795
Buffer Solution Phosphate, pH 7	Ampoule for dilution to 500 mL	4796
Buffer Concentrate Carbonate, pH 10	Ampoule for dilution to 500 mL	4797

For product specifications, packaging, and prices, please see the J.T.Baker brand A to Z section (pages 107-422) of this catalog or visit our web site at www.avantormaterials.com

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Macron Fine Chemicals pH Buffer Solutions

Description	Product Number
BuffAR pH 4.01 Reference Solution	0029
BuffAR pH 4.01 Reference Solution	0097
BuffAR pH 7.0 Reference Solution	0031
BuffAR pH 7.0 Reference Solution	0098
BuffAR pH 10.00 Reference Solution	0032
BuffAR pH 10.00 Reference Solution	0099

For product specifications, packaging, and prices, please see the Macron Fine Chemicals brand A to Z product listing section (pages 423-568) of this catalog or visit our web site at www.avantormaterials.com.

in large lots certified traceable to NIST Standard Reference Buffers. Solutions are available in clear and color-coded versions in a variety of sizes. J.T.Baker DILUT-IT buffer concentrates make it easy to create fresh

solutions whenever needed by diluting the ampoule contents with water to a volume of 500 mL. Diluted solutions are accurate to ± 0.01 pH units.

Macron Fine Chemicals ready-to-use pH buffers are manufactured to stringent specifications and utilize quality control procedures to reduce lot-to-lot variability. Products are available in clear or color-coded versions in a variety of sizes. Inquire for customized solutions and packaging sizes.

Other Wet Chemical Analyses

Avantor offers a broad line of reagents for other wet chemical analysis methods, such as gravimetry, anion/cation determination, alkalinity, and others. In general, Macron Fine Chemicals reagents are the universal

brand, where you'll find good quality versatile reagents at reasonable prices. J.T.Baker reagents are the highly characterized brand with quality products for the most demanding applications. Whichever brand you choose, you'll find that you're buying a product that Avantor stands behind with over 100 years of experience, service, and dedication to providing the finest quality products available to the chemical marketplace.

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