Ferric Chloride CS—Dissolve about 55 g of ferric chloride ( $\mathrm{FeCl}_{3} \cdot 6 \mathrm{H}_{2} \mathrm{O}$ ) in enough of a mixture of 25 mL of hydrochloric acid and 975 mL of water to make 1000 mL . Pipet 10 mL of this solution into a $250-\mathrm{mL}$ iodine flask, add 15 mL of water, 3 g of potassium iodide, and 5 mL of hydrochloric acid, and allow the mixture to stand for 15 minutes. Dilute with 100 mL of water, and titrate the liberated iodine with 0.1 N sodium thiosulfate VS , adding 3 mL of starch TS as the indicator. Perform a blank determination with the same quantities of the same reagents, and make any necessary correction. Each mL of 0.1 N sodium thiosulfate is equivalent to 27.03 mg of $\mathrm{FeCl}_{3} \cdot 6 \mathrm{H}_{2} \mathrm{O}$. Adjust the final volume of the solution by the addition of enough of the mixture of hydrochloric acid and water so that each mL contains 45.0 mg of $\mathrm{FeCl}_{3} \cdot 6 \mathrm{H}_{2} \mathrm{O}$.

## INDICATORS SOLUTIONS

See TEST SOLUTIONS.

## TEST SOLUTIONS (TS)

## Change to read:

## 1. USE AS INDICATORS

Certain test solutions are intended for use as $\Delta$ detectors of a shift in solution composition (e.g., hydrogen ion, complexometric precipitation, iodometric determination, etc.). Ausen

## 2. VOLUMETRIC SOLUTIONS USED AS TEST SOLUTIONS

Where it is directed that a volumetric solution be used as the test solution in a qualitative procedure, standardization of the solution used as the test solution is not required.

## 3. SOLUTIONS PREPARED FRESH

In general, the directive to prepare a solution "fresh" indicates that the solution is of limited stability and must be prepared on the day of use.

Acetaldehyde TS—Mix 4 mL of acetaldehyde, 3 mL of alcohol, and 1 mL of water. Prepare this solution fresh.

Acetate Buffer TS-Dissolve 320 g of ammonium acetate in 500 mL of water, add 5 mL of glacial acetic acid, dilute with water to 1000.0 mL , and mix. This solution has a pH between 5.9 and 6.0.

1 M Acetic Acid TS-Transfer 57.4 mL of glacial acetic acid to a $1000-\mathrm{mL}$ volumetric flask. Dilute with water to volume.

2 M Acetic Acid TS-Transfer 114.8 mL of glacial acetic acid to a $1000-\mathrm{mL}$ volumetric flask. Dilute with water to volume.
0.008 M Acetic Acid TS-Transfer 0.5 mL of glacial acetic acid to a $1000-\mathrm{mL}$ volumetric flask containing about 250 mL of water. Cool and dilute with water to volume.
0.3 N Acetic Acid TS-Transfer 17.2 mL of glacial acetic acid to a $1000-\mathrm{mL}$ volumetric flask containing about 500 mL of water. Cool and dilute with water to volume.

Acetic Acid, Glacial, TS-Determine the water content of a specimen of glacial acetic acid by the Titrimetric Method (see Water Determination $\langle 921\rangle$ ). If the acid contains more than
$0.4 \%$ of water, add a few mL of acetic anhydride, mix, allow to stand overnight, and again determine the water content. If the acid contains less than $0.02 \%$ of water, add sufficient water to make the final concentration between $0.02 \%$ and $0.4 \%$, mix, allow to stand overnight, and again determine the water content. Repeat the adjustment with acetic anhydride or water, as necessary, until the resulting solution shows a water content of not more than $0.4 \%$.

Acetic Acid, Strong, TS—Add 300.0 mL of glacial acetic acid, and dilute with water to 1000 mL . This solution contains about $30 \%(\mathrm{v} / \mathrm{v})$ of $\mathrm{CH}_{3} \mathrm{COOH}$ and has a concentration of about 5 N .

Acetic Acid-Ammonium Acetate Buffer TS—Dissolve 77.1 g of ammonium acetate in water, add 57 mL of glacial acetic acid, and dilute with water to 1000 mL .

Acetone, Buffered, TS-Dissolve 8.15 g of sodium acetate and 42 g of sodium chloride in about 100 mL of water, and add 68 mL of 0.1 N hydrochloric acid and 150 mL of acetone. Mix, and dilute with water to 500 mL .

Acid Ferric Chloride TS-Mix 60 mL of glacial acetic acid with 5 mL of sulfuric acid, add 1 mL of ferric chloride TS, mix, and cool.

Acid Ferrous Sulfate TS-See Ferrous Sulfate, Acid, TS.
Acid Stannous Chloride TS—See Stannous Chloride, Acid, TS.
Acid Stannous Chloride TS, Stronger-See Stannous Chloride, Acid, Stronger, TS.

Albumen TS-Carefully separate the white from the yolk of a strictly fresh hen's egg. Shake the white with 100 mL of water until mixed and all but the chalaza has undergone solution; then filter. Prepare the solution fresh.

Alcohol-Phenol TS—Dissolve 780 mg of phenol in alcohol to make 100 mL .

Alcoholic TS-It contains 95 parts of specially denaturated alcohol 3A with 5 parts of isopropyl alcohol. The final concentrations are approximately $90 \%$ alcohol, $5 \%$ methanol, and $5 \%$ isopropanol.
[NOTE-A suitable grade is available as Reagent alcohol, catalog number R8382, available at www.sigma-aldrich. com.]
Alcoholic Ammonia TS-See Ammonia TS, Alcoholic.
Alcoholic Mercuric Bromide TS-See Mercuric Bromide TS, Alcoholic.

Alcoholic Potassium Hydroxide TS-See 0.5 N Alcoholic Potassium Hydroxide VS.
Alkaline Cupric Citrate TS-See Cupric Citrate TS, Alkaline.
Alkaline Cupric Citrate TS 2-See Cupric Citrate TS 2, Alkaline.

Alkaline Cupric lodide TS-See Cupric lodide TS, Alkaline.
Alkaline Cupric Tartrate TS (Fehling's Solution)—See Cupric Tartrate TS, Alkaline.

Alkaline Mercuric-Potassium Iodide TS-See
Mercuric-Potassium lodide TS, Alkaline.
Alkaline Picrate TS-See Picrate TS, Alkaline.

