I - Imidazole R.... Isopropyl myristate R

Imidazole R

Glyoxaline, $C_3H_4N_2$. Contains not less than 99.0% of $C_3H_4N_2$.

Description. A white, crystalline powder.

Solubility. Soluble in water and ethanol (~750 g/L) TS.

Melting range. 89–93 °C.

Sulfated ash. Not more than 0.5 mg/g.

Assay. Dissolve 0.3 g in 50 mL of water and titrate with sulfuric acid (0.05 mol/L) VS using bromocresol green/ethanol TS as indicator. Each mL of sulfuric acid (0.05 mol/L) VS is equivalent to 6.808 mg of $C_3H_4N_2$.

Imidazole, recrystallized, R

Procedure. Dissolve 25 g of imidazole R in 100 mL of hot toluene R and cool in an ice-bath while stirring. Filter off the crystals with suction using filter-paper Whatman No. 54 or No. 541. Repeat the crystallization and filtration, sucking as dry as possible. Slurry wash the resulting crystals with about 50 mL of ether R and filter. Repeat this process and then wash the crystals on the filter with ether R and suck as dry as possible. Transfer to a shallow dish and dry at room temperature under reduced pressure (not exceeding 0.6 kPa or about 5 mm of mercury) over silica gel, desiccant, R.

Storage. Store in a tightly closed container.

Imidazole/mercuric chloride TS

Procedure. Dissolve 8.25 g of recrystallized imidazole R in 60 mL of water and add 10 mL of hydrochloric acid (5 mol/L) VS. Under continuous stirring add, drop by drop, 10 mL of mercuric chloride (2.7 g/L) TS. If a cloudy solution results discard and prepare a further solution by adding the mercuric chloride solution more slowly. Adjust the pH to 6.80 ± 0.05 with hydrochloric acid (5 mol/L) VS (about 4 mL is required) and add sufficient water to produce 100 mL.

Iminodibenzyl R

10,11-Dihydro-5H-dibenz[b,f]azepine; $C_{14}H_{13}N$.

Description. A pale yellow, crystalline powder.

Melting temperature. About 106 °C.

Iobenguane sulfate R

$C_{16}H_{22}I_2N_6O_4S$.

Description. White crystals.

Melting point. About 160 °C.

Iodide standard (20 µg I/mL) TS

Procedure. Dissolve 26.0 mg of potassium iodide R in sufficient water to produce 100 mL. Dilute 10 mL of this solution to 100 mL with water.

Iodine (0.0001 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 25.38 mg of I_2 and 36 mg of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the solution following the method described under iodine (0.1 mol/L) VS.

Iodine (0.0005 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 0.127 g of I2 and 0.18 g of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the solution following the method described under "Iodine (0.1 mol/L) VS".

Iodine (0.005 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 1.269 g of I_2 and 1.80 g of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the solution following the method described under iodine (0.1 mol/L) VS.

Iodine (0.01 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 2.538 g of I_2 and 3.6 g of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the solution following the method described under iodine (0.1 mol/L) VS.

Iodine (0.02 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 5.076 g of I_2 and 7.2 g of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the solution following the method described under iodine (0.1 mol/L) VS.

Iodine (0.05 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 12.69 g of I_2 and 18.0 g of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the solution following the method described under iodine (0.1 mol/L) VS.

Iodine (0.1 mol/L) VS

Iodine R and potassium iodide R, dissolved in water to contain 25.38 g of I_2 and 36.0 g of KI in 1000 mL.

Method of standardization. Ascertain the exact concentration of the 0.1 mol/L solution by titrating 25.0 mL with sodium thiosulfate (0.1 mol/L) VS, using starch TS as indicator.

Iodine bromide R

IBr.

Description. Blue-black or brownish-black crystals.

Solubility. Freely soluble in water, ethanol (~750 g/L) TS, ether R and glacial acetic acid R.

Melting temperature. About 40 °C.

Storage. Store in a cool place, in a tightly closed container, protected from light.

Iodine bromide TS

Procedure. Dissolve 20 g of iodine bromide R in sufficient glacial acetic acid R to produce 1000 mL.

Storage. Store in a tightly closed container, protected from light.

Iodine pentoxide R

Iodic anhydride; I_2O_5.

A commercially available reagent of suitable grade.

Iodine R

I_2 (SRIP, 1963, p. 101).

Iodine solution TS

To 10.0 mL of M iodine (0.05 mol/L) VS add 0.6 g of potassium iodide R and dilute to 100.0 mL with water R. Prepare immediately before use.

Iodine TS

Procedure. Dissolve 2.6 g of iodine R and 3 g of potassium iodide R in sufficient water to produce 100 mL (approximately 0.1 mol/L).

Iodine/chloroform TS

Procedure. Dissolve 5.0 g of iodine R in sufficient chloroform R to produce 100 mL.

Iodine/ethanol TS

Procedure. Dissolve 10 g of iodine R in sufficient ethanol (~750 g/L) TS to produce 1000 mL.

Iron colour TS

A solution containing 45.0 mg/mL of $FeCl_3,6H_2O$.

Procedure. Prepare a solution containing 4.500 g of $FeCl_3,6H_2O$ in 100 mL, diluting the strong iron colour TS with sulfuric acid (~10 g/L) TS as necessary.

Iron colour, strong, TS

Procedure. Dissolve 6.6 g of ferric chloride R in 120 mL of sulfuric acid (~10 g/L) TS, filter the solution if necessary and determine the concentration of $FeCl_3,6H_2O$.

Assay. Dilute 5.0 mL with sufficient water to produce 25.0 mL. Transfer 10.0 mL of this solution to a flask and add 60 mL of water. Adjust the pH to 2–3 with hydrochloric acid (1 mol/L) VS and ammonia (~100 g/L) TS using congo red paper R. Heat the solution to approximately 45 °C and titrate with disodium edetate (0.05 mol/L) VS using 2 mL of sulfosalicylic acid (175 g/L) TS as indicator until the solution changes from a lilac tint to straw-yellow. Each mL of disodium edetate (0.05 mol/L) VS is equivalent to 13.52 mg of $FeCl_3,6H_2O$.

Iron salicylate TS

Procedure. Dissolve 0.5 g of ferric ammonium sulfate R in 250 mL of water containing 10 mL of sulfuric acid (~100 g/L) TS and dilute with sufficient water to produce 500 mL. To 100 mL of this solution add 50 mL of sodium salicylate (11.5 g/L) TS, 20 mL of acetic acid (~60 g/L) TS and 80 mL of sodium acetate (150 g/L) TS and dilute with water to 500 mL.

Storage. Store in a well-closed container, protected from light.

Note. Iron salicylate must be freshly prepared.

Iron standard FeTS

Procedure. Dissolve 0.173 g of ferric ammonium sulfate R in 100 mL of water, add 5 mL of hydrochloric acid (~70 g/L) TS and sufficient water to produce 1000 mL. Each mL of this solution contains 20 µg of iron.

Iron, reduced, R

Fe (SRIP, 1963, p. 102).

Isobutyl methyl ketone R

4-Methyl-2-pentanone; $C_6H_{12}O$.

Description. A clear, colourless liquid; odour, characteristic.

Boiling point. About 115 °C.

Mass density. ρ_{20} = about 0.80 kg/L.

Isoleucine R

(2*S*,3*S*)-2-Amino-3-methylpentanoic acid; $C_6H_{13}NO_2$

Description. White or almost white, crystalline powder or flakes.

Solubility. Sparingly soluble in water, slightly soluble in ethanol (~750 g/L) TS. It dissolves in dilute mineral acids and in dilute solutions of alkali hydroxides.

L-Isoleucine R

(2S,3S)-2-Amino-3-methylpentanoic acid, $C_6H_{13}NO_2$, content: 98.5% to 101.0% (dried substance).

Isoniazid R

Isoniazid as described in the monograph for *Isoniazid*.

Isopropylamine R

C_3H_9N.

Description. A colourless, volatile liquid with an ammoniacal odour.

Boiling point. About 33 °C.

Mass density. ρ_{20} = about 0.69 kg/L.

Isopropyl iodide R

2-Iodopropane. C_3H_7I. CAS Reg. No. 75-30-9.

Content. Minimum 99%.

Isopropyl myristate R

Propan-2-yl tetradecanoate. $C_{17}H_{34}O_2$.

Description: A clear, colourless, oily liquid.

Miscibility: Immiscible with water, miscible with ethanol, with fatty oils, with liquid paraffin.