

RESIDUE ON IGNITION (Reagent test): not more than 0.1%.

DEAE-Agarose [57407-08-6]—Agarose beads chemically bonded with diethylaminoethane and suspended in a 20% ethanol solution in water.

[NOTE—Commercially available as DEAE-Sepharose.]

Decanol (*n-Decyl Alcohol*), $C_{10}H_{22}O$ —**158.28**

[112-30-1]—A clear, viscous liquid. Specific gravity: about 0.83 at 20°. Solidifies at about 6.5°. Insoluble in water; soluble in alcohol and in ether.

ASSAY: When examined by gas-liquid chromatography, using suitable gas chromatographic apparatus and conditions, it shows a purity of not less than 99%.

Decyl Sodium Sulfate, $C_{10}H_{21}NaO_4S$ —**260.33**—White, crystalline solid.

ASSAY: Transfer about 1 g, accurately weighed, to a suitable, tared crucible, moisten with a few drops of sulfuric acid, and ignite gently to constant weight. Each mg of residue is equivalent to 3.662 mg of $C_{10}H_{21}NaO_4S$. Not less than 95% is found.

Dehydrated Alcohol—See *Alcohol, Dehydrated*.

Deoxyadenosine Triphosphate, $C_{10}H_{16}N_5O_{12}P_3$ —**491.18** [1927-31-7]—Use a suitable grade.

[NOTE—A suitable grade is available from either BD Biosciences, www.bdbiosciences.com or Applied Biosystems, www.appliedbiosystems.com.]

Deoxycytidine Triphosphate, $C_9H_{16}N_3O_{13}P_3$ —**467.16** [2056-98-6]—Use a suitable grade.

[NOTE—A suitable grade is available from either BD Biosciences, www.bdbiosciences.com or Applied Biosystems, www.appliedbiosystems.com.]

Deoxyguanosine Triphosphate, $C_{10}H_{16}N_5O_{13}P_3$ —**507.18** [2564-35-4]—Use a suitable grade.

[NOTE—A suitable grade is available from either BD Biosciences, www.bdbiosciences.com, or Applied Biosystems, www.appliedbiosystems.com.]

Deoxyribonucleic Acid Polymerase: Thermostable, recombinant DNA polymerase. Use a suitable grade.

[NOTE—A suitable grade is available from Applied Biosystems, www.appliedbiosystems.com.]

Deoxythymidine Triphosphate, $C_{10}H_{17}N_2O_{14}P_3$ —**482.17**—Use a suitable grade.

[NOTE—A suitable grade is available from either BD Biosciences, www.bdbiosciences.com or Applied Biosystems, www.appliedbiosystems.com.]

Desmosterol (3 β -Hydroxy-5,24-cholestadiene; 24-Dehydrocholesterol; 5,24-Cholestadien-3 β -ol), $C_{27}H_{44}O$ —**384.64** [313-04-2]—Use a suitable grade with a content of NLT 94%. [NOTE—A suitable grade is available as catalog number 700060 from www.avantilipids.com or as catalog number 190190 from www.mpbio.com.]

Desoxycorticosterone Acetate (11-Desoxycorticosterone Acetate), $C_{23}H_{32}O_4$ —**372.5** [56-47-3]—Use a suitable grade.

Deuterated Methanol (Methanol- ^{12}C - d_4 , Methyl- ^{12}C - d_3 alcohol- d_1)—**36.1** [811-98-3]—The degree of deuteration is not less than 99.8%. Is a clear colorless liquid miscible with water, with alcohol, and with methylene chloride; density at 20°: 0.888 g/mL; refractive index at 20° (D-line): 1.326; boiling point 65.4° (760 mm Hg).

Deuterated Water—See *Deuterium Oxide*.

Deuterium Chloride (*Deutero Hydrochloric Acid*), DCI—**37.47** [7698-05-7]—Toxic gas. Use a suitable grade with a degree of deuteration of NLT 99%.

Deuterium Oxide, D_2O —**20.032** [7789-20-0]—Use a suitable grade having a minimum isotopic purity of 99.8 atom % of deuterium.

Deuteriochloroform, $CDCl_3$ —**120.38**—Use a suitable grade.

Devarda's Alloy (*Devarda's Metal*) [8049-11-4]—A gray powder composed of 50 parts of copper, 45 parts of aluminum, and 5 parts of zinc.

Dextran, High Molecular Weight [9004-54-0]—A dextran molecular weight standard having a weight-average molecular weight, M_w , of 1 to 2×10^6 Da and a weight-average molecular weight to number-average molecular weight ratio, M_w/M_n , of 1.0 to 1.8.

[NOTE—A suitable grade is available from American Polymer Standards Corporation, www.ampolymer.com.]

Dextrin, $(C_6H_{10}O_5)_n \cdot xH_2O$ [9004-53-9]—A white amorphous powder. Slowly soluble in cold water; more readily soluble in hot water; insoluble in alcohol.

INSOLUBLE MATTER: Boil 1 g with 30 mL of water in a small flask: the solution is colorless and clear, or not more than opalescent.

LOSS ON DRYING (731): Dry it at 105° to constant weight: it loses not more than 10.0% of its weight.

RESIDUE ON IGNITION (Reagent test): Ignite 1 g with 0.5 mL of sulfuric acid: the residue weighs not more than 5 mg (0.5%).

CHLORIDE (Reagent test): Dissolve 3 g in 75 mL of boiling water, cool, dilute with water to 75 mL, and filter if necessary. To 25 mL of the filtrate add 2 mL of nitric acid and 1 mL of silver nitrate TS, and allow to stand for 5 minutes: any turbidity produced is not greater than that of a control containing 0.02 mg of added Cl (0.002%).

SULFATE (Reagent test, *Method I*): To a 25-mL portion of the filtrate from the preceding test add 0.5 mL of diluted hydrochloric acid and 2 mL of barium chloride TS, and allow to stand for 10 minutes: any turbidity produced is not greater than that of a control containing 0.2 mg of added SO_4 (0.02%).

ALCOHOL-SOLUBLE SUBSTANCES: Boil 1 g with 20 mL of alcohol for 5 minutes under a reflux condenser, and filter while hot. Evaporate 10 mL of the filtrate on a steam bath, and dry at 105°: the residue weighs not more than 5 mg (1%).

REDUCING SUGARS: Shake 2 g with 100 mL of water for 10 minutes, and filter until clear. To 50 mL of the filtrate add 50 mL of alkaline cupric tartrate TS, and boil for 3 minutes. Filter through a tared filtering crucible, wash with water, then with alcohol, and finally with ether, and dry at 105° for 2 hours: the precipitate of cuprous oxide weighs not more than 115 mg (corresponding to about 5% of reducing sugars as dextrose).

Dextro Calcium Pantothenate—Use *Calcium Pantothenate* (USP monograph).

Dextrose, Anhydrous, $C_6H_{12}O_6$ —**180.16**—Use ACS reagent grade D-Glucose, Anhydrous.

Diacetyl—See 2,3-Butanedione.

3,3'-Diaminobenzidine Hydrochloride, $(NH_2)_2C_6H_3C_6H_3(NH_2)_2 \cdot 4HCl$ —**360.11** [7411-49-6]—White to yellowish-tan (occasionally purple), needle-shaped crystals. Soluble in water. Stable in organic solvents but unstable in aqueous solution at room temperature. Store aqueous solutions in a refrigerator.