

**G - Gelatin R.... Guanine R****Gelatin R**

Gelatin of suitable purity.

**Gelatin TS**

A solution of gelatin R dissolved in phosphate buffer, pH 7.0, TS containing about 10 g/L.

**Glucose hydrate R**

Monohydrate of  $\alpha$ -D-glucopyranose,  $C_6H_{12}O_6 \cdot H_2O$ . Contains not less than 99.0% and not more than 101.5% of  $C_6H_{12}O_6$ , calculated with reference to the dried substance.

*Description.* Colourless crystals or a white crystalline or granular powder; odourless.

*Solubility.* Soluble in about 1 part of water and in about 60 parts of ethanol (~750 g/L) TS; more soluble in boiling water and in boiling ethanol (~750 g/L) TS.

*Acidity.* Dissolve 5 g in 50 mL of carbon-dioxide-free water R. It requires for neutralization not more than 0.5 mL of carbonate-free sodium hydroxide (0.02 mol/L) VS, phenolphthalein/ethanol TS being used as indicator.

*Specific optical rotation.* Dissolve 100 mg, previously dried to constant weight, in 1 mL of water, and add a few drops of ammonia (~100 g/L) TS;  $[\alpha]_D^{20} = +52^\circ$  to  $+53^\circ$ .

*Soluble starch or sulfites.* Dissolve 1 g in 10 mL of water and add 1 drop of iodine TS; the liquid is coloured yellow.

*Loss on drying.* Dry to constant weight at 105 °C; it loses not less than 80 mg/g and not more than 100 mg/g.

*Sulfated ash.* Not more than 1.0 mg/g.

*Assay.* Dissolve about 0.1 g, accurately weighed, in 50 mL of water, add 30 mL of iodine (0.1 mol/L) VS, 10 mL of sodium carbonate (50 g/L) TS and allow to stand for 20 minutes. Add 15 mL of hydrochloric acid (~70 g/L) TS and titrate the excess of iodine with sodium thiosulfate (0.1 mol/L) VS using starch TS as indicator. Perform a blank determination and make any necessary corrections. Each mL of iodine (0.1 mol/L) VS is equivalent to 9.008 mg of  $C_6H_{12}O_6$ .

**Glucose, anhydrous, R**

$C_6H_{12}O_6$ . Use anhydrous glucose as described in the monograph for [Glucose](#).

**Glycerol R**

Propane-1,2,3-triol with small amounts of water,  $C_3H_8O_3$ . Contains not less than 970 g/kg of  $C_3H_8O_3$ .

*Description.* A clear, almost colourless, syrupy and hygroscopic liquid; odourless.

*Miscibility.* Miscible with water and ethanol (~750 g/L) TS; practically immiscible with ether R.

*Mass density* ( $\rho_{20}$ ). Not less than 1.256 kg/L.

*Refractive index* ( $n_D^{20}$ ). Not less than 1.469.

*Acrolein and other reducing substances.* Mix 1 mL with 1 mL of ammonia (~100 g/L) TS and heat in a water-bath at 60 °C for 5 minutes; the liquid is not coloured yellow. Remove from the water-bath and add 3 drops of silver nitrate (40 g/L) TS; the liquid does not become coloured within 5 minutes.

*Sulfated ash.* Not more than 0.5 mg/mL.

**Glycine R**

Aminoacetic acid;  $C_2H_5NO_2$ .

*Description.* A white, crystalline powder.

*Solubility.* Very soluble in water; slightly soluble in ethanol (~750 g/L) TS.

*Assay.* Determine the nitrogen by the Kjeldahl method in the test substance previously dried at 105 °C for 2 hours; between 18.4 and 18.8% of N is found, corresponding to not less than 98.6% and not more than the equivalent of 100.8% of  $C_2H_5NO_2$ .

*Insoluble matter.* 10g shows not more than 1.0 mg of insoluble matter (0.1 mg/g).

*Sulfated ash.* Not more than 0.5 mg/g.

*Chlorides.* Not more than 0.1 mg of Cl/g.

*Sulfates.* Not more than 0.05mg of SO<sub>4</sub>/g.

*Heavy metals.* Not more than 0.02 mg/g.

*Iron.* Not more than 0.01 mg of Fe/g, 3 mL of hydrochloric acid (~420 g/L) TS being used to facilitate solution.

**Glycolic acid R**

C<sub>2</sub>H<sub>4</sub>O<sub>3</sub>. 2-Hydroxyacetic acid. CAS Reg. No. 79-14-1.

*Description.* Crystals.

*Solubility.* Soluble in water, in acetone, in ethanol (~750 g/L) TS and in methanol.

*Melting point.* About 80 °C.

**Glyoxal bis(2-hydroxyanil) R**

2,2'-(Ethanediylidenedinitrilo)diphenol, C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>.

*Description.* White crystals.

*Solubility.* Soluble in hot ethanol (~750 g/L) TS.

*Melting temperature.* 203–205 °C.

**Glyoxal bis(2-hydroxyanil) TS**

A solution of glyoxal bis(2-hydroxyanil) R dissolved in ethanol (~750 g/L) TS containing about 10 g/L of C<sub>14</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>.

**Green stock standard TS**

*Procedure.* To 3.5 mL of cobalt colour TS add 20.1 mL of copper colour TS, 10.4 mL of dichromate colour TS and 4.0 mL of iron colour TS; dilute to 100.0 mL with sulfuric acid (~10 g/L) TS and mix.

**Guanine R**

C<sub>5</sub>H<sub>5</sub>N<sub>5</sub>O, 2-Amino-1,7-dihydro-6H-purin-6-one.

Amorphous white or almost white powder, practically insoluble in water, slightly soluble in ethanol (96 per cent). It dissolves in ammonia and in dilute solutions of alkali hydroxides.