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 α-D-glucopyranose, $C_6H_{12}O_6,H_2O$. 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; $[\alpha]_D^{20\,°C}$ = +52° to +53°.

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 (ρ_{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_4/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

$C_2H_4O_3$. 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, $C_{14}H_{12}N_2O_2$.

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 $C_{14}H_{12}N_2O_2$.

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

$C_5H_5N_5O$, 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.