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Glucose Infusion

General Notices

Glucose Injection
Glucose Intravenous Infusion

DEFINITION

Glucose Infusion is a sterile solution containing Glucose or Glucose Monohydrate. It is supplied as a ready-to-use solution.

The infusion complies with the requirements stated under Parenteral Preparations and with the following requirements.

Content of glucose, $C_6H_{12}O_6$

95.0 to 105.0% of the stated amount.

CHARACTERISTICS

A colourless solution. Solutions containing the equivalent of 200 g per litre or more of glucose, $C_6H_{12}O_6$, may be not more than faintly yellow in colour.

IDENTIFICATION

A. Heat with *cupri-tartaric solution R1*. A red precipitate is produced.
B. The solution prepared as directed in the Assay is dextrorotatory.

TESTS

Acidity

pH, 3.5 to 6.5, Appendix V L, when determined on a solution diluted, if necessary, with *water for injections*, to contain not more than the equivalent of 5% w/v of glucose, $C_6H_{12}O_6$, and to which 0.30 mL of a saturated solution of *potassium chloride* has been added for each 100 mL of solution.

5-Hydroxymethylfurfural and related substances

Dilute a volume containing the equivalent of 1.0 g of glucose, $C_6H_{12}O_6$, to 250 mL with *water*. The *absorbance* of the resulting solution at the maximum at 284 nm is not more than 0.25, Appendix II B.

Bacterial endotoxins

The endotoxin limit concentration is 0.25 IU per mL, Appendix XIV C. Dilute infusions containing more than 5% w/v of Glucose with *water BET* to contain 5% w/v.

ASSAY

To a volume containing the equivalent of 2 g to 5 g of glucose, $C_6H_{12}O_6$, add 0.2 mL of 5M *ammonia* and sufficient *water* to produce 100 mL. Mix well, allow to stand for 30 minutes and determine the *optical rotation* in a 2-dm tube, Appendix V F. The observed rotation in degrees multiplied by 0.9477 represents the weight in g of glucose, $C_6H_{12}O_6$, in the volume taken for assay.

LABELLING

The strength is stated as the equivalent number of grams of glucose, $C_6H_{12}O_6$, per litre.

When Glucose Infusion is required as a diluent for Injections or Infusions of the Pharmacopoeia, Glucose Infusion (50 g per litre) shall be used.