

Glucose

Analyte: Glucose

Specimen Type: Serum, EDTA Plasma, inquire for additional option(s)

Optimum Volume: 1 mL

Stability:

2-8 Degrees C	-20 Degrees C	-70 Degrees C
6 days	16 days	1.4 years

Reporting Units: mg/dL

Method: Enzymic

Biological or Clinical Significance:

Glucose is the major carbohydrate present in the peripheral blood. Oxidation of glucose is the major source of cellular energy in the body. Glucose derived from dietary sources is converted to glycogen for storage in the liver and muscle or to fatty acids for storage in adipose tissue. In diabetes mellitus, the hyperglycemia consists of a relative deficiency of insulin. A number of secondary factors also can contribute to elevated blood glucose levels. These include pancreatitis, pituitary or thyroid dysfunction, renal failure and liver disease. Hypoglycemia is less frequently observed. A variety of conditions may cause low blood glucose levels such as insulinemia, hypopituitarism, neoplasms or pharmacologic insulin induced hypoglycemia.

Principle of Test Method:

The glucose assay is an automated enzymic method.

References:

1. Nesse, J.W., Duncan, P., Bayse, D. et al. Development and evaluation of a hexokinase/glucose-6-phosphate dehydrogenase procedure for use as a national glucose reference method. NEW Publication No. (CDC) 77-8330. Atlanta, Center for Disease Control, 1976.
2. The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus, "Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus". Diabetes Care 2003; 26 (Supplement 1): 5S-20S.