

Glucose, Urine

Analyte: Glucose

Specimen Type: Urine

Optimum Volume: 1 mL

2-8°C	-20°C	-70°C
5 days	26 days	2.3 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.

The most frequent cause of hyperglycemia is diabetes mellitus, which is marked by relative insulin deficiency. 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.

The measurement of glucose in urine is primarily used to monitor glucosuria caused by hyperglycemia, especially in patients with diabetes mellitus. However, monitoring urine glucose concentration in diabetes lacks sensitivity and specificity due to the relatively high renal threshold of glucose. The normal renal threshold for glucose is 180 mg/dL while in diabetics glucose levels may range from near normal to more 300 mg/dL.

Principle of Test Method:

The glucose assay is an automated enzymic assay.