
Lab Dept: Urine/Stool

Test Name: GLUCOSE, 24 HOUR URINE

General Information

Lab Order Codes: UGLQ

Synonyms: Glucose, Quantitative Urine

CPT Codes: 82945 – Glucose, body fluid, other than blood
81050 – Volume measurement for timed collection, each

Test Includes: Urine glucose in mg/dL and g/24 hours

Logistics

Test Indications: Glucose is a simple sugar that serves as the main source of energy for the body. Urine testing is useful in the evaluation of glycosuria. Glucose is present in the urine if the blood level is high or if the kidneys are damaged allowing glucose to leak out into the urine.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Clinic Laboratories (Mayo Test: GLUR)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 612-813-6280

Test Availability: Daily, 24 hours

Turnaround Time: 1-2 days

Special Instructions: Submit an entire 24-hour urine collection. No preservative. Refrigerate specimen during and after collection. Urine samples may lose as much as 40% of their glucose after 24 hours at room temperature. A 24 hour collection is required.

Note: Starting and ending times of collection are required for a timed urine collection and must be documented electronically or on the proper request form.

Specimen

Specimen Type: Urine, 24 hour collection

Container:	Plastic leakproof container (No preservative). Urine GUARD® collection container is preferred for a timed urine sample.
Draw Volume:	Submit an entire 24-hour urine collection
Processed Volume:	1 - 4 mL urine from a well mixed 24 hour collection.
Collection:	For timed urine collections, empty the bladder, discard the voided sample, and note the start time. Collect all urine voided for the specified time period. At the end of the period, note the finishing time; add the last voided sample to the container by emptying the bladder. Bring the refrigerated container to the lab. Make sure all specimens submitted to the laboratory are properly labeled with the patient's name, medical record number and date of birth.
Special Processing:	Lab Staff: Measure total volume of specimen submitted and record by ordering PVSO (Period and Volume) in the LIS. Pour off an aliquot into a 5 mL urine tube (Mayo Supply T465). Store and ship refrigerated.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimens; all specimens will be evaluated for suitability

Interpretive

Reference Range:	≤0.15 g/24 hours
	Note: The reference value is for a 24 hour collection. Elevated urine glucose concentration reflects either a presence of hyperglycemia or a defect in proximal tubule function. As a screening for diabetes mellitus, urine glucose testing has low sensitivity (though reasonably good specificity).
Critical Values:	N/A
Limitations:	Urine glucose monitoring for the management of diabetes mellitus has essentially been replaced by more accurate and reliable blood glucose determinations.
Methodology:	Glucose Hexokinase
References:	Mayo Clinic Laboratories (October 2020)
Updates:	9/28/2017: Lab processing update. 10/28/2020: Testing moved to Mayo.