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**Lab Dept:** Chemistry

**Test Name:** GLUCOSE

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***General Information***

**Lab Order Codes:** GLUC

Note: Test is also included in the [Basic Metabolic Panel](#) (PR7), [Comprehensive Metabolic Panel](#) (PR12) and [Renal Panel](#) (RENPN).

**Synonyms:** Fasting Blood Sugar

**CPT Codes:** 82947 – Glucose; quantitative, blood

**Test Includes:** Glucose concentration reported in mg/dL.

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***Logistics***

**Test Indications:** Glucose is derived from the breakdown of carbohydrates in the diet and in the body stores. The glucose level in the blood is maintained within a narrow range by regulatory hormones such as insulin, glucagons, or epinephrine. The most frequently encountered disorder of carbohydrate metabolism is high blood sugar due to diabetes mellitus. Hypoglycemia is a blood glucose concentration below the fasting level.

**Lab Testing Sections:** Chemistry

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 30 minutes

**Special Instructions:** N/A

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***Specimen***

**Specimen Type:** Blood

**Container:** Green top (Li Heparin) tube **preferred**  
Alternate tube: Red, marble or gold top tube. Grey top (Na Fluoride) is also acceptable.

**Draw Volume:** 0.6 mL blood

<b>Processed Volume:</b>	0.2 mL serum/plasma
<b>Collection:</b>	Routine collection. Mix tubes containing anticoagulant by gentle inversion.
<b>Special Processing:</b>	Lab Staff: Centrifuge specimen, remove serum/plasma aliquot into a plastic sample cup within 2 hours of collection. Store at refrigerated temperature. Grey top (Na Fluoride) tubes may remain unspun for up to 24 hours.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Mislabeled or unlabeled specimen

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***Interpretive***

**Reference Range:**

<b>Reference ranges by Method:</b>	
Method Abbott	
Full term 0 – 1 day:	40 – 60 mg/dL
1 – 364 days:	50 – 80 mg/dL
1 – 18 years:	60 – 100 mg/dL
>=19 years:	74 – 100 mg/dL

**Critical Values:** All ages: <50 or >300 mg/dL

**Limitations:** Glucose concentrations are decreased by excess hemolysis, excess bilirubin and excess lipemia.

**Methodology:** Enzymatic Hexokinase/G6pDH

**References:** Biorad Liquichek Control Product inserts, Bio-Rad Laboratories, Irvine, CA 92618

Architect Glucose Pkg Insert, Abbott Laboratories Diagnostic Division, Abbott Park, IL 60064, May 2017

Alinity Glucose Pkg Insert, Abbott Laboratories Diagnostic Division, Abbott Park, IL 60064, February 2018

Clinical Significance, Dade Behring Inc., Glasgow Business Community, Mailbox 531, P.O. Box 6101, Newark, Delaware 19714

Jacobs & DeMott Laboratory Test Handbook (2001) Lexi-Comp, Inc,  
Hudson, OH, 5th Edition

The Textbook of Clinical Chemistry and Molecular Diagnostics, Tietz,  
6<sup>th</sup> Edition

**Updates:**

2/17/2005: Critical value for Newborns <40 or >160 mg/dL removed.  
Critical value range made consistent for all ages.

8/28/2005: Turnaround time previously listed changed from 4 hours to 2  
hours.

8/19/2009: Turnaround time previously listed as 2 hours.

2/8/2016: Update alt tube types

10/18/2019: New backup instrumentation and related reference ranges.

11/16/2020: Updated for method Alinity c.

5/7/2024: Combined adult reference ranges.