Lab Dept: Chemistry

Test Name: GLUCOSE

General Information

Lab Order Codes:	GLUC Note: Test is also included in the Basic Metabolic Panel (PR7), Comprehensive Metabolic Panel (PR12) and Renal Panel (RENP).
Synonyms:	Fasting Blood Sugar
CPT Codes:	82947 – Glucose; quantitative, blood
Test Includes:	Glucose concentration reported in mg/dL.

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

Specimen

Specimen Type:	Blood
Container:	Green top (Li Heparin) tube **preferred** Alternate tube: Red, marble or gold top tube
Draw Volume:	0.6 mL blood

Processed Volume: 0.2 mL serum/plasma

Collection: Routine collection. Mix tubes containing anticoagulant by gentle inversion.

Special Processing: Lab Staff: Centrifuge specimen, remove serum/plasma aliquot into a plastic sample cup. Store at refrigerated temperatures.

Patient Preparation: None

Sample Rejection: Mislabeled or unlabeled specimen

Interpretive

Reference Range:

Reference ranges by Method:	
Method Abbott	
Premature newborns:	20 – 60 mg/dL
Neonates:	30 – 60 mg/dL
Full term 0 – 1 day:	40 – 60 mg/dL
1 – 364 days:	50 – 80 mg/dL
1 – 18 years:	60 – 100 mg/dL
19 – 60 years:	74 – 100 mg/dL
60 – 89 years	82 – 115 mg/dL
>90 years	75 – 121 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

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.