

GLUCOSE-6  
PHOSPHATE  
DEHYDROGENASE  
ASSAY

## Orderable - G6PDA

Turn Around Time: 24 hours

### Alternate Name(s):

G6PD Assay  
G-6-PD Assay

### Specimen:

Adult	Pediatric
4 mL K <sub>2</sub> or K <sub>3</sub> EDTA Lavender top Vacutainer tube	0-2 years: 0.5 mL Lavender top Microtainer 2-10 years: 3 mL Lavender top tube

### Collection Information:

Minimum volume required is 0.5 mL

For referred-in (non-LHSC) samples:

1. Include the following:
  - Requisition with patient demographics (HCN included)
  - Relevant clinical history (reason for test request)

2. Send to:
 

Core Laboratory  
Room D1-218  
London Health Sciences Centre  
800 Commissioners Rd.,  
London, ON  
N6A 5W9

3. Notify laboratory (519-685-8500 ext. 52544) prior to sending sample.

A hemoglobin value is required in order to calculate the G-6-PD activity. It is important also, for interpretation purposes, to determine the percentage of reticulocytes. Therefore, a CBC and a reticulocyte count are included in the care set.

### Reference Ranges:



**Laboratory:**  
Core Lab



**Requisition:**  
GENERAL LABORATORY  
REQUISITION



**Method of Analysis:**  
Enzymatic rate method  
on chemistry analyzer



**Test Schedule:**  
Monday-Friday  
0800-1600

## GLUCOSE-6 PHOSPHATE DEHYDROGENASE ASSAY

8.3-17.0 IU/g Hb

Critical Values:

Intermediate Deficiency:	2.0-8.2 IU/g Hb
Severe Deficiency:	<2.0 IU/g Hb

### Interpretive Comments:

Glucose-6-phosphate dehydrogenase (G6PD) is an enzyme in the pentose phosphate pathway, a metabolic pathway that supplies reducing energy to cells. Patients with G6PD deficiency are at risk of hemolytic anemia in states of oxidative stress triggered by viral or bacterial infections, antimalarial drugs (primaquine) or exposure to certain foods (fava beans).

### Special Processing:

All test requests for the G-6-PD assay will include a CBC and reticulocyte enumeration.

### Comments:

Reticulocytes have higher G-6-PDH levels than mature red cells. It is not recommended that assays be performed after a severe hemolytic crisis, since G-6-PDH levels may appear falsely elevated."

Leukocytosis falsely elevates G-6-PDH levels in extreme anemia.

### Storage and Shipment:

Ship sample at room temperature.

Samples must be received in laboratory for testing within 24 hours of sample collection.