
Lab Dept: Chemistry

Test Name: GALACTOSE-1-PHOSPHATE (GAL-1-P),
ERYTHROCYTES

General Information

Lab Order Codes: GAL1P

Synonyms: Galactosemia; GAL1P, RBCs

CPT Codes: 84378 – Sugars, single quantitative, each specimen

Test Includes: Galactose-1-Phosphate (GAL-1-P) level reported in mcg/g of hemoglobin.

Logistics

Test Indications: Monitoring dietary therapy of patients with galactosemia due to deficiency of galactose-1-phosphate uridylyltransferase or uridine diphosphate galactose-4-epimerase

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (Mayo Test: GAL1P)

Phone Numbers: MIN Lab: 612-813-6280

STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 8 - 15 days, performed weekly on Tuesdays

Special Instructions: See [Patient Preparation](#). The specimen must be processed and washed within 4 hours of collection. **Requires Green Sodium Heparin tube.** Contact lab for tube if needed.

Specimen

Specimen Type: Whole blood

Container: Green top (NaHep) tube

Draw Volume: 2 mL (Minimum: 2 mL) blood

Processed Volume: Same as Draw Volume

Collection:	Routine venipuncture
Special Processing:	<p>Lab Staff: Erythrocytes must be washed within 4 hours of draw.</p> <ol style="list-style-type: none"> 1. Collect and process a minimum of 2 mL of whole blood as follows: <ol style="list-style-type: none"> a. Immediately centrifuge for 10 minutes at 650 x G. For conversion to RPMs, see Additional Information. b. Discard the plasma and buffy coat layers. c. Add a cold 0.9% saline solution to the erythrocytes (about 2 times the volume of erythrocytes). d. Mix gently by inversion and centrifuge again for 10 minutes at 650 x G. e. Remove and discard the saline. f. Repeat the wash steps (steps c-e) 2 more times. 2. After the final centrifugation, remove and discard the saline and a thin layer of the top cells. <p>Store and ship at frozen temperatures. Forward promptly.</p>
Patient Preparation:	For infants, collect the specimen immediately prior to feeding to avoid postprandial elevations.
Sample Rejection:	Mislabeled or unlabeled specimens

Interpretive

Reference Range:	<p>Non-galactosemic: 5 – 49 mcg/g of hemoglobin (<1 mg/dL)</p> <p>Galactosemic on galactose restricted diet: 80 – 125 mcg/g of hemoglobin (1-4 mg/dL)</p> <p>Galactosemic on unrestricted diet: >125 mcg/g of hemoglobin (>4 mg/dL)</p> <p>Interpretation: The concentration of galactose-1-phosphate (Gal-1-P) is provided along with reference ranges for patients with galactosemia and normal controls. The recommended Gal-1-P goal for patients with galactosemia is <125 mcg/g/ of hemoglobin.</p>
Critical Values:	N/A
Limitations:	Not a diagnostic test for galactosemia.
Methodology:	Ultraviolet, enzymatic
References:	Mayo Medical Laboratories Web Page (November 2016)
Updates:	12/12/2016: Requires Sodium Heparin Green top tube.

