**Lab Dept:** Hematology

**Test Name:** HEMOGLOBIN F BY FLOW CYTOMETRY

### General Information

**Lab Order Codes:** HGBFF

**Synonyms:** Hgb F by Flow Cytometry; Hemoglobin F, Red Cell Distribution, Blood

**CPT Codes:** 88184 – Flow cytometry, cell surface, cytoplasmic, or nuclear marker, technical component only; first marker

**Test Includes:** The presence of hemoglobin F reported as heterocellular or homocellular.

### Logistics

**Test Indications:** Useful in distinguishing hereditary persistence of fetal hemoglobin from other conditions with increased amounts of fetal hemoglobin.

**Lab Testing Sections:** Hematology - Sendouts

**Referred to:** Mayo Medical Laboratories (Test:HPFH/8270)

**Phone Numbers:**
- MIN Lab: 812-813-6280
- STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 – 5 days, test set up Monday - Saturday

**Special Instructions:** A current Hemoglobin F% must be submitted with an order for this test. If a current Hemoglobin F value is not available, **Hemoglobin F, Blood** should be ordered first or in conjunction with this test. This test is not to be ordered for fetal-maternal bleed.

### Specimen

**Specimen Type:** Whole blood

**Container:** Lavender top (EDTA) tube

**Draw Volume:** 3 mL (Minimum: 0.5 mL) blood

**Processed Volume:** Same as Draw Volume
Collection: Routine venipuncture A Hemoglobin F% for the patient should be submitted with an order for this test. If a current Hemoglobin F value is not available, Hemoglobin F, Blood should be ordered first or in conjunction with this test. This test is not to be ordered for fetal-maternal bleed.

Special Processing: Lab Staff: Do Not Centrifuge. Send specimen in original collection container. Store and ship at refrigerated temperatures. Do Not freeze. Indicate the % of Hemoglobin F patient age and sex. Forward promptly.

Patient Preparation: None

Sample Rejection: Specimens other than whole blood, frozen specimens, anticoagulants other than EDTA or heparin, hemolyzed specimens, mislabeled or unlabeled specimens

Interpretive

Reference Range: Reported as heterocellular or hepatocellular

Note: In the common form of the genetic trait, hereditary persistence of fetal hemoglobin (HPFH), all of the erythrocytes contain hemoglobin F.

More than 75% of the hemoglobin of the newborn is hemoglobin F, it diminishes over a period of several months to adult levels, becoming <2% by 1 year of age.

Hemoglobin F may constitute 90% of the total hemoglobin in patients with beta-thalassemia major.

Hemoglobin F is often moderately elevated in sickle cell disease, aplastic anemia, acute leukemia, myelo-proliferative disorders, hereditary spherocytosis, and alpha-thalassemia minor. It is commonly increased in all hemoglobinopathies associated with hemolysis. Hemoglobin F increases to as high as 10% during normal pregnancy.

Critical Values: N/A

Limitations: Indication for test must be stated.

Methodology: Flow cytometry

References: Mayo Medical Laboratories Web Page February 2007