



# Laboratory Service Manual

**Lab Dept:** Hematology

**Test Name:** HEMOGLOBIN S AND F MONITORING

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## ***General Information***

**Lab Order Codes:** HBSF

**Synonyms:** Hbg S and F Quantitation for Therapeutic Monitoring

**CPT Codes:** 83021 – Hemoglobin fractionation and quantitation; chromatography  
85660 – Sickling of red blood cells, reduction (if appropriate)

**Testing includes:** Hemoglobin S and F measurement by Cation Exchange/High-Performance Liquid Chromatography (HPLC). If hemoglobin S is detected, hemoglobin S screen will be performed when appropriate at an additional charge.

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## ***Logistics***

**Test Indications:** Monitoring patients with sickling disorders who have received hydroxyurea or transfusion therapy. This test is not intended for diagnostic purposes; it is assumed the patient's diagnosis is established. If the patient has never been studied, hemoglobin electrophoresis is necessary.

**Lab Testing Sections:** Hematology - Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test# 60205)

### **Phone Numbers:**

Minneapolis: 612-813-6280

Saint Paul: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 – 2 days, performed Monday - Saturday

**Special Instructions:** This test is not intended for diagnostic purposes. See [Test Indications](#).

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## ***Specimen***

**Specimen Type:** Whole blood

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



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<b>Draw Volume:</b>	6 mL (Minimum: 1 mL) blood
<b>Processed Volume:</b>	Same as Draw Volume.
<b>Collection:</b>	Routine venipuncture
<b>Special Processing:</b>	Lab Staff: <b>Do Not</b> centrifuge. Specimen should remain in original collection container. <b>Do not</b> freeze. Send refrigerated.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Testing cannot be performed on clotted samples; frozen specimens; mislabeled or unlabeled specimens

## *Interpretive*

Reference Range:	Hgb Fraction	Age	Range
<b>Hgb F</b>		1 – 30 days:	22.8 – 92.0%
		1 – 2 months:	7.6 – 89.8%
		3 – 5 months:	1.6 – 42.2%
		6 – 8 months:	0.0 – 16.7%
		9 – 12 months:	0.0 – 10.5%
		13 – 17 months:	0.0 – 7.9%
		18 – 23 months:	0.0 – 6.3%
		>or = 24 months:	0.0 – 0.9%
<b>Hgb S</b>		All ages:	0.0%
<b>Hgb S, Screen</b>		All ages:	Negative

**Critical Values:** N/A

**Limitations:** This test is not intended for diagnostic purposes. See [Test Indications](#).

This assay will not discriminate hemoglobin S (Hb S) trait from homozygous sickle cell disease (S/S), nor any of the following combinations: S/C, S/D, S/G, S/E, S/beta-thalassemia, S/O-Arab, and C-Georgetown trait. The presence of HbS will be confirmed, but any additional Hb variants will not be definitively identified.



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**Methodology:**

Hemoglobin F/S: Cation Exchange/HPLC  
Hemoglobin Electrophoresis: Capillary Electrophoresis  
Hemoglobin S: Hemoglobin S Solubility

**References:**

[Mayo Medical Laboratories Lab Web Page](#) March 2011