

Hemoglobinopathy Evaluation Reference Range Changes

Effective Date: February 24, 2025

Effective 24 Feb 2025, the methodology for hemoglobinopathy evaluations will change from high-performance liquid chromatography to capillary zone electrophoresis for initial variant screening. Confirmation of variants will continue to be performed by alkaline and acid gel electrophoresis. Accordingly, reference intervals will change for Hemoglobin A, Hemoglobin A2, and Hemoglobin F as reported for these tests:

HEMOGLOBINOPATHY EVALUATION [LAB1231654]

HEMOGLOBIN VARIANT QUANTITATION BY HPLC [LAB1231441]

HEMOGLOBIN F [LAB1231295]

Current Reference Intervals (HPLC)		
Hemoglobin A	0 up to 31d	10.0-40.0%
	31d up to 24m	40.0-98.5%
	24m to 150y	94.5-98.5%
Hemoglobin A2	0 up to 12mo	0-3.3%
	12mo to 150y	2.0-3.3%
Hemoglobin F	0 up to 31d	60.0-90.0%
	31d up to 24m	<= 60%
	24m to 150y	0.0-2.0%
NEW Reference Intervals (Capillary Zone Electrophoresis)		
Hemoglobin A	0 up to 31d	5.9 – 77.2 %
	31 d up to 6 mo	7.9 – 97.1 %
	6 mo up to 13 mo	80.0 – 98.0 %
	13 mo up to 24 mo	88.8 – 98.0%
	24 mo to adult	94.5 – 98.5 %
Hemoglobin A2	0 up to 31 d	0.0 – 2.1 %
	31 d up to 6 mo	0.0 – 3.1 %
	6 mo up to adult	2.0 – 3.3 %
Hemoglobin F	0 to 30 d	22.8 – 92.0 %
	31 d to 5 mo	1.6 – 89.8 %
	6 mo to 12 mo	0.0 – 16.7 %
	13 mo to 23 mo	0.0 – 7.9 %
	24 mo to adult	0.0 – 0.9 %

Specimen collection and transport requirements will not change. Gel electrophoresis confirmations will continue to be performed weekly when a previously unreported hemoglobin variant is detected. As is current practice, samples in which rare hemoglobin variants are suspected will be sent to a reference laboratory for further testing.

For questions regarding testing, please contact Corewell Health Laboratory Customer Service at **800-551-0488**

Date submitted: February 14, 2025**Submitted by: Steven M. Truscott, PhD; Caitlin Schein, MD**