

\* Amino acid substitution in hemoglobin variants & correlation with electrophoretic mobility & Sickling test

<u>Hb variant</u>	<u>mutation</u>	<u>Sickling test</u>	<u>movement in alkaline electrophoresis</u>
Hb A	-	Negative	Ahead of any other Hb
Hb S	B6 [glutamic acid → valine]	positive	Behind Hb A - at position of Hb S
Hb D (Punjab) <del>Florida</del>	B121 [glutamic acid → glutamine]	Negative	Behind Hb A - At position of Hb S
Hb C	B6 [glutamic acid → lysine]	Negative	Behind Hb S - at Hb A <sub>2</sub> position
Hb C [Harlem]	B6 [glutamic acid → valine], B73 [aspartic acid → asparagine]	positive	Behind Hb S - at Hb A <sub>2</sub> position
Hb E	B66 [glutamic acid → lysine]	Negative	Behind Hb S - at Hb A <sub>2</sub> position
Hb O	B121 [glutamic acid → lysine]	Negative	Behind Hb S - at Hb A <sub>2</sub> position
Hb J	$\alpha$ 120 [Alanine → glutamic acid]	Negative	Ahead of Hb A

- ~~Gen~~ Hb A - More negative charge