

High Performance Optical Spectroscopy (HPOS) for Sickle Cell anemia diagnosis



Compound name: Optical Absorption of Hemoglobin

Trade name: HPOS - SickleCERT

Date of approval: November 2022

Therapeutic Areas Sickle cell Anemia, Heoglobinopathies

Innovation:

HPOS to meet First-Time (One-time) & Follow-up (Repeated) Testing Requirements at Village Level: Screening – Diagnosis – Prognosis – Management:

Newborn screening would be a critical and valuable addition to the HPOS platform. We expect the solution to be integrated into the Maternal and Child Health Program at Anganwadi level beyond the implementation plan period proposed here. G6PD and other hemoglobin disorders would be taken up to further enhancement the HPOS platform. While “Quantitative” Single-Step Tests are known to be ideally suitable for ‘Population’ Screening & Subsequent ‘Management’ of a Disease, due to lack of their affordability and availability, diseases such as Sickle-Cell Anemia

(which are preventable) are still adversely affecting millions of lives, even today, in many countries. Our vision is to evolve HPOS Technology way beyond fulfilling the needs of single-time testing (to know if a subject is Positive or Negative), and help clinicians in treatment, prognosis, and effective management of the disease by providing the quantitative %s of Abnormal and Normal Hb values. Much like a Glucometer for Diabetes, HPOS Technology’s use for Testing (Total Hb & Hemoglobinopathies), Treatment (Blood Transfusion, Drugs Dosage, Lifestyle Management), and Tracking Hb levels (ex: HbF vs HbS/HbC), is being envisioned in the future at every village level in India and beyond, for heading towards “Anemia-Free World”.



HPOS Technology High-Performance Optical Spectroscopy



Point-of-Care Diagnostic Test for Sickle Cell Anemia

Screening – Diagnosis – Prognosis – Management



Finger-Prick (6 uL drop) Batch-Mode in Field-Camps: 30 Tests/Hour Single-Test Kit: Door to Door (D2D) Testing TAT 15 mins

SickleCert (Buffer Vial) for adding 6uL of Blood to read with HPOS Device