

HemoScreen - Transforming blood testing at the Point of Care

Overview

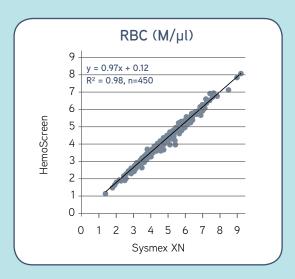
The **HemoScreen** is a miniature portable hematology analyzer that uses disposable cartridges. Each cartridge includes all necessary reagents and is designed to accept a single drop of blood. Once the cartridge is inserted into the reader, the sample is automatically processed and analyzed.

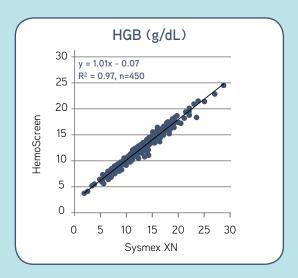


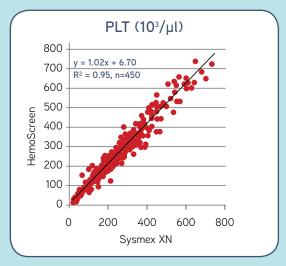
Technology

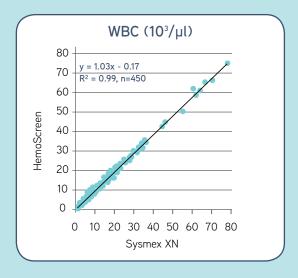
The HemoScreen employs a breakthrough technology based on Microfluidics, Machine Vision and Artificial Intelligence. Cells are flow focused into a single layer plane within a microfluidic chamber which facilitates their optical analysis. Thousands of images of the flowing cells are analyzed onthe-fly by cutting edge AI algorithms providing unparalleled differentiation and clarity.

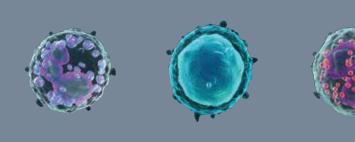












Measured parameters

The HemoScreen provides 20 parameters: RBC, WBC, HGB, HCT, MCV, MCH, MCHC, PLT, RDW, MPV and percentage and absolute counts of NEUT, LYMP, MONO, EOS, BASO.

The HemoScreen flags for the presence of abnormal cells including IG, nRBC and Blasts as well as PLT aggregates.

Sample specification

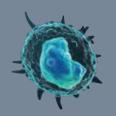
Each test requires $2X20~\mu l$ whole blood from venous or capillary source with or without K2EDTA.

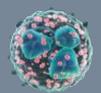
Performance specification

The HemoScreen performance has been validated in numerous clinical studies in the US and EU and in different settings such as oncology, ICU, primary care and ER.







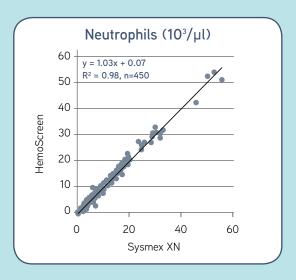


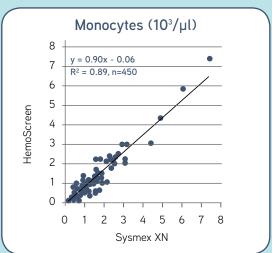
Precision

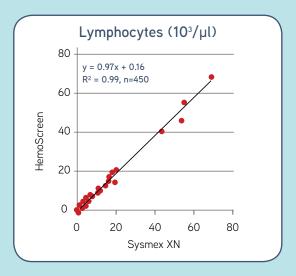
Parameter	Criteria
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WBC (x10 ³ /µl)	≤4% CV
RBC (x10 ⁶ /µl)	≤2% CV
HGB (g/dL)	≤2% CV
HCT (%)	≤2% CV
MCV (fl)	≤1% CV
MCH (pg)	≤1.5% CV
MCHC (g/dL)	≤1.5% CV
RDW (%)	≤2.0% CV
PLT (x10³/µl)	≤4% CV
NEUT (%)	≤8.0% CV
LYMPH (%)	≤8.0% CV
MONO (%)	≤15% CV
EOS (%)	≤1 SD
BASO (%)	≤1.5 SD

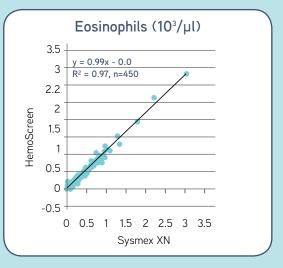
Accuracy

Parameter	Correlation	Bias/Difference (Whichever is greater)
WBC (x10³/μl)	r≥0.98	±0.3 or ±7.0%
RBC (x10 ⁶ /µl)	r≥0.98	±0.07 or ±3.0%
HGB (g/dL)	r≥0.98	±0.3 or ±3.0%
HCT (%)	r≥0.98	±2 or ±5.0%
MCV (fl)	r≥0.95	±2.5 fL or ±3.0%
MCH (pg)	r≥0.9	±5.00%
MCHC (g/dL)	r≥0.7	±5.00%
RDW (%)	r≥0.9	±1.5 or ±10.0%
PLT(x10³/µl)	r≥0.95	±10.0 or ±10.0%
MPV (fL)	r≥0.8	±1.0 or ±10.0%
NEUT (x10³/µl)	r≥0.95	±0.3 or ±10.0%
LYMP (x10 $^3/\mu$ l)	r≥0.95	±0.2 or ±10.0%
MONO (x10³/μl)	r≥0.8	±0.2 or ±10.0%
EOS (x10³/µl)	r≥0.95	±0.1 or ±10.0%
BASO (x10 ³ /µl)	NA	±0.05 or ±10.0%

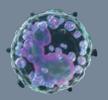




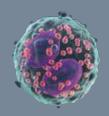


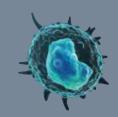


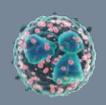






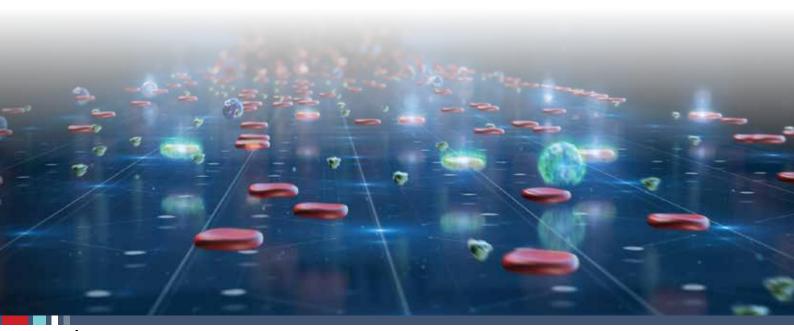






Analyzer specification

Parameter	Specification
Test duration	6 minutes
Operating temperature	17°C - 27°C
Approvals	CE, under FDA review
Operating voltage	12 VDC, 5A
Power supply	100 – 240 VAC, 4 – 2 A, 50/60 Hz
Power consumption	Approx. 60W
Dimensions (LxWxH)	Device: 26cm X 17.5cm X 30cm
Weight	Approx. 5.5 Kg
Peripherals	Optional printer and barcode reader (USB)



Point of Care Diagnostics

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