

DiaSpect Tm and T



The fastest hemoglobin test in the market!

DiaSpect Tm

- Results in 1 – 2 seconds
- Reagent-free cuvettes work in any climate conditions
- Always ready for use
- Broad spectrum photometer
- Factory calibrated, no re-calibration required
- Automatic self check between measurements
- No moving parts that could lead to malfunction
- Rechargeable battery for 40 days of mobile operation (> 10,000 tests performed)



Diaspect customers

Primary Health

- Providing access to hemoglobin testing for primary health care anywhere in the world

Hospital Clinics

- Fast and easy hemoglobin testing in clinics e.g. emergency and intensive care

Blood Banks

- Time and money saving pre-donation hemoglobin screening in blood banks and transfusion centers



Unpacking the Tm analyzer



Diaspect Hb cuvette

- No reagent in the cuvette
- No reaction takes place in the cuvette
- 1-2 seconds measuring time
- Cuvettes insensitive to moisture or temperature
- Same expiry date for unopened or opened bag
- Shelf life >2.5 years
- Store at 0° C to +50° C
Temperatures of -30° C to +70° C are temporarily permitted (24 hours max) during transport



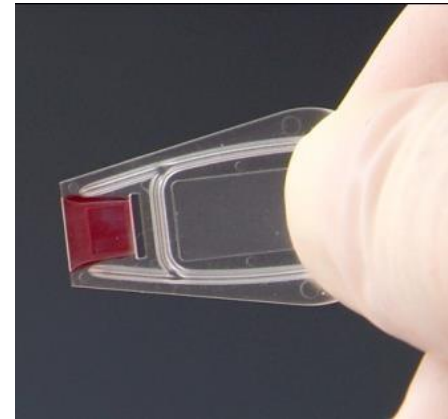
Hematology

100 cuvettes per bag
5 x 100 cuvettes per box

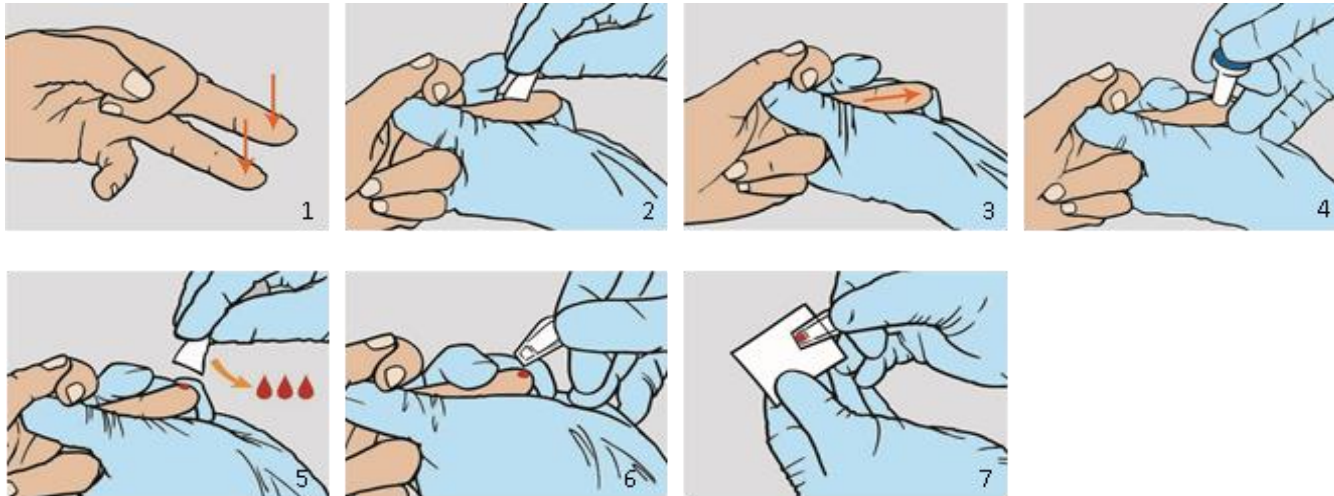


Cuvette design

- Opening (air vent) to avoid bubbles in the filled cuvette
- Can be filled from any angle
- Fits either way in the cuvette holder
- Easy to pick up from a surface
- Does not stain the working surface



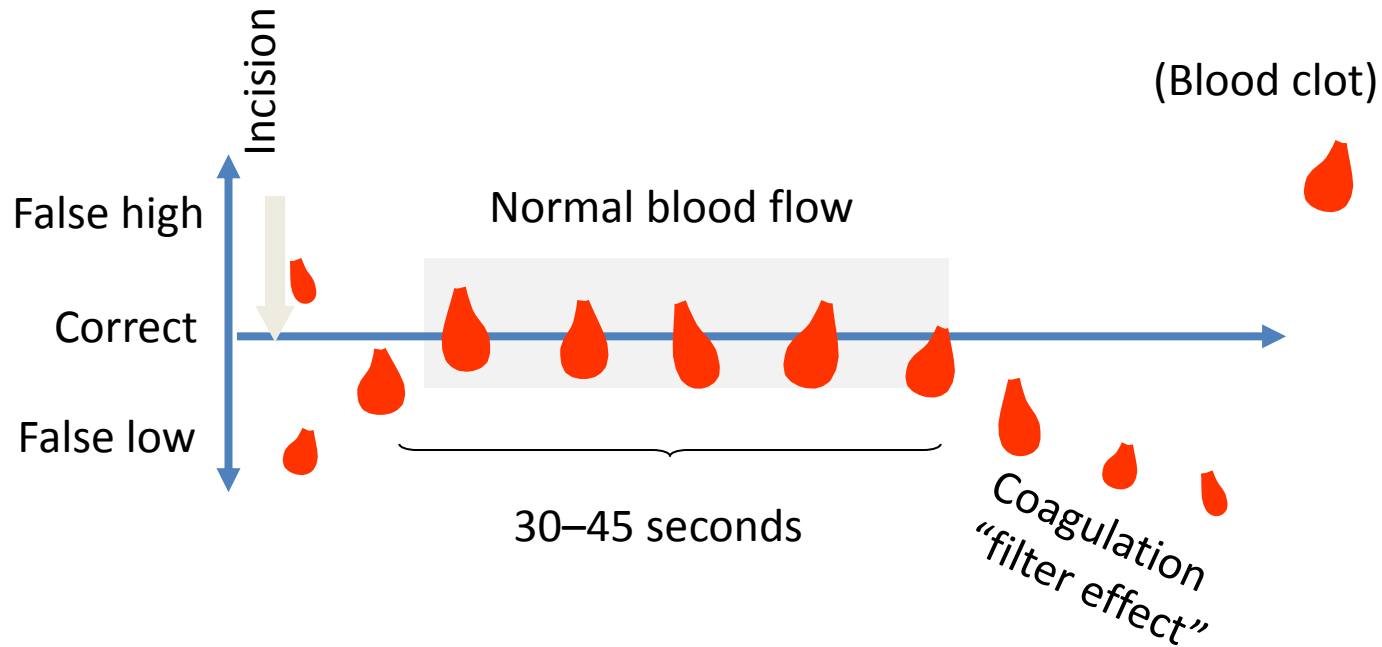
Capillary sampling



1. Hand must be warm and relaxed
2. Clean and dry puncture site
3. Gently massage the finger towards the tip
4. Incision should be done on the *side* of the finger tip
5. Discard the first 3 drops
6. Blood drop must fill the cuvette .
Touch blood drop with the corner of the cuvette
Fill completely in one continuous process - do not refill!
7. Wipe off the *outside* of the cuvette

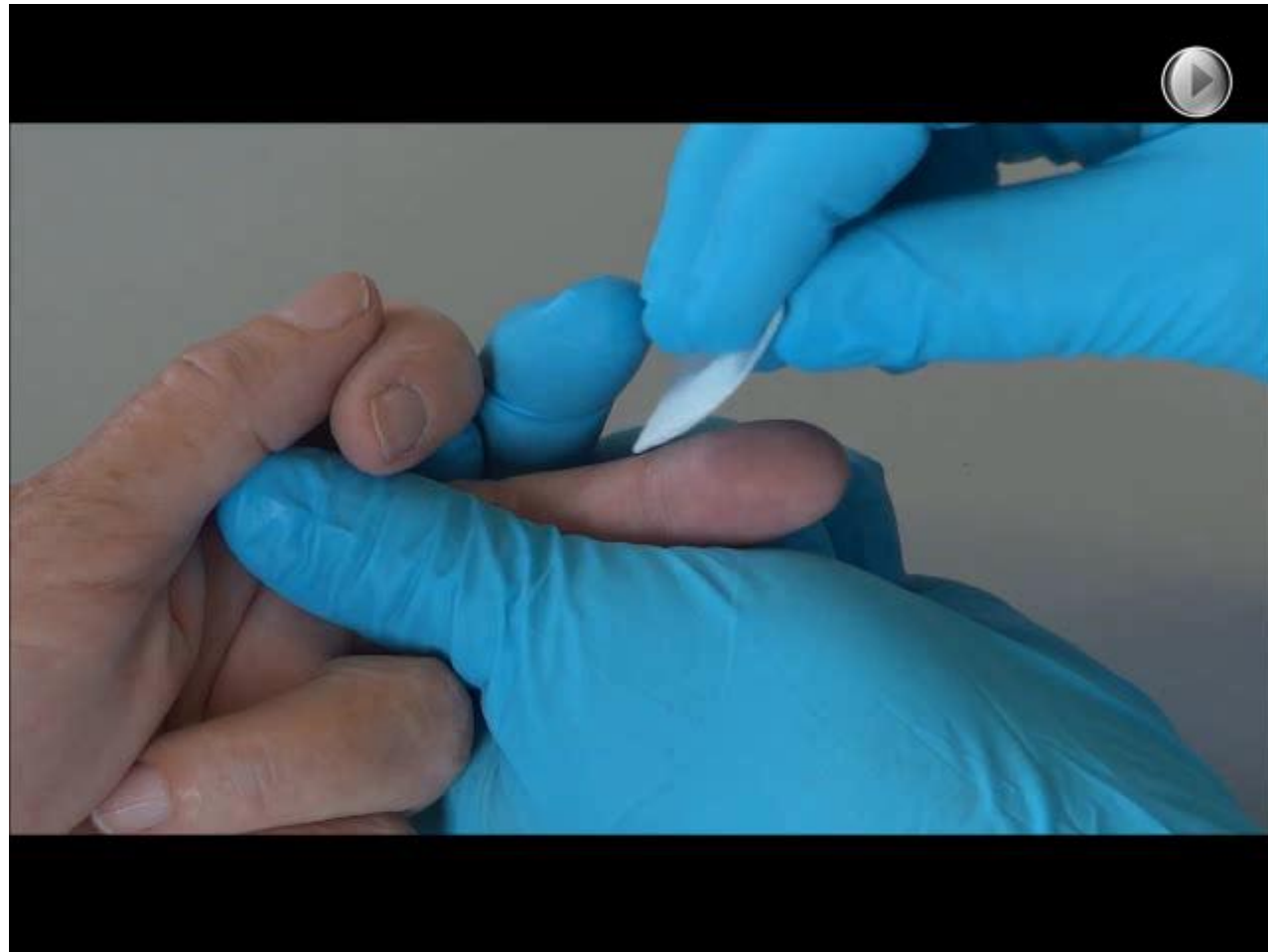
Capillary sampling

Blood flow in the fingertip

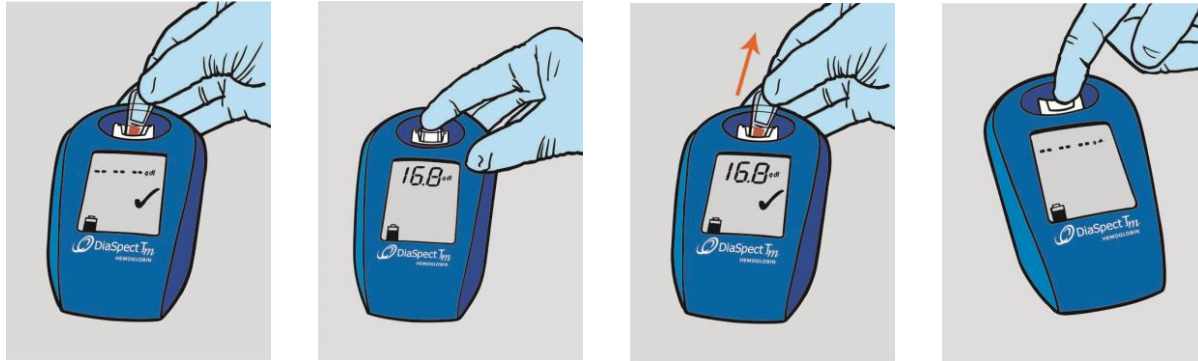


Pre-analysis is the key to accurate measurements
regardless of measuring system used!

Test procedure T Analyzer



Test procedure Tm Analyzer



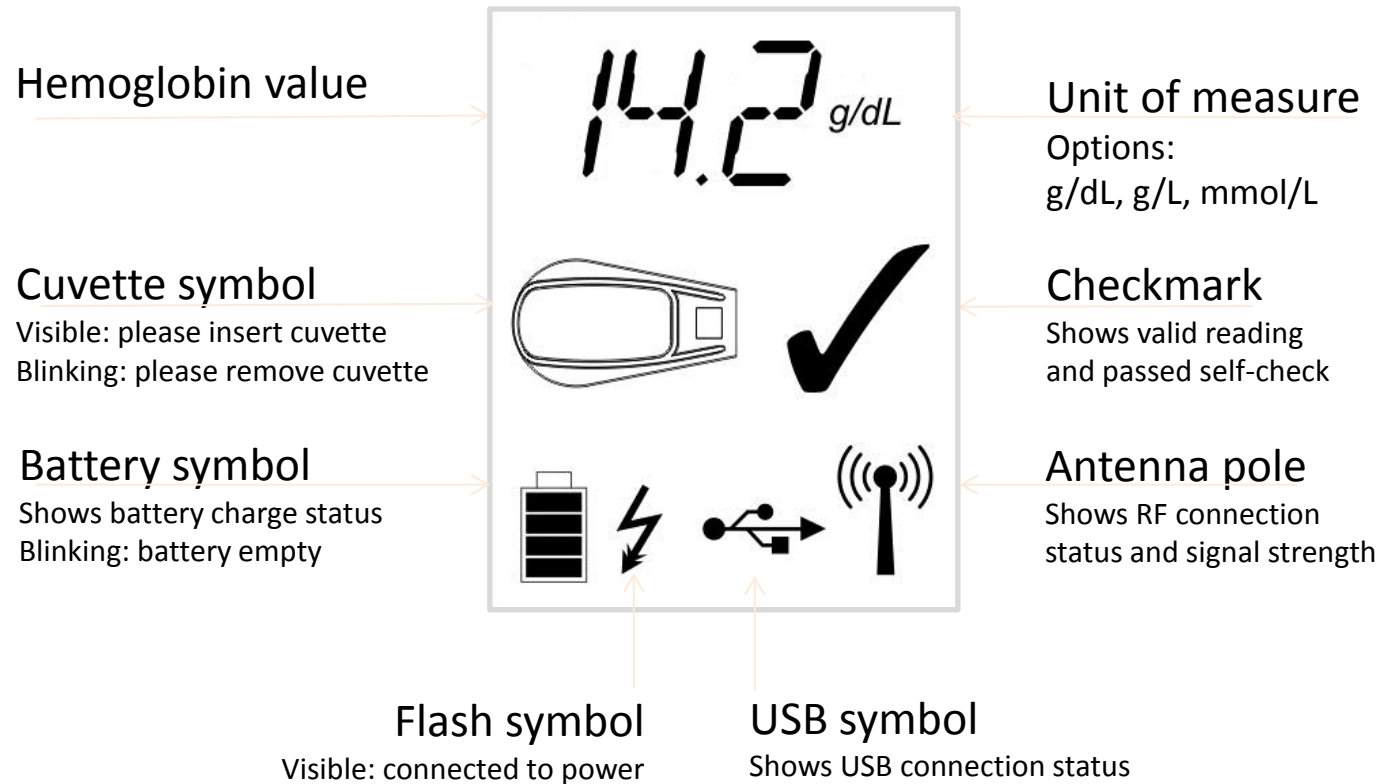
1. Place cuvette in the cuvette holder
2. Press gently down until you feel a *click*
3. Hold cuvette in position, the hemoglobin value will be displayed instantly
4. Pull out cuvette quickly. Record the result.
5. Displays last result until new test or cancellation (press down the empty cuvette holder)

Test procedure Tm Analyzer



Measuring

Tm Analyzer display





Repeated sampling

Hb values from capillary samples may be misleading due to pre-analytical factors:

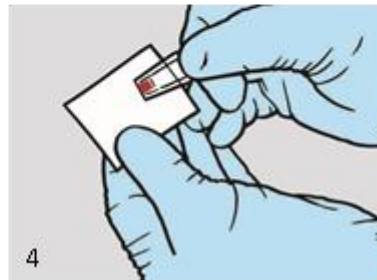
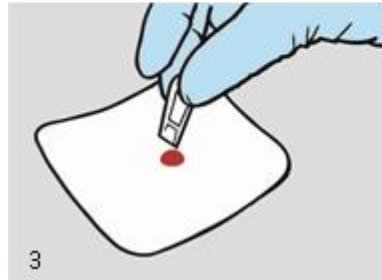
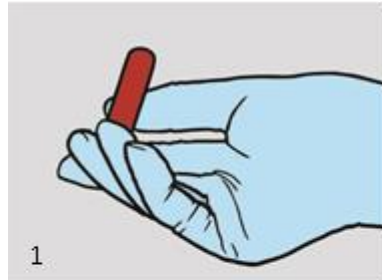
- Capillary sampling technique
- Restricted capillary blood flow
- Presence of extra-cellular fluid in the sample

Confirmation of an unexpected or unacceptable result can exclude:

- Potential pre-analytical factors as the cause

As the DiaSpect T_m is a very fast method, this confirmatory test can preferably be done from the same incision, as long as there is a free flow of blood

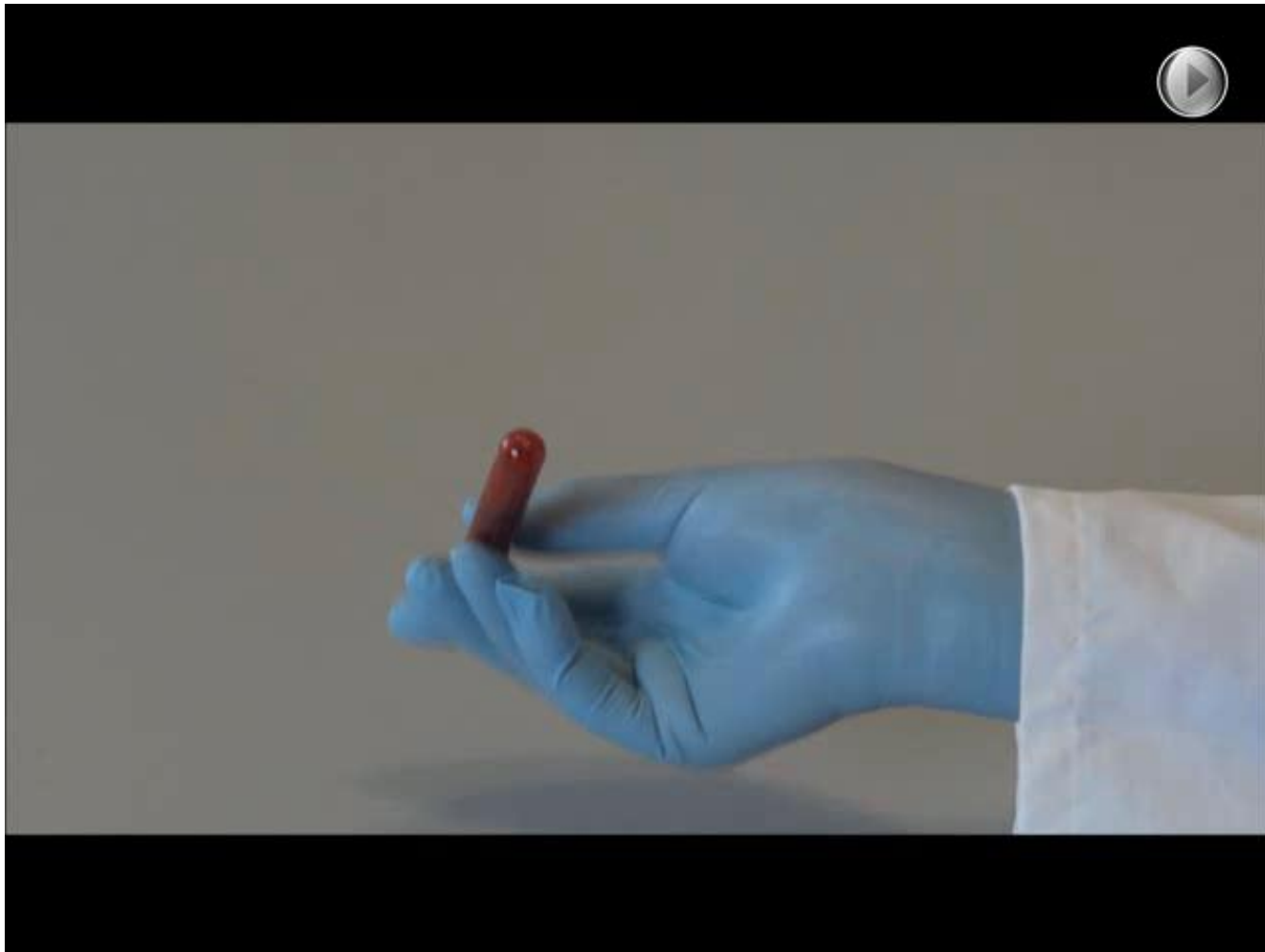
Venous sample



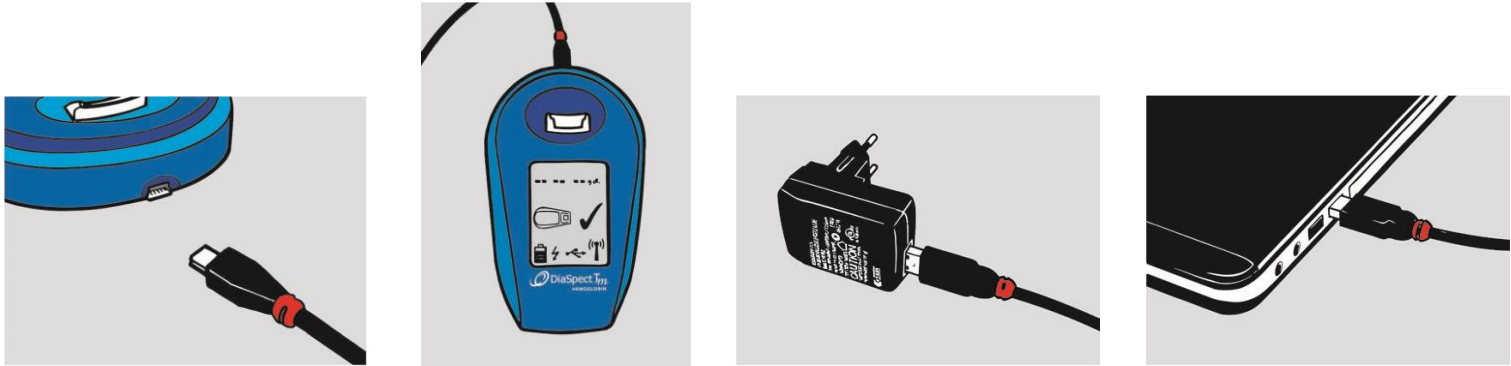
1. Mix blood well prior to sampling. Mix by gentle inversion*
2. Place a drop onto a hydrophobic surface
3. Touch blood drop with the corner of the cuvette
4. Fill completely in one continuous process - do not refill
5. Wipe off the *outside* of the cuvette

** If stored in a refrigerator, the blood should be allowed to warm up to room temperature before mixing*

Testing venous samples



DiaSpect Tm - Charging



- Features in-built rechargeable battery
- Can be charged by connection with the power supply or by connection to a computer via USB cable
- A battery symbol in the display shows the current charging state
- Battery cannot be overcharged
- Charge at least once within 9 month

A fully charged battery can be used continuously for several weeks without recharging!

DiaSpect Tm – Charging



Charging



Quality control

- Device is factory calibrated against the HiCN reference method according to ICSH and needs no further calibration
- An automatic self-check is performed between each measurement:
 - Passed self-test verifies the measurement performance and is indicated with a check mark on the display
 - An error code is displayed if the self-check failed and the analyzer ceases measuring

Liquid controls available for system control
(analyzer, cuvette, sample collection and operator)

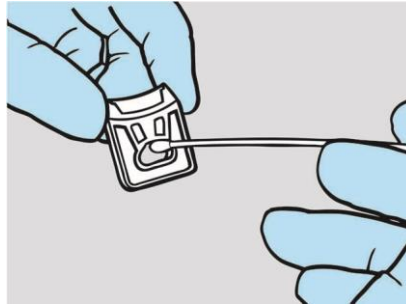
Follow local, state and federal regulations and other accreditation requirements

DiaSpect Control HBT

- A liquid control material for monitoring the performance of the DiaSpect hemoglobin systems over time
- Available in three concentrations: Low, Medium and High
- Non-biohazardous
- Each bottle contains 1.9 mL of solution
- Storage:
2°C – 25°C unopened
2°C – 25°C after opening for max. 60 days



DiaSpect Tm – Cleaning

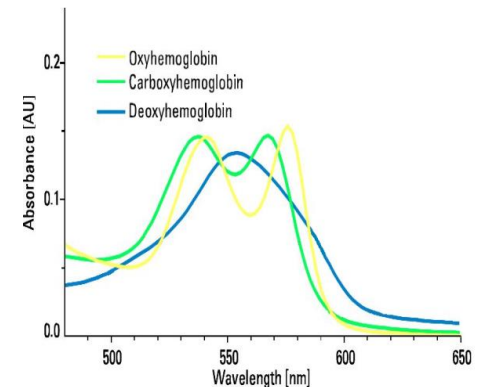
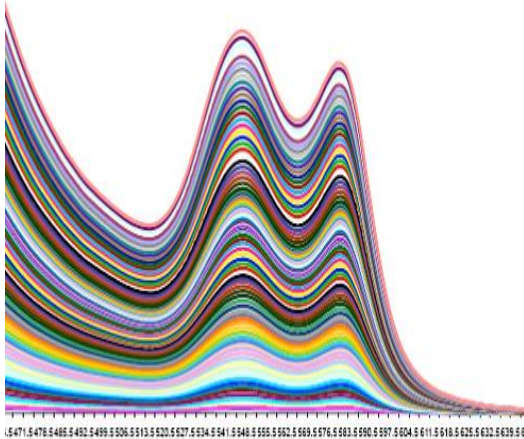


1. Hold the rear of the cuvette holder and pull the cuvette holder out
2. Clean the cuvette holder with cold water or mild detergent, followed by disinfectant
3. Reinsert the dry cuvette holder

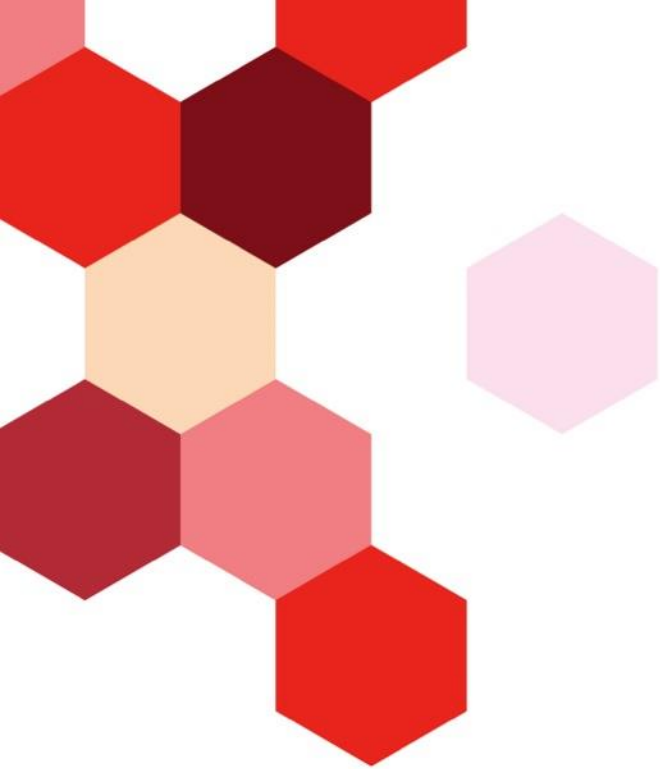
This is the only maintenance that is required!

Measuring principle

- The Hemoglobin concentration is calculated from a broad spectrum photometric measurement of unaltered whole blood
- The measured spectrum of a fresh whole blood is the sum of all fractions = total Hb
- A patented method compensates for light scattering.
- Turbidity is measured and compensated for
- Each Hemoglobin fraction has a specific absorbance spectrum

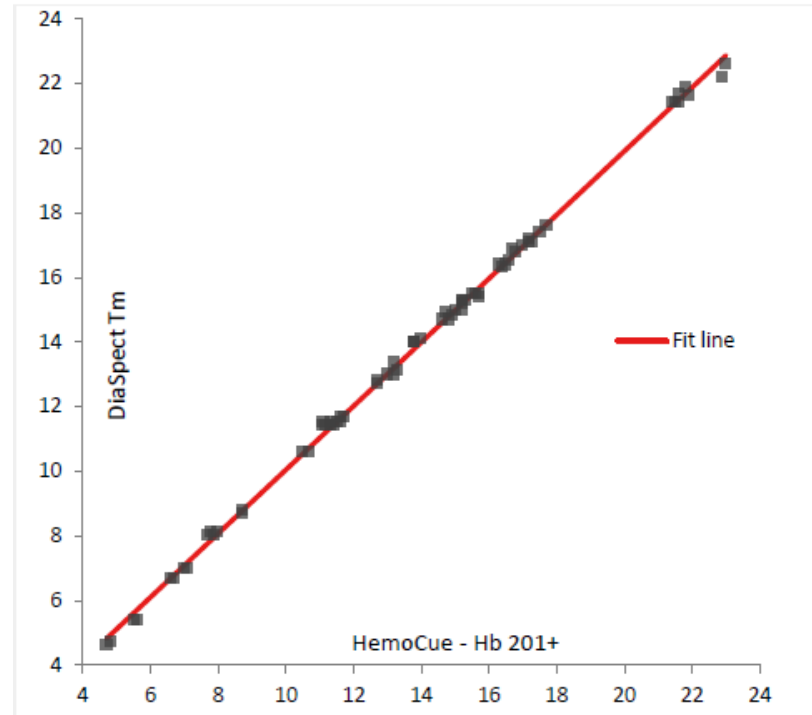


DiaSpect Tm – Evaluations



Evaluation data available comparing to

- Sysmex KX-21NTM
- EKF Hemo Control
- HemoCue Hb 201+



Diaspect Tm and T Comparison



	Diaspect Tm	Diaspect Hemoglobin T
Cuvettes	DiaSpect hemoglobin cuvettes	
Wavelength	Multiple wavelengths ranges, 450 nm to 750 nm	
Battery	Integrated lithium-ion rechargeable battery	
Duration of use fully charged	Several weeks continuous use	40 hours continuous use
Displayed measuring range	0.3 to 25.5 g/dL	0.3 to 25.5 g/dL
Operating temperature	+10°C to +35°C	+15°C to +35°C
Cuvette holder	Not moving	Motor driven, Automatic
Programmable	No	Yes
Data interface	USB 2.0, Bluetooth Smart	USB 2.0
Dimensions / weight analyzer	15 x 9 x 4 cm / 185 g	21.5 x 14 x 7 cm / 500 g

Summary

- Fastest Hb test on the market
1-2 second to result
- Ideal for mobile use
Integrated battery lasts 40 days / 10,000 tests
- Reagent-free
Suitable for all climate conditions,
long consumable shelf-life
- Economical
Low costs of investment and price per test





Thank you