

# NBM 200

Non-Invasive Measurement of Hemoglobin



Pulmonary Function Tests (PFT) assist medical professionals in identifying, quantifying and managing respiratory system performance issues. Obtaining accurate Diffusion Capacity (DLco) values is affected by many contributing factors, in which Hemoglobin is one such factor that has a significant influence on the DLco measurement. When DLco values are abnormal, it is imperative to know the levels of hemoglobin at the time of testing so an accurate interpretation of the DLco test results can be made.

In many pulmonary lab settings, immediate Hemoglobin measurements are generally inconvenient or impossible; resulting in the use of patients' historic test results or no correction for Hemoglobin being made. The NBM 200 non-invasive Hemoglobin system provides a reliable measurement of Hemoglobin, allowing for convenient DLco adjustments at the time of patient care.



## NBM 200

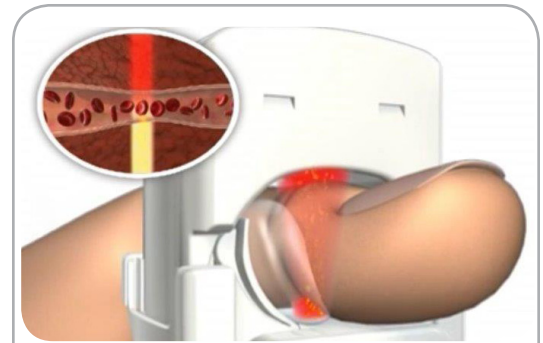
The OrSense NBM 200 is a non-invasive device for the analysis of hemoglobin, pulse and SpO<sub>2</sub>, which is perfectly suited for use in the pulmonary lab. The NBM 200 is simple to operate and maintain. This non-invasive system requires no blood draw, sharps or disposables. The NBM 200 greatly improves patient comfort and staff safety, minimizing infection risks. Test results are immediate and can be manually entered into the MGC Diagnostics software.

## NBM 200 BENEFITS

- Immediate & reliable measurements
- Easy & safe to use
- Increased patient comfort
- Environmentally friendly
  - No disposables
  - No biohazardous waste

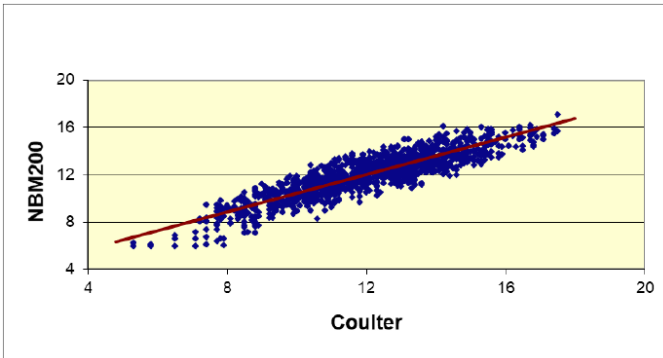


OrSense's patented SpectOLight™ technology, known as Occlusion Spectroscopy, uses a non-invasive optical measurement platform combined with a finger attached ring-shaped sensor probe. The pressure applied by the sensor temporarily occludes the blood flow in the finger, creating new blood dynamics which generate a unique, strong optical signal, yielding a high signal-to-noise ratio which is wholly blood specific. Analysis of the signal provides the sensitivity necessary to measure hemoglobin, pulse-rate, oximetry (even under severe low perfusion levels), and other analyte concentrations.



A BREAKTHROUGH SOLUTION FOR THE MEASUREMENT OF HEMOGLOBIN (HB)

- Strong optical signal
- No interference from fingernail polish
- Highly sensitive measurements



Hematology patients data (n = 1396), precision 0.94 g/dL, correlation 0.89.  
 Axes: NBM 200 Hb [g/dL] vs. Reference Hb [g/dL]

## SPECIFICATIONS

### PERFORMANCE

#### HEMOGLOBIN

- Measurement range: 7-17 g/dL
- Precision (1 SD): 1 g/dL
- Resolution: 0.1 g/dL

#### PULSE RATE (PR)

- Measurement range: 30-240 bpm
- Accuracy: 3 bpm

#### SPO2

- Range: 1-100%
- Accuracy: 3% for 70-100%
- Below 70% unspecified

#### DATA MANAGEMENT

- Data logger with real time and date
- Measured values automatically stored
- Multilingual data interface

#### ELECTRICAL

- Consumption (typical): 12 watts input
- Voltage range: 100 – 240 VAC, 50-60 Hz 40 VA max.
- Operates on mains power or 4 AA 1.5V batteries, or an optional internal Li-ion rechargeable battery (capable of continuous operation for up to 300 tests)

#### TYPE OF PROTECTION

- Class 1 (on AC Power) Type BF applied part

### ENVIRONMENTAL

- Operating temperature: 0-40°C (32-104°F)
- Storage: -20-70°C (-4-158°F)
- Humidity: 5%-95% non-condensing
- Operating Altitude: -300m to 4572m (-1000-15,000 ft.)

### PROTECTION

- IP42 against drip and foreign bodies

### COMPLIANCE WITH STANDARDS

- IEC/EN 60601-1, CSA 601.1, IEC/EN 62304, MDD 93/42/EEC
- EMC compliance: IEC/EN 60601-1-2, Class B

### SENSOR EMITTED LIGHT

- LED wavelength range: 600-940 nm.
- Average radiated power: <1 mw

### CALIBRATION

- Factory Calibrated over the range

### PHYSICAL CHARACTERISTICS

#### DIMENSIONS:

- 7.5 cm H x 22.5 cm W x 18 cm D (3" x 10" x 9" x 7.1")
- Weight: 1 kg (2.2 lb.)



DESIGNED, DEVELOPED AND MANUFACTURED BY:



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