## **Technical information**

#### Sample Features

| Sample Type | Newborn infant whole blood |
|-------------|----------------------------|
| Sample Size | 35 μL                      |
| Hematocrit  | 25 - 70%                   |
|             |                            |

| Bilistick Reader     |  |
|----------------------|--|
| Units                | mg/dL and μmol/L   |
| Range                | 1 mg/dL to 40 mg/dL / 17.1 μmol/L to 684.0 μmol/L  |
| Measure System       | Photometric based in two wavelength at 465 nm and 570 nm   |
| Resolution           | ± 0.1 mg/dL / 1.0 μmol/L   |
| Repeatability        | Till 25 mg/dL: Within ± 0.2 mg/dL / 3 μmol/L   |
|                      | Over 25 mg/dL: Within ± 0.6 mg/dL / 10 μmol/L  |
| Test Time            | < 2 minutes depending on hematocrit  |
| Sensors              | Optical sensor   |
| Optical filters      | Glass protection inside the optical chamber  |
| Calibration          | Standard for periodic calibration  |
| culbration           | Blank self-calibration after Test Strip insertion  |
| Hemolysis            | Automatic system for hemolysis detection   |
| Results Report       | Color display, dimension 36.0 x 29.0 mm  |
| Interface            | Mini B - USB port  |
| Operating Conditions | Temperature: 15°C to 40°C  |
| operating conditions | Relative Humidity (non-condensing): 5 to 75%   |
| Storage Conditions   | 10 °C to 40 °C low humidity, non-corrosive gas atmosphere.   |
| Long-term Storage    | 1- In case of long-term storage, store the reader at 15-25 °C, low humidity, non-corrosive gas atmosphere. |
|                      | 2- When storing the reader for a period longer than six months, charge the battery at least once a month   |
| Power Supply         | Mini B - USB – DC 5V – 0.5A – 2.5 W  |
| Charging Conditions  | Average charging time: 4 hours (while no bilirubin test are been performed)                                |
|                      | Charging temperature: 15 – 40 °C (Recommended 15-25°C)   |
|                      | Voltage: 5V  |
| Dimensions           | 31.3 mm H x 72.9 mm W x 140 mm D   |
| Net Weight           | 220 gr.  |
| Shipping Weight      | 760 gr.  |

#### Power Supply

| Power Supply | USB – DC 5V – 1.5A - 7.5 W         |
|--------------|------------------------------------|
|              | UL Certificated Accessory          |
| USB Cable    | Type A - Mini B (5pin) M/M USB 2.0 |
|              | UL Certificated Accessory          |

#### Bilistick Test Strips

| Cell-Plasma Separator | Glass fiber                         |
|-----------------------|-------------------------------------|
| Reading membrane      | Nitrocellulose                      |
| Plastic Cassette      | High Impact Polystyrene (HIPS)      |
| Dimensions            | 3.70 mm H x 15.00 mm W x 48.65 mm D |
| Net Weight            | 1.86 gr.                            |

#### Bilistick Sample Transfer Pipettes

| Composition         | Plastic and Glass |
|---------------------|-------------------|
| Total Length        | 70.00 ± 0.20 mm   |
| Glass Tube Diameter | 1.60 ± 0.02 mm    |
| Drawing Capacity    | 35.00 ± 2.00 μL   |

### **Contact information**



# Bilistick® System

Measuring what needs to be measured





# Measuring what needs to be measured



The Bilistick<sup>®</sup> System is a Point of Care bilirubin assay able to provide early diagnosis of hyperbilirubinemia by measuring total serum bilirubin concentration.

It is composed by the Bilistick<sup>®</sup> Reader, a portable rechargeable battery reflectance reader; Bilistick<sup>®</sup> Test Strips, test strips with a cell-plasma separator coupled with a nitrocellulose membrane, both encased in a plastic cassette: and Bilistick<sup>®</sup> Sample Transfer Pipettes, used for loading the appropriate volume of blood on the test strip.

The test requires collection of a small blood sample directly from a heel stick or a test tube, by using a Sample Transfer Pipette, and its application on a Test Strip once it was already inserted in the Reader.

# Bilistick<sup>®</sup> System benefits



Portable and usable everywhere, afterwards a short training

Minimally invasive, requiring only one blood drop



Does not need the use of reagents and results are immediate



Comparable to laboratory exams, diagnose immediately the hyperbilirubinemia Able to measure in blood samples with wide range of PCV



Applicable to newborn babies of all ethnicities

# Bilistick<sup>®</sup> Reader Maintenance products





Bilistick<sup>®</sup> Calibration Kit

**Bilistick®** Cleaning Kit



Simple Steps for trustable results







Insert Bilistick<sup>®</sup>

Collect blood sample

Bilirubin Value

**M#** 000001

Check bilirubin

concentration in the display

mg/dL umol/L Load sample

6



Press M key and wait for result

# Because precision matters...

The Bilistick<sup>®</sup> System has been extensively validate both in Western Countries as well as in Low and Middle Income Countries. covering different environments and condition in which it can be used around the world.

By comparing Bilistick<sup>®</sup> bilirubin results with classic methodologies routinely used in high quality laboratories of hospitals, it has been demonstrated an excellent correlation of bilirubin results.

Several studies supports the use of Bilistick<sup>®</sup> System for routine Total Serum Bilirubin screening. It may facilitate early identification of newborns requiring phototherapy treatment thus contributing to substantial reduction of the prevalence of ABE/kernicterus in LMICs.

#### REFERENCES

- Neonatology (2013) 103:176–180 – "Bilistick: A Low-Cost Point-of-Care System to Measure Total Plasma Bilirubin"

- Journal of Perinatology (2017) 00, 1 – 4 – "Comparison between Bilistick System and transcutaneous bilirubin in assessing total bilirubin serum concentration in jaundiced newborns"

- EClinicalMedicine 1 (2018) 14–20 – "Diagnostic Performance Analysis of the Point-of-Care Bilistick System in Identifying Severe Neonatal Hyperbilirubinemia by a Multi-Country Approach"



Check the

**Bilistick Test Strip**