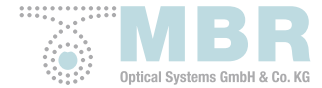


Technical Informations

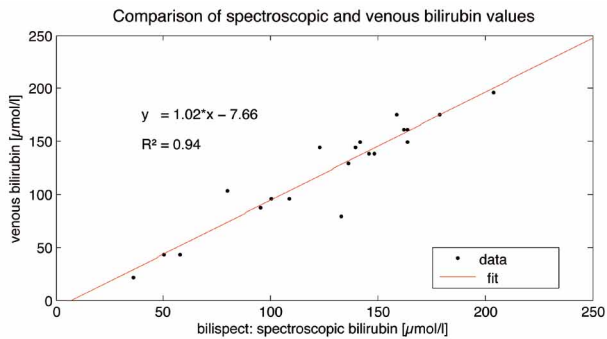
Distribution

| | |
|--|--|
| Parameter: Bilirubin $\mu\text{mol/l}$ | |
| Measuring method: | Reflection spectroscopy |
| Light source: | 2 LEDs |
| Power source: | 6 NiMH rechargeable batteries, or 6 normal batteries (alkaline), size 'AA', 'Mignon' or 'LR6' or the 'FRIWO FW7556M/15' mains adapter |
| Operating temperature / humidity range: | +10 to +40°C; relative humidity 10 to 85%, no condensation |
| Storage temperature / humidity range: | -10 to +60°C, relative humidity 10 to 95%, no condensation |
| Dimension: | 20,8 cm (W) x 11,5 cm (H) x 4,0 cm (D) |
| Weight: | 544 g (with 6 batteries) |
| Accessories: | Buttonsensor, main adapter (type 'FRIWO FW7556M/15'), USB cable, rechargeable batteries (6 off), Protective caps for fibre-optic light guide (3 x small) |
| Wavelength range: | 360 - 800 nm |

Distribution:

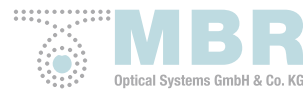


Reflect your health



Source:
 Comparative Measurements of Venous and Transcutaneous Bilirubin Levels in Preterm Infants by Non-Invasive White Light Spectroscopy
 H. Rabe¹, D. Stilton¹, H. Jungmann², M. Olbert²
¹ Department of Neonatology, Brighton & Sussex University Hospitals, Eastern Road, Brighton, UK
² Research Laboratories, MBR Optical Systems GmbH & Co KG, Im Hölker Feld 5, Wuppertal, Germany

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biliSpect[®]

E-2012-1

innovative, non-invasive & quantitative:
 measurement of the bilirubin value in the blood

Application possibilities

The fast, safe and careful measurement of the bilirubin value in newborns is essential for an optimal therapy. Unlike other non-invasive bilirubin measurement devices **bili**spect® measures the bilirubin in the skin and the bilirubin in the blood.

The Advantages:

- reliable results to inform correct therapy and ongoing treatment decisions
- long-term monitoring during the phototherapy using a button sensor
- appropriate for all newborns
- without needle, painless, no stress for infants
- no disposable materials
- minimization of operating costs



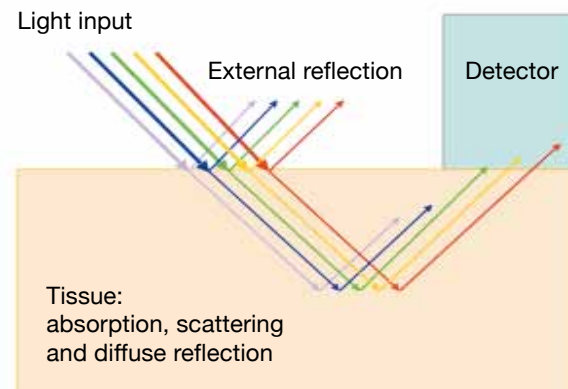
Principle of operation



A sensor head placed on the skin projects a white light into the underlying tissue via a waveguide.

Some of the projected light is absorbed by the various components of tissue, while some of it is reflected. Another waveguide transmits the light reflected as a result of the physical conditions back to the device. A spectrometer breaks the light down into its separate wavelengths and an electronic evaluation unit analyses it.

The resulting data is then processed using an algorithm developed by MBR and visualised on the display of the device. Individual measurements and continuous measurements can also be carried out. The device is powered by batteries. A matching charger is included. With fully charged batteries, the device can measure for at least five hours in continuous operation.



Buttonsensor

bilispect®
hand held analyser



Reflector



Transport case