artinis

eat

slee

PortaLite mini

A portable cerebral oxygenation monitoring device



Especially designed for pediatric studies and neonatal research.



Utilizing the non-invasive NIRS technique.



Measures local tissue saturation (TSI), as well as oxy-, deoxy- and total hemoglobin.



Almost no set-up time.



Easy analysis of your data with our superior software; OxySoft.



Real-time measurements using Bluetooth or offline measurements using the local device storage option.

Main applications are found in:

- Brain oxygenation monitoring
- Pediatric studies
- Neonatal research

Get a quote

Artinis Medical Systems +31 481 350 980 www.artinis.com

Contact us at askforinfo@artinis.com

Einsteinweg 17 6662 PW Elst The Netherlands

References to wireless fNIRS

Buchheit, M., Bishop, D., Haydar, B., Nakamura, F. Y. & Ahmaidi, S. Physiological Responses to Shuttle Repeated-Sprint Running. Int. J. Sports Med. 31, 402–409 (2010).

Maidan, I. et al. Changes in oxygenated hemoglobin link freezing of gait to frontal activation in patients with Parkinson disease: an fNIRS study of transient motor-cognitive failures. J. Neurol. 262, 899–908 (2015).

Maidan, I., Bernad-Elazari, H., Giladi, N., Hausdorff, J. M. & Mirelman, A. When is Higher Level Cognitive Control Needed for Locomotor Tasks Among Patients with Parkinson's Disease? Brain Topogr. 30, 531–538 (2017).

Maidan, I. et al. The Role of the Frontal Lobe in Complex Walking Among Patients With Parkinson's Disease and Healthy Older Adults: An fNIRS Study. Neurorehabil. Neural Repair 30, 963–971 (2016).

Mirelman, A. et al. Increased frontal brain activation during walking while dual tasking: an fNIRS study in healthy young adults. J. NeuroEngineering Rehabil. 11, 85 (2014).

Nieuwhof, F. et al. Measuring prefrontal cortical activity during dual task walking in patients with Parkinson's disease: feasibility of using a new portable fNIRS device. Pilot Feasibility Stud. 2, (2016).

Shadgan, B., Reid, W. D., Gharakhanlou, R., Stpublisher-ids, L. & Macnab, A. J. Wireless near-infrared spectroscopy of skeletal muscle oxygenation and hemodynamics during exercise and ischemia. Spectroscopy 23, 233–241 (2009).

Technical specifications

TECHNOLOGY

RELATIVE MEASURES ABSOLUTE MEASURES

CHANNELS TEMPLATE & LOCATION INTER-OPTODE DISTANCE RECEIVERS TRANSMITTERS WAVELENGTHS AMBIENT LIGHT CORRECTION DIMENSION

WEIGHT ENVIRONMENT INDICATORS POWER

SAMPLE RATE DATA COLLECTION & STORAGE DATA ANALYSIS SOFTWARE OPERATING SYSTEM EVENTS ELECTROMAGNETIC COMPATIBILITY HARDWARE SYNC OPTIONS SOFTWARE SYNC OPTIONS NIRS + OTHER MODALITIES Continuous wave Near-InfraRed Spectroscopy (NIRS) using the modified Lambert-Beer law Oxy-, deoxy-, and total hemoglobin concentration changes Tissue saturation index (TSI) using spatially resolved spectroscopy (SRS) 3 relative, 1 absolute Fixed template for muscle and brain (frontal cortex) 16, 21, and 26 mm 1 photodiode 3 LEDs, each with 2 wavelengths Standard 760 and 850 nm, custom wavelength possible Proprietary algorithm to filter out ambient light Battery housing: 84 x 54 x 20 mm Probe: 40 x 20 x 5 mm Wire: 1.3 m 80 g including battery and sensor Operating temperature: 10 - 35 °C Power, Measuring, Battery status, Bluetooth connection Up to 8 h with interchangeable and fast-charging battery Optional battery upgrade to 16 h available 50 Hz Online and offline (2 h at 10 Hz) OxySoft Windows 10 Online, offline or PortaSync No interference with TMS, EEG, EMG, ECG PortaSync, parallel cable, serial cable, LabStreamer ASCII, LSL, DCOM (e.g. Matlab, E-prime, Presentation) We deliver the following packages: PortaLite Mini + TMSi EEG package (32 channels or more)

askforinfo@artinis.com

What's in the box?

PortaLite mini Strong & sturdy Pelicas License key Battery charge .aptop Jser guide Bluetooth dongle OxySoft, data analysis software







