PortaMon

A wireless NIRS device, especially designed for the measurement of muscle oxygenation.

Main applications are found in:

- Sport science
- Rehabilitation
- Mitochondrial function
- Urology research



1 channel to measure absolute oxygenated hemoglobin percentage, 3 channels to measure relative concentrations.

Measures oxy-, deoxy-, and total hemoglobin concentration changes.



Combine multipe PortaMons at the same time, on the muscle tissue of your interest.



Utilising the non-invase NIRS technique.



Perform real-time measurements using Bluetooth or offline measurements using the board data collection.



Analyse your data with our superior analysis software; Oxysoft.

Interested? contact us at: askforinfo@artinis.com

t f e +31 481 350 980 +31 842 105 702 askforinfo@artinis.com

artinis

Einsteinweg 17 6662 PW Elst The Netherlands

Page 1/2 PortaMon Leaflet - rev. 1601

References to wireless NIRS

- Allart E et al. Evaluation of muscle oxygenation by near-infrared spectroscopy in patients with Becker muscular dystrophy. Neuromuscul Disord. 2012 Aug; 22(8):720-78
- Buchheit et al. Physiological responses to shuttle repeated-sprint running.
 Int J Sports Med. 2010 Jun; 31(6):402-9.
 Buchhait et al. Parse durit illite and source in the state of the second se
- Buchheit et al. Reproducibility and sensitivity of muscle reoxygenation and oxy-gen uptake recovery kinetics following running exercise in the field. *Clin Physiol Funct Imaging. 2011 Sep; 31(5):337-46.*
- Dascombe et al. No effect of upper body compression garments in elite flat-water kayakers.
 European Journal of Sport Science 2011, 1-9
- Hesford et al. Asymmetry of Quadriceps Muscle Oxygenation during Elite Short-Track Speed Skating. Med Sci Sports Exerc. 2012 Mar; 44(3):501-8.
- Hesford C et al. NIRS Measurements with Elite Speed Skaters: Comparison Be-tween the Ice
 Rink and the Laboratory. Adv Exp Med Biol. 2013; 765:81-6.
- Kenjale et al. Dietary nitrate supplementation enhances exercise performance in peripheral arterial disease. J Appl Physiol. 2011 Jun; 110(6):1582-91.
- Rittweger et al. Muscle tissue oxygenation and VEGF in VO2-matched vibration and squatting exercise. *Clin Physiol Funct Imaging*. 2010 Jul; 30(4): 269-279.
- Shadgan et al. Wireless near-infrared spectroscopy of muscle oxygenation and heamodynamics during exercise and ischemia. Spectroscopy 2009; 23: 233-241.

Technical Specifications

TECHNOLOGY

MEASURES INDICATIONS DATA ANALYSIS SOFTWARE OPERATING SYSTEM LIGHT SOURCE CHANNELS

WAVELENGTHS EVENTS DETECTORS OPTODE DISTANCE

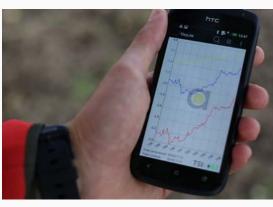
POWER

TOTAL WEIGHT NOISE

SIZE ENVIRONMENT INTERFERENCE ACCESSORIES Continious wave near infrared spectroscopy using modified lambert-beer law. Oxy-deoxy, total hemoglobin and tissue saturation. Battery status, Bluetooth connection Oxysoft Windows 7.8.10 Light emitting diodes: 3x2 wavelengths 1 channel to measure absolute oxygenated hemoglobin percentage, 3 channels to measure relative concentrations Standard nominal 760 and 850 nm, others possible. Insert online and offline events. Photo diode with ambient light protection. Three distances are used between receiver and transmitters: 30.35 and 40 mm. Up to 8 hours with one interchangeable and rechargeable battery. Upgradable up to 16 hours. 75 grams including battery. $^{\prime\prime}$ 0.004 standard deviation in optical density at a total of $^{\prime\prime}6$ optical densities at a measurement frequency of 10 hz. WXDXH: 83.8 x 42.9 x 17.2 mm Operating temperature: ~ 10-35 °c No interference with eeg, ecg or emg. - PortaSvnc - incorporated 3d accelerometer









Applications of the PortaMon

Quotation?

contact us at: askforinfo@artinis.com PortaMon research package What's in the box?

1x PortaMon 1x strong and sturdy (micro) Pelicase 1x License key 1x Bluetooth dongle Oxysoft, data analysis software Batteries and charger Stickers and bandages Dark cloth and sleeves Laptop User Guide

©2016 Artinis Medical Systems all rights reserved. All specifications and appearances can change without further notice. All other trademarks or registered trademarks are the property of their respective owners. *Note: the PortaMon is as a research device only*



Page 2/2 PortaMon Leaflet - rev. 1601