OctaMon+

One-of-a-kind wearable & customisable 8-channel fNIRS

The OctaMon+ opens the possibility to measure at any position on the scalp. We have developed interchangeable high-power and lower-power optodes with our own 3-step mechanism that enables you to easily select the pressure load on the optode. This has a clear advantage over spring-loaded systems with a fixed and often too tense load. This system also allows you to easily part the hair beneath the optode. As a rule of thumb, you can use high-power optodes on any template covered by hair, and low-power optodes on hairless areas. This way, we created the perfect and portable 8-channel system capable of measuring from prefrontal lobe to occipital lobe with the highest possible signal quality.





8-channels and truly portable.



Utilizing the non-invase NIRS technique.



Can be combined with other techniques such as EEG, EMG, and tCS.



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



Easy data analysis with our superior analysis software OxySoft.

Interested?

Contact us at askforinfo@artinis.com

www.artinis.com +31 481 350 980 Einsteinweg 17 6662 PW Elst The Netherlands



Main applications

Brain oxygenation monitoring, sports science, functional studies, cerebral studies, hyperscanning (up to 4 devices) - both inside and outside the lab.

References to wireless NIRS

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).

Buchheit, M., Ufland, P., Haydar, B., Laursen, P. B. & Ahmaidi, S. Reproducibility and sensitivity of muscle reoxygenation and oxygen uptake recovery kinetics following running exercise in the field: Reproducibility and sensitivity of muscle reoxygenation. Clin. Physiol. Funct. Imaging 31, 337–346 (2011).

Dascombe, B., Laursen, P., Nosaka, K. & Polglaze, T. No effect of upper body compression garments in elite flat-water kayakers. Eur. J. Sport Sci. 13, 341–349 (2013).

Hesford, C., Cardinale, M., Laing, S. & Cooper, C. E. NIRS Measurements with Elite Speed Skaters: Comparison Between the Ice Rink and the Laboratory. in Oxygen Transport to Tissue XXXIV (eds. Welch, W. J., Palm, F., Bruley, D. F. & Harrison, D. K.) 765, 81–86 (Springer New York, 2013).

Hesford, C. M., Laing, S. J., Cardinale, M. & Cooper, C. E. Asymmetry of Quadriceps Muscle Oxygenation during Elite Short-Track Speed Skating: Med. Sci. Sports Exerc. 44, 501–508 (2012).

Kenjale, A. A. et al. Dietary nitrate supplementation enhances exercise performance in peripheral arterial disease. J. Appl. Physiol. 110, 1582–1591 (2011).

Rittweger, J., Moss, A. D., Colier, W., Stewart, C. & Degens, H. Muscle tissue oxygenation and VEGF in VO2-matched vibration and squatting exercise: Muscle tissue oxygenation, VEGF and vibration. Clin. Physiol. Funct. Imaging 30, 269–278 (2010).

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



TECHNOLOGY Continuous wave near infrared spectroscopy using the

modified Lambert-Beer law

MEASURES Oxy-, deoxy-, and total hemoglobin

DATA ANALYSIS SOFTWARE OxySoft

OPERATING SYSTEM Windows 10

LIGHT SOURCES Light emitting diodes: 8 x 2 wavelengths

WAVELENGTHS Standard nominal 760 and 850 nm, others possible

CHANNELS 8 channels

INDICATIONS Battery status, Bluetooth connection

DETECTORS Photodiode with proprietary ambient light protection

OPTODE DISTANCE 30 - 35 mm

POWER 3 to 11 hours with one interchangeable and rechargeable

battery

TOTAL WEIGHT 260 grams including battery

SIZE Battery housing: $84 \times 54 \times 42$ mm, wire: 1.3 m headcaps

available in multiple sizes

SAMPLE RATE 50 Hz

ENVIRONMENT Operating temperature: 10 - 35 °C

ELECTROMAGNETIC COMPATIBILTY No interference with EEG, ECG or EMG

OPTIONAL Can be combined with the PortaSync

INDICATIONS Battery status, Bluetooth connection

OctaMon+ and TMSI EMG package (2 channels or more)
OctaMon+ and TMSI EEG package (16 channels or more)

We deliver the following packages:









Get a quote:

askforinfo@artinis.com

What's in the box?

NIRS + OTHER MODALITIES

OctaMon+ research package

OctaMon+ Strong & sturdy Pelicase License key 2 Batteries & charge Laptop User guide Bluetooth dongle OxySoft data analysis software Neoprene headcap