NIRSIT
Brain Imaging System

Portable High-resolution fNIRS device, NIRSIT!

OBELAB is introducing a new portable functional Near-Infrared Spectroscopy (fNIRS) system: NIRSIT!
It is an easily configurable, multi-channel fNIRS neuroimaging system for prefrontal cortex, specifically targeted for research.
NIRSIT is designed to measure variations in cerebral hemodynamics on a realtime basis by radiating a near light beam, at two wavelengths of 780nm and 850nm of laser, into the cerebral cortex.
The system comes with its dedicated monitoring and analysis software for researchers.

Key Features

- Real-time multichannel monitoring ($\Delta HbO2$, ΔHbR, ΔHbT)
- Non-invasive measurement
- High spatial resolution with 204 channels
- Motion artifact removal algorithm using embedded motion sensor
- Various cognitive and behavioral tasks (E-Prime, Psychtoolbox, PsychoPy)

- Wired or Wireless connection
- Nirsit analysis software included
- CSV file format support for measured data
- Ergonomic design

Application Areas

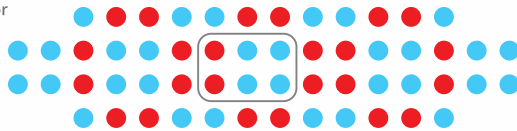Cognitive Function   Psychiatric Disease   Neuro-Marketing   Neurological Disorder
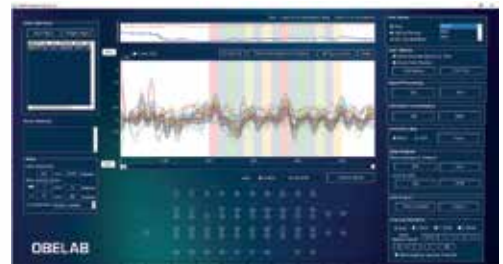
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Channel Arrangement

● Laser
● Detector

1.5 cm
2.12 cm
3.0 cm
3.35 cm

1.5 cm

Technical specifications

Optode distance	3 cm (default) / 1.5, 2.12, 3.35 cm (additional)
Channels	48 channels (max 204 channels – DOT mode)
Optical Elements	light sources: 24 / detector: 32 (default)
Wavelength	780 nm, 850 nm
Weight	550 g
Sampling rate	8.138 Hz
Motion sensor	6 axis (3 axis Accel + 3 axis Gyro)
Operating time	8 hours (3000mAh rechargeable battery)
Communication protocol	Wireless: WLAN (2.4GHz IEEE 802.11b/g/n), Wired: Serial communication (micro USB)
System Requirements (Tablet / PC tool)	Android v5.0(Lollipop) and up / Window 10 based, external sync (E-prime, TCP/IP communication)
Warranty	1 year

Accessories

Nirsit	Tablet Disposable patch Strap Silicon caps USB cable OTG cable Charger USB memory(Manual & SW included)

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