

Sole-source instrument

Oxygen	Respiration chambers with minimum oxygen diffusion <ul style="list-style-type: none"> High-resolution of oxygen flux: $\pm 1 \text{ pmol O}_2\text{-s}^{-1}\cdot\text{mL}^{-1}$ from normoxia to anoxia High-resolution of oxygen concentration: 5 nM Long-term stability and linearity of the polarographic oxygen sensor (OroboPOS) Barometric pressure transducer for accurate air calibration at any altitude
SUIT protocols	Standardized substrate-uncoupler-inhibitor-titration DL-Protocols <ul style="list-style-type: none"> Real-time monitoring of respiratory rates and states Multiple titrations within a single assay for in-depth analysis of mitochondrial fitness
MultiSensor	Additional parameters recorded real-time in combination with oxygen in the same chamber <ul style="list-style-type: none"> Automatic and documented calibration routines, instrumental background tests, and mitochondrial assays supported by DL-Protocols
Temperature	4 to 47 °C stability $\pm 0.002 \text{ }^\circ\text{C}$

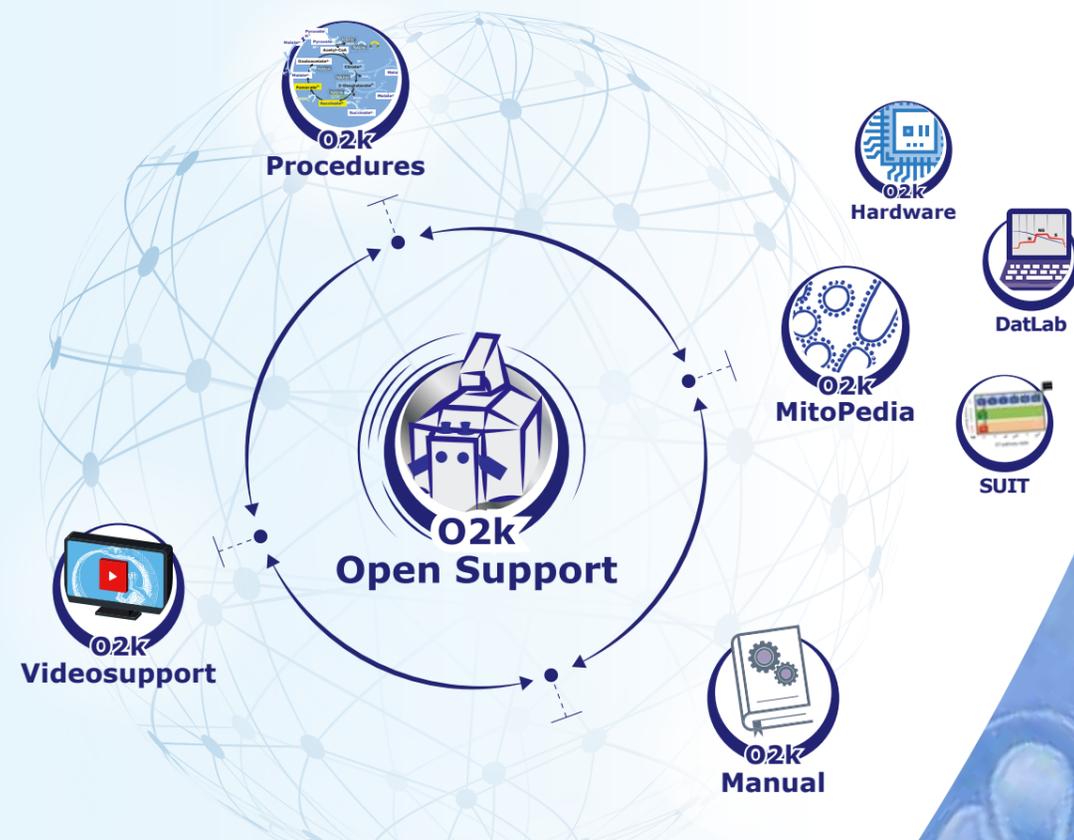
Dimensions: L 45 cm, W 31 cm, H 23 cm | **Weight:** 14 kg | **Power:** 100 – 240 V, 47 – 63 Hz, 120 W
Chamber: Duran glass | **Volume:** 2 mL or 0.5 mL | **Thermostat:** Peltier temperature control
Integrated computer with DatLab software installed for protocol design, control and data analysis.



NextGen-02k

The all-in-one instrument

www.orooboros.at



日本総代理店

ベルトールドジャパン株式会社

□ 東京本社
 〒131-0046 東京都墨田区京島2-8-12
 Tel : 03-6661-8064 Fax : 03-6661-8065

□ 大阪営業所
 〒532-0011 大阪市淀川区西中島3-11-10 新三宝ビル 2F
 Tel : 06-6195-8750 Fax : 06-6195-8760

<https://www.berthold-jp.com>

販売元

The revolutionary all-in-one instrument
 to conquer mitochondrial disease and algal bioenergetics.

RedoxBiology

Biomedicine

- Cancer • Diabetes • Obesity
- Neurodegeneration
- Aging • Cardiovascular
- Exercise physiology

- » explore
- NAD(P)H redox state
 - Coenzyme Q redox state

HRR and NAD(P)H in isolated mitochondria



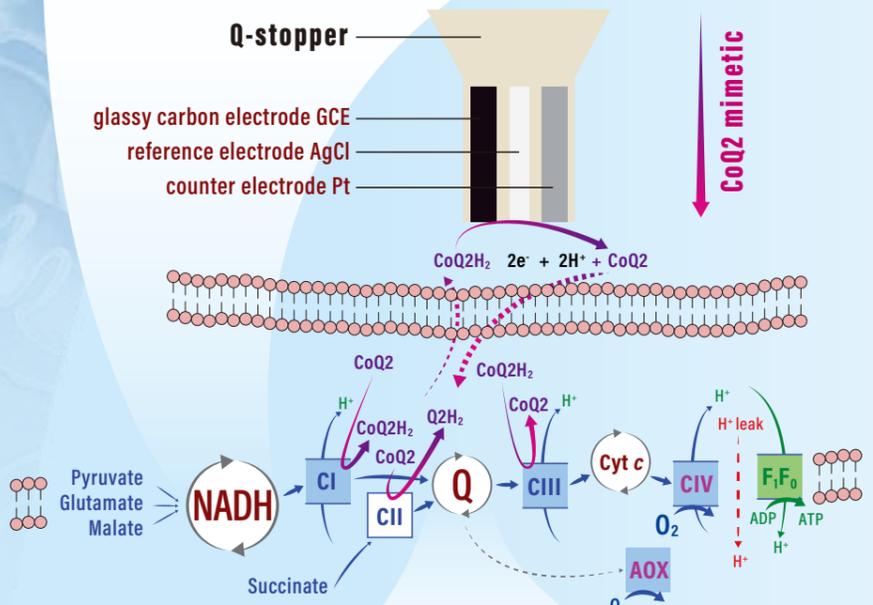
NADH-Module

High-Resolution Respirometry HRR



Q-Module

Innovations in bioenergetics



HRR and Coenzyme Q in permeabilized cells



- ROUTINE: living cell respiration
- ROX: residual oxygen consumption
- LEAK: cation leak-dependent respiration
- OXPHOS: ADP-stimulated respiration, OXPHOS-capacity
- ET: noncoupled respiration, ET-capacity

O₂ production

PhotoBiology

Plant physiology

- Photophysiology
- Algal biotechnology
- Environmental physiology

- » explore
- Photosynthesis
 - Dark respiration
 - Light-enhanced respiration

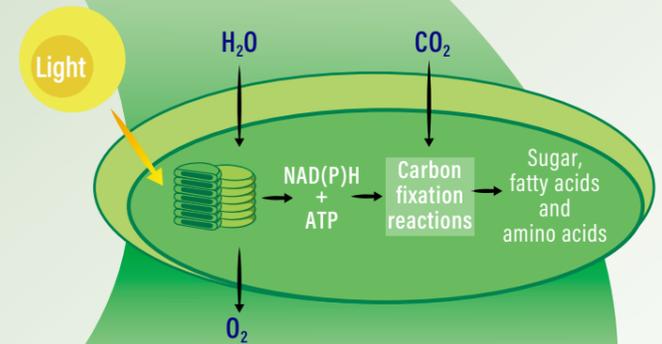
Cell respiration in mitochondria



Photosynthesis in chloroplasts



PB-Module



HRR - dark respiration and photosynthesis in algae

