



# **RESIPHER:** turns a multi-well plate into a dynamic oxygen consumption reader.

Through partnership with Lucid Scientific, Baker provides a suite of the most sensitive and accurate optical oxygen sensors available.

Based on a unique, patented technology, **RESIPHER** multi well plate analyzers offer unmatched performance in a compact package with low-power, plug-and-play USB connectivity.

RESIPHER's web-based, real-time logging and analysis software provides fast and easy data visualization and is extendable for customized real-time analysis.

- Superb sensitivity and accuracy
- Plug-and-play USB connection



- Real-time, continuous readout
- View data anytime, anywhere

#### USAGE



**RESIPHER** is intended to be used in incubator or Physoxia Workstation conditions.



The sterile, disposable lids attach to the underside of the device to monitor 4 or 32 wells

The disposable lids are compatible with most standard 96-well plates. Lids arrive sterilized and calibrated - simply place them on the top of you plates and begin your experiment.

## BENEFITS

- · Characterize time-course of metabolic response
- Track cell growth
- Observe real-time non-invasive dynamic dose response
- Monitor oxygen consumption from as few as 625 cells
- Monitor experimental controls

#### **APPLICATIONS**

Cancer biology, angiogenesis, stroke and brain injury, vital organ and muscle tissue monitoring, ophthalmology, wound healing as well as dissolved oxygen monitoring in cell culture, bioreactors etc.





### **PRINCIPLE OF OPERATION**

**RESIPHER** devices utilize proprietary high-resolution optical oxygen sensors to characterize oxygen consumption and the oxygen environment in cell culture. The RESIPHER is a handheld device that rests on top of a plate in the incubator or workstation. The device interfaces a sterile/disposable lid with probes that extend into the media directly above the cells.

Probes are small enough (500µm diameter) that the system is totally non-invasive to the cell culture.

An oxygen concentration gradient forms in the media as a direct result of cellular oxygen consumption. The readout is attained by continually scanning the probes vertically above the cells in order to measure the gradient, then using sophisticated signal processing algorithms to convert concentration readings to cellular oxygen consumption.





Device streams real-time to a web-based analysis and visualization software by way of a hub which resides outside of the incubator.

The primary readout is oxygen consumption, but user also has access to a characterization of oxygen concentration, incubator temperature, relative humidity, and several other environmental factors.

- Consumption Resolution -5 fmol/mm<sup>2</sup>/ sec
- Concentration Sensitivity < 1 µM</li>
- Time Resolution < 30 mins</li>
- Lid Shelf Life > 12 weeks

Get in touch today to learn more about our Starter Packs!

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