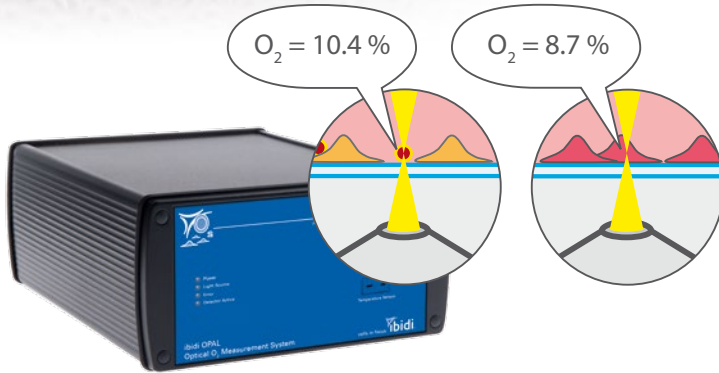


NEW

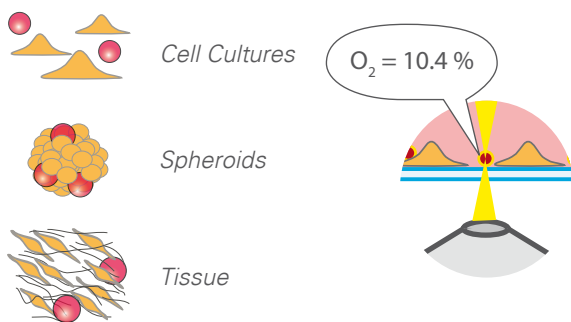


ibidi OPAL O₂ Measurement System

Measure Oxygen Directly in Cell Cultures and Tissues

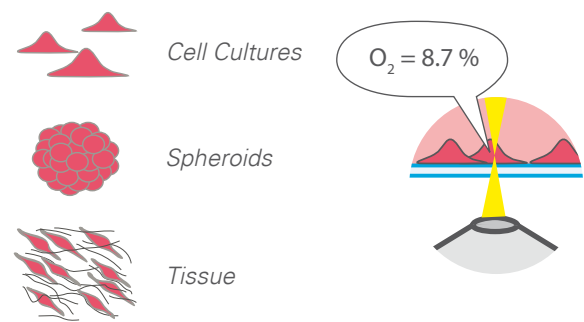
- ✓ Exact oxygen measurement in cell cultures and tissues
- ✓ Fast measurement within seconds
- ✓ Non-invasive and real-time measurement
- ✓ Ideal for *in vitro* hypoxia conditions

Extracellular O₂ Monitoring Using CPOx Beads:



- 50 µm polystyrene beads with an O₂-sensitive fluorophore
- Not cell permeable; for O₂ monitoring in the direct neighborhood of cultured cells
- Quantitative results with OPAL and FLIM microscopes

Intracellular O₂ Monitoring Using NanO₂ Nanoparticle Reagents:



- O₂-sensitive fluorophore
- Directly cell permeable and self-loading, for intracellular image-based O₂ measurement
- Quantitative results with OPAL and FLIM microscopes

NEW

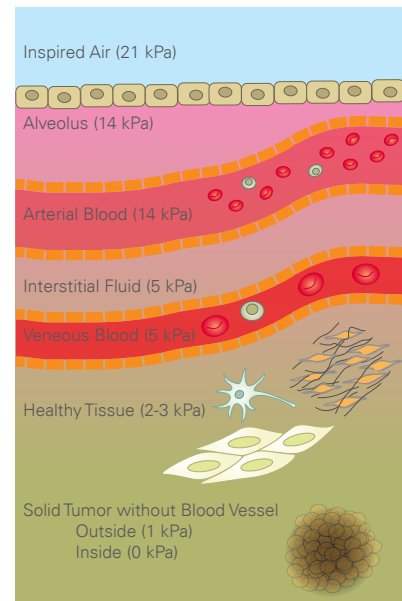
ibidi OPAL O₂ Measurement System

Measure Oxygen Directly in Cell Cultures and Tissues

O₂ Monitoring and Intracellular Measurement

In addition to controlling the oxygen concentration in the stage top incubator, it is indispensable to know the real oxygen concentration near the cells (monitoring extracellular O₂), or even inside the cells (intracellular O₂). Because cells consume oxygen, the concentrations are typically much lower in cell clusters, such as tissue or spheroids.

With the ibidi OPAL Optical O₂ Measurement System, the oxygen concentration can be measured optically and directly in a 2D cell culture dish, a compact 3D cell spheroid, or even in a piece of tissue. Oxygen-sensitive beads or cell-permeable fluorophores are utilized to measure the fluorescence lifetime.



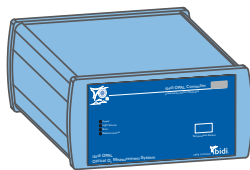
Oxygen concentration in living organisms

Working Principle and Components of the ibidi OPAL System

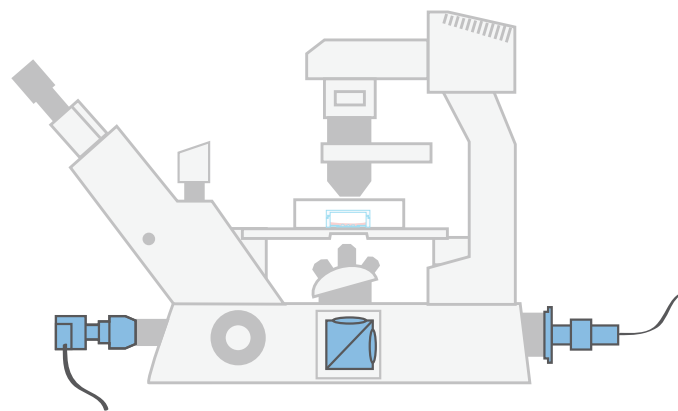
The ibidi OPAL System is easily connected to your fluorescence microscope.



Computer



ibidi OPAL Controller



OPAL Detector Unit

OPAL Filter Cube

OPAL LED Light Source

Ordering Information:

Cat. No.	Description
74001	ibidi OPAL - Optical O ₂ Measurement System, Optoelectronic hardware and software for generating and processing oxygen-dependent fluorescence lifetime signals: Controller, Detector Unit, LED Light Source, Adapter Set, Filter Cube, PC software
74101	CPOx-Beads, 50 µm, red, fluorescence lifetime probe for extracellular O ₂ measurement, 3 mg (10-100 assays)
74111	CPOx-Beads, 50 µm, orange, fluorescence lifetime probe for extracellular O ₂ measurement, 3 mg (10-100 assays)
74151	NanO ₂ , fluorescence lifetime nanoparticle reagent for intracellular O ₂ measurement, 100 µg (10-100 assays)
10918	ibidi Heating System, Universal Fit, for 1 Chamber: ibidi Temperature Controller, Heated Plate in Multi-Well Format for 1 Chamber, 1 Heating Insert, with Heated Lid
11922	ibidi Gas Incubation System for CO ₂ and O ₂ : ibidi CO ₂ and O ₂ Gas Mixer, Humidifying Column