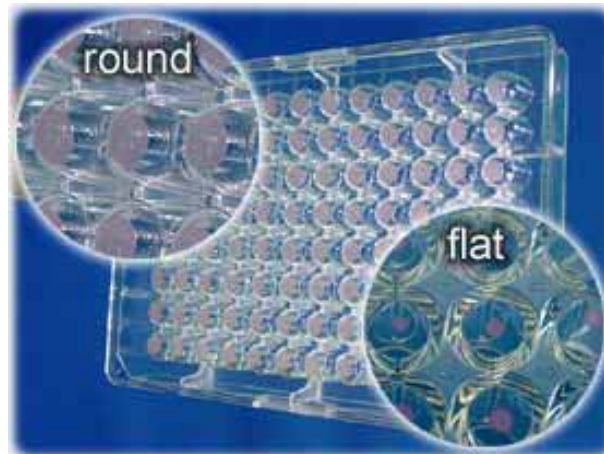


OxoPlate®

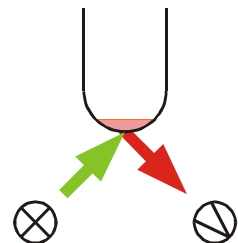
The microplate that measures **oxygen**



- **Monitoring of Cell Growth**
- **Enzyme Screening**
- **Drug Screening**
- **Homogenous Assay**
- **Fast Results**

OxoPlate®'s Principles

- OxoPlate® has 96 integrated **oxygen-sensor** layers immobilized on the bottom of each well (read out from bottom side).
- OxoPlate®'s sensor contains two different dyes in a constant ratio. One dye is sensitive to oxygen the other one gives a stable signal.
The resulting signal is **internally referenced**.
- OxoPlate®'s referenced signal reduces significantly the deviation from well to well.
OxoPlate is **calibration-FREE**.



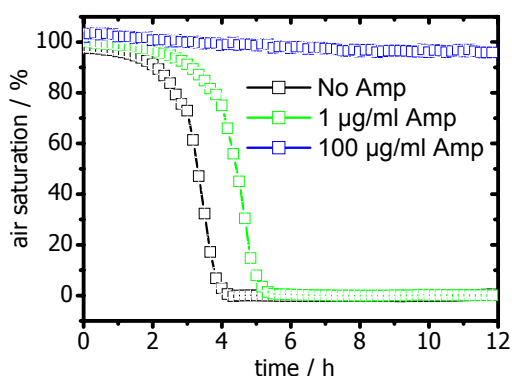
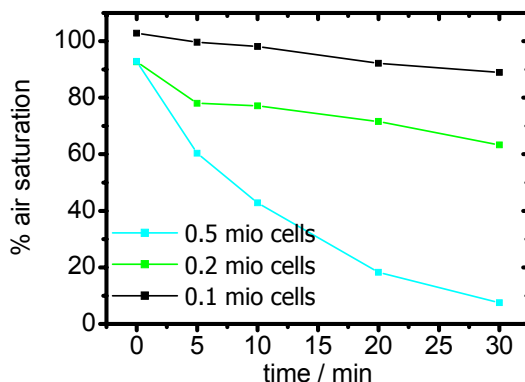
Schematic view of a well with integrated oxygen sensor

Applications

Screening the Proliferation of Cells

OxoPlate monitors cell growth by detecting the change of oxygen concentration. Even the low oxygen consumption of mammalian cells can be monitored easily. The figure on the right shows the growth of different numbers of HEK 293 cells at 37°C in sealed wells.

As **OxoPlate** sensors are thin, hydrophilic, and calibration-FREE, you do not need to compare with solutions at 0% or 100% oxygen. The signal is internally referenced.



Screening the Toxicity of Compounds

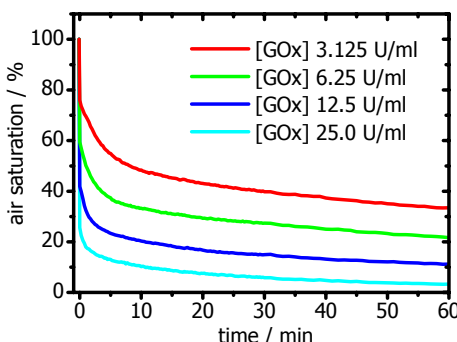
OxoPlate measures the toxicity of compounds at multiple concentrations. As **OxoPlate** just gives you the oxygen concentration, you can measure kinetic profiles of multiple drugs.

OxoPlate is **calibration-FREE**, so you can compare 96 different compounds without losing wells by using standards in every plate. In the figure on the left different concentrations of ampicillin inhibit the growth of *E. coli* shown by **OxoPlate**.

Screening the Enzyme reactions

OxoPlate is the ideal tool to screen enzyme reactions which consume oxygen. With its hydrophilic matrix it has a response time below 30 sec. This makes it possible to screen even fast reactions.

The figure on the right depicts the consumption of oxygen by oxidation of glucose catalyzed by glucose oxidase (GOx). Even the fast drop at the beginning can be monitored accurately due to the low response time.



Technical Specifications

Measuring range	0 % to 150 % air saturation	
Resolution (at 37 °C)*	up to 1 % air saturation at 0 % air saturation* up to 3 % air saturation at 100 % air saturation*	
Accuracy (at 37 °C)*	up to 2 % air saturation at 0 % air saturation* up to 5 % air saturation at 100 % air saturation*	
Temperature range	15 - 45 °C	
Response time (t₉₀) (at 37 °C)	< 30 sec	
Indicator filters	540 / 650 nm	
Reference filters	540 / 590 nm	
Types of plates offered	OxoPlate® OP96U	OxoPlate® 96C
	96 well round bottom	96 well flat bottom
	Standard / Best signals	For Cell culture
Order code	B021033-32013	B021033-32011

* performance dependent on used reader