
Equipment

1. **The high-performance Oxygraph-2k respirometer** (OROBOROS) allows the measurement of mitochondrial function (biotransformation energy pathways, respiratory complex activities) by measuring oxygen consumption using appropriate specific substrates, expanders and inhibitors. Mitochondrial respiration can be measured in isolated mitochondria, tissue homogenates, intact and permeabilized cells.
2. **The Agilent Seahorse XFe96** is a dedicated instrument that simultaneously measures key parameters of mitochondrial respiration (oxygen consumption rates = OCR) and glycolysis (extracellular acidification rates = ECAR) in living cells, enabling systematic characterization of their metabolic functions. Samples are analyzed in a 96-well microtiter plate format and measurements are performed using an optical principle with LEDs and optical sensors.