



## Rocking and Instrumented T-Flasks are Better Flasks

Gentle agitation of tissue culture flasks has been shown to improve cell outcomes. Vallejos et al (2012) showed that cells grew faster, had higher viable cell density, and produced less lactate with rocking compared to static cultures.

The ID-Rocker combines adjustable T-flask rocking with real-time, non-invasive monitoring of pH and dissolved oxygen (DO). An interface box allows for closed loop control of rocking speed with feedback from the sensor measurements so that your cells can reach target DO levels.

Place the compact ID-Rocker in your cell culture incubator and elevate your static T-flask cultures.

### Includes

Laboratory Shaker with integrated ID-Readers  
T-150 Flasks  
Interface Box

ID-Sensor pH and DO  
ID-Converter  
ID-Data Hub



## How do I incorporate optical sensors in my T-flasks?

The ID-Rocker monitors pH and dissolved oxygen and controls rocking speed to help you reach your experimental design parameters.

- ID-Sensor pH and ID-Sensor DO are securely attached to the T-flasks.
- Four ID-Readers are embedded into the Laboratory Shaker platform. T-flasks with ID-Sensors are placed on top of ID-Readers and secured on the rocking platform.
- ID-Data Hub software loaded onto your laptop collects pH and DO data through the ID-Converter for each of the tissue culture flasks.

### ✓ Advantages

#### ID-Sensor Advantages

- Real-time monitoring of pH and dissolved oxygen
- Non-invasive and biocompatible
- Single use, disposable
- State-of-the-art fluorescence technology
- High resolution and unmatched accuracy
- Quick and easy setup
- Long sensor life

### + Features

#### ID-Rocker Features

- 10-70 cycles per minute rocking
- +3 to -10 degrees rocking angle
- 4.5 Kg (10 lb) platform capacity
- Four ID-Readers embedded into the platform
- One instrumented T-150 flask per ID-Reader
- Durable ID-Reader design resistant to spills and harsh environments

#### ID-Data Hub Features

- Automatic sensor type detection
- Real-time monitoring of up to 8 sensors
- pH and DO graphical display
- Data acquisition
- Review, save and export data
- Programmable scan intervals

## Sensor Specifications

	pH	DO
<b>MEASUREMENT RANGE</b>	6-8	0-100%
<b>ACCURACY</b>	1.5% at pH 7	0.2% at full scale
<b>RESOLUTION</b>	±0.01 at pH 7	±0.1% at 21% O <sub>2</sub>
<b>RESPONSE TIME</b>	<15 sec	
<b>TEMPERATURE RANGE</b>	+5 to +60°C	
<b>DRIFT</b>	< or = 0.005 pH per day at 1 minute scan interval	
<b>CALIBRATION</b>	Pre-calibrated; recalibration is possible	
<b>STERILIZATION</b>	Autoclave, gamma irradiation; inquire about other methods	
<b>SENSOR LIFE</b>	45 days (continuous monitoring), several months (intermittent monitoring)	
<b>SHELF LIFE</b>	12 months	
<b>SENSOR DIMENSIONS</b>	ID-Sensors pH: 7mm diameter x 0.3mm height sensors ID-Sensors DO: 5mm diameter x 0.3mm height sensors	
<b>SCAN INTERVAL</b>	10 seconds or greater	
<b>OPERATING SYSTEM</b>	Windows 7/8/10	
<b>WARRANTY</b>	24 months	

## Pricing

<b>ID-Rocker includes:</b> <ul style="list-style-type: none"> <li>■ Laboratory Shaker</li> <li>■ Interface Box</li> <li>■ T-150 flasks with ID-Sensors (qty 16)</li> <li>■ ID-Readers (qty 4)</li> <li>■ ID-Converter</li> <li>■ ID-Data Hub</li> </ul>	<b>\$12,995</b>
Additional ID-Sensors pH - 7mm diameter x 0.3mm height sensors, pack of 10	<b>\$250</b>
Additional ID-Sensors DO - 5mm diameter x 0.3mm height sensors, pack of 10	<b>\$250</b>

Note: All prices are in USD and FOB.