



The Intelligent Shake Flask

Suspension cell cultures in shake flasks are routinely used for screening and process development. Continuous culture monitoring is paramount for identifying culture volume and agitation speeds and minimizing time and cost.

The ID-Shaker provides real-time, non-invasive monitoring of pH and dissolved oxygen (DO) in a compact orbital shaker incubator with precise temperature control. The non-intrusive design of the sensors does not interfere with the actual culture conditions, thereby allowing for truly representative pH and dissolved oxygen data collection.

Includes

Genie Temp-Shaker 300™ with integrated ID-Readers, ID-Converter, ID-Data Hub. ID-Sensor pH and ID-Sensor DO are included; specify desired flask holder size.

How do I incorporate optical sensors in my shake flasks?

The ID-Shaker is designed for a wide range of small-scale bacterial, yeast and mammalian shake flask cultures.

- ID-Sensor pH and ID-Sensor DO are securely attached to the bottom of the shake flask.
- Four ID-Readers are embedded into the Genie Temp-Shaker 300™ platform. Shake flasks are placed on top of ID-Readers and secured with flask holders.
- ID-Data Hub software loaded onto your laptop collects pH and DO data through the ID-Converter for each of the shake 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-Shaker Features

- Unique temperature flow increases temperature stability when door is opened
- Chamber heats to 37°C in less than 3 minutes
- 35 - 300rpm orbital shaking
- 3kg (6.6lb) maximum load
- Four ID-Readers embedded into the platform
- 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
MEASUREMENT RANGE	6-8	0-100%
ACCURACY	1.5% at pH 7	0.2% at full scale
RESOLUTION	±0.01 at pH 7	±0.1% at 21% O ₂
RESPONSE TIME	<15 sec	
TEMPERATURE RANGE	+5 to +60°C	
DRIFT	< or = 0.005 pH per day at 1 minute scan interval	
CALIBRATION	Pre-calibrated; recalibration is possible	
STERILIZATION	Autoclave, gamma irradiation; inquire about other methods	
SENSOR LIFE	45 days (continuous monitoring), several months (intermittent monitoring)	
SHELF LIFE	12 months	
SENSOR DIMENSIONS	10mm x 10mm x 0.3mm, Custom Dimensions Available	
SCAN INTERVAL	10 seconds or greater	
OPERATING SYSTEM	Windows 7/8/10	
WARRANTY	24 months	

Pricing

<p>ID-Shaker Includes:</p> <ul style="list-style-type: none"> ■ Genie Temp-Shaker 300™ (GTS-300) ■ ID-Sensor pH - 10mm x 10mm x 0.3mm square, non-sterile, pre-calibrated ■ ID-Sensor DO - 10mm x 10mm x 0.3mm square, non-sterile, pre-calibrated ■ ID-Readers (qty 4) ■ ID-Converter ■ ID-Data Hub <p>Note: Shake flasks are customer-provided. Up to four shake flask holders are provided depending on shake flask size (100ml to 2L). Please specify shake flask sizes that will be used when ordering.</p>	\$12,500
Additional ID-Sensors pH - 10mm x 10mm x 0.3mm square, pack of 10	\$250
Additional ID-Sensors DO - 10mm x 10mm x 0.3mm square, pack of 10	\$250

Note: All prices are in USD and FOB.