

Labdisc BioChem Data Logger Specifications



| Parameter | Labdisc BioChem |
|---|---|
| Supported Platforms | Standalone, PC, Mac, iPad, Linux, Android, Chromebook |
| Built-in Accessible Sensors | 15 sensors: Air Pressure, Ambient Temperature, Barometric Pressure, Colorimeter, Conductivity, Dissolved Oxygen (electrode sold separately), External Temperature, GPS, Heart Rate, Light, pH, Relative Humidity, Thermocouple, Turbidity, Universal Input |
| Stopwatch | 0.1s to 99:59.9 Minutes |
| Max. Sampling Speed | 100,000/s |
| Sampling Resolution | 12-bit |
| Internal Data Storage | 1,000,000 samples |
| Internal Rechargeable Battery | LiPO 3.6V |
| Battery Life | > 150 Hours |
| Display | Graphical LCD 64 x 128 pixels |
| Keypad | Yes |
| Communication | USB 2.0 |
| Wireless Communication | Bluetooth V2.0+EDR |
| Remote Data Collection | Yes |
| Automatic Sensor Testing & Calibration | Yes |
| Size | $\phi=132$, H=45 mm |
| Weight | 300 gr. |
| Temperature Range | -10 to 50 °C |
| Standard Compliance | CE, FCC |

Labdisc BioChem Built-in Sensor Specifications

| Sensor Type | Max. Range | Accuracy |
|----------------------|--|-----------------------|
| Air Pressure | 0 to 300 kPa | ±2.5 kPa |
| Ambient Temperature | -10 to 50 °C | ±1 °C |
| Barometer | 500 to 1100 mB | ±2.5 mB |
| Colorimeter | 10 to 90% transmittance (3 colors) λ R=620 nm λ G=550 nm λ B=470 nm | ±5 % |
| Conductivity | 0 to 20 ms | ±7% |
| Dissolved Oxygen | 0 to 14mg/l | ±8 % |
| External Temperature | -25 to 125 °C | ±2 °C |
| GPS | N/A | ±3m |
| Heart Rate | 0 to 240 bpm | ±1 digit |
| Light | 0 to 55,000 lx | ±15 % |
| pH | 0 to 14 pH | ±2 % |
| Relative Humidity | 0 to 100 %RH | ±3.5% (20% to 80%) RH |
| Thermocouple | -200 to 1200 °C | ±2 % |
| Turbidity | 0 to 1000 NTU | ±5 % |
| Universal Input | 0 to 5 V | ±2 % |



Analysis Software Specifications

| Parameter | Description |
|----------------------------|--|
| Data Retrieval | Online up to 100 samples per second, or download Labdisc stored data |
| Data Display | Line graphs, bar graphs, tables, meters, Google Maps |
| Communication | USB 2.0, Bluetooth 2.0 |
| Data Logging Configuration | Sensor selection, sampling rate, sampling points |
| Graph Manipulation | Placing and moving up to 2 markers on the graphs, zoom in/out, graph cropping, graph color change, sensor legend (allowing graph show/hide and the selection of lines/icons for the graph samples) |
| Graph Annotation | Text and image annotations on the graph |
| Mathematical Functions | Derivative, linear regression, quadratic regression, FFT |
| Statistics | Minimum, maximum, average, standard deviation for a selected graph |
| Data Manipulation | Save/open experiment data, direct export to EXCEL, display hardcopy printout |
| Workbook | Full suite of built-in curriculum activities |
| Stored Experiments | Full suite of stored experiment data |
| Configuration | Sensor calibration, change of sensor units |
| Firmware Update | Ability to update the Labdisc firmware through a USB connection |
| OS | PC, Mac, Linux, iPad, Android, Chromebook |