



| BOD-200

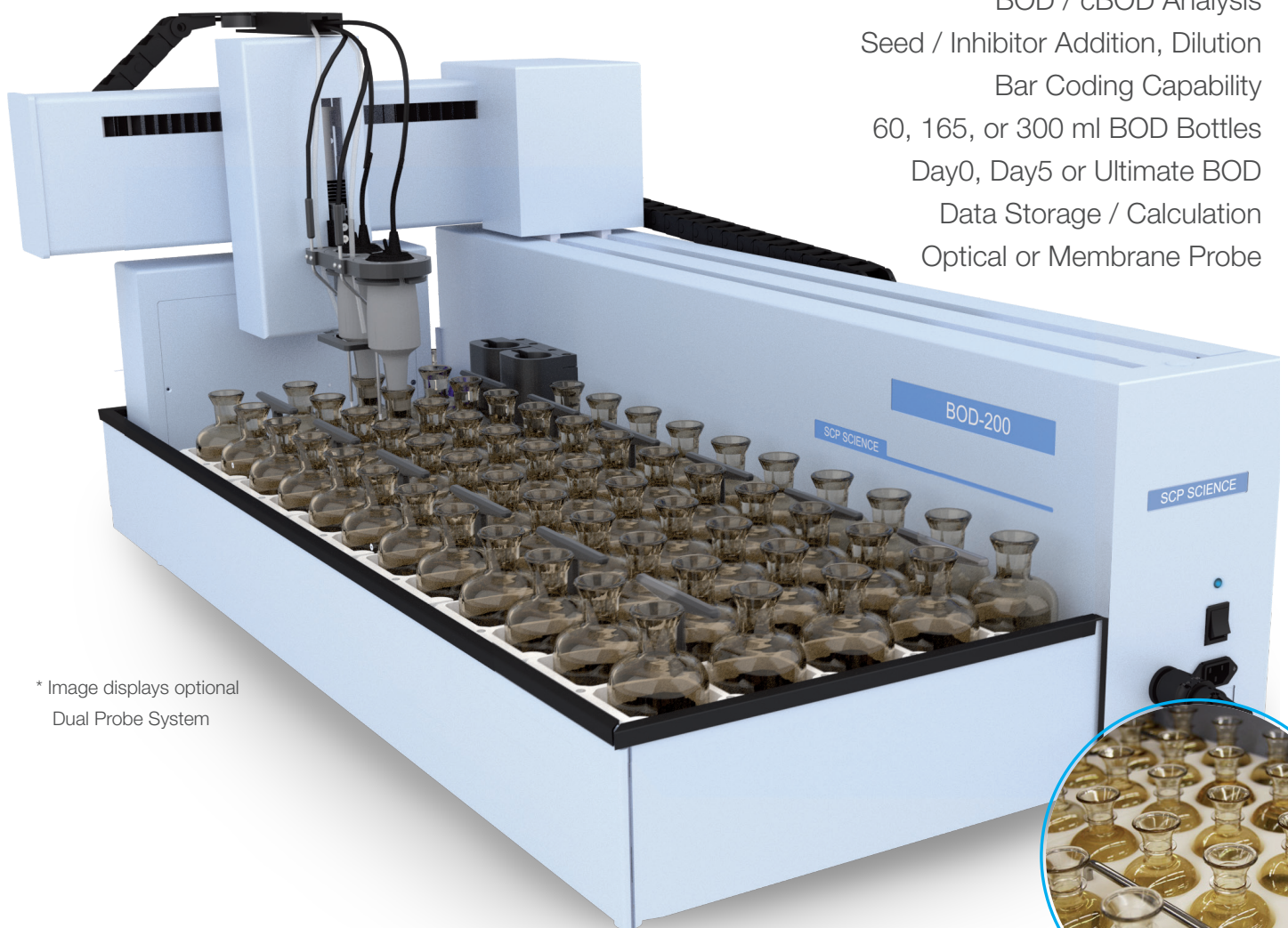
Automate your processes
Automate your lab
Innovate

with *Easy*PREP
BOD-200

Automated Analyzer

Full Process Automation:

- BOD / cBOD Analysis
- Seed / Inhibitor Addition, Dilution
- Bar Coding Capability
- 60, 165, or 300 ml BOD Bottles
- Day0, Day5 or Ultimate BOD
- Data Storage / Calculation
- Optical or Membrane Probe



* Image displays optional
Dual Probe System

**ENVIRONMENTAL
TESTING**
made
*Easy*PREP

SCP SCIENCE
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The EasyPREP portfolio provides environmental testing laboratories with the technologies required to comply with environmental water legislation through automated, unattended, environmental analyzers.

The EasyPREP BOD-200 provides users with the capability to conduct BOD and cBOD analysis. Analyze cBOD in conjunction with BOD to verify if non-compliant BOD results are due to nitrification. Obtain results more reflective of real effluent quality than when under nitrifying conditions.

Overview

THE BOD-200 AUTOMATES BOD AND cBOD ANALYSIS FOR STATE, MUNICIPAL, AND COMMERCIAL TESTING LABORATORIES

- Improve laboratory productivity by assigning personnel to value-added tasks instead of repetitive manual BOD measurements.
- Ensure that your laboratory complies to accuracy and precision requirements.
- Ensure repeatability. Results are only reflective of sample variations.
- Track and reference detailed records of results.

Biochemical oxygen demand (BOD), measures oxygen depletion which represents the breakdown of organic material by microorganisms. Carbonaceous BOD (cBOD), measures oxygen depletion from the breakdown of organic material by microorganisms in which the contribution from nitrogenous bacteria has been suppressed.

Features

- Universal platform accommodates all BOD bottle types.
- Barcode reader option provides sample tracking throughout the entire process.
- Optimize laboratory management with Day0, Day5 or Ultimate BOD. The total oxygen consumed when a biochemical reaction is completed is Ultimate BOD.
- Automatic dispensing of liquids and quick measurement for Day0.
- Integrated blade stirrer for homogenization and optimal stabilization time.
- YSI Optical or Membrane probe, available in single or dual configurations.
- Automatic rinsing between samples for residual sample removal and preventing cross contamination.
- Prime tubing with the click of a button.



COMPLIANT WITH
LABORATORY STANDARDS:

ISO 5815-1 | EN-1899-1 | EN-1899-2 | EN-5814 (2012) | EPA 405.1

Software Features

RESULTS OF PROCESS

File: Result1 Date: 2014-09-26 Operator: GB

| 0 | A | B | C | D | E | F | G | H | I | J | K | L |
|----|------|--------|--------|-----------|--------|--------|---------|---------|---------|-------|----|---|
| 1 | Rack | Bottle | Bottle | Sample | Sample | Sample | Seed | Initial | Initial | Final | DO | T |
| 2 | # | ID | # | ID | Name | ID | Vol(ml) | Vol(ml) | DO | Temp | DO | T |
| 3 | A | 1 | | Blank | | | 0 | 0 | 9.01 | 23.0 | | |
| 4 | A | 2 | | Seed | seed1 | | 0 | 20 | 8.88 | 23.0 | | |
| 5 | A | 3 | | Seed | seed2 | | 0 | 30 | 9.01 | 23.7 | | |
| 6 | A | 4 | | Seed | seed3 | | 0 | 40 | 8.95 | 23.0 | | |
| 7 | A | 5 | | QC Sample | GG41 | | 6 | 6 | 8.94 | 23.0 | | |
| 8 | A | 6 | | QC Sample | GG42 | | 6 | 6 | 8.96 | 23.0 | | |
| 9 | A | 7 | | QC Sample | GG43 | | 6 | 6 | 8.89 | 23.0 | | |
| 10 | A | 8 | | Sample | tt | | 100 | 6 | 8.95 | 22.9 | | |
| 11 | A | 9 | | Sample | tt2 | | 100 | 6 | 8.99 | 22.8 | | |

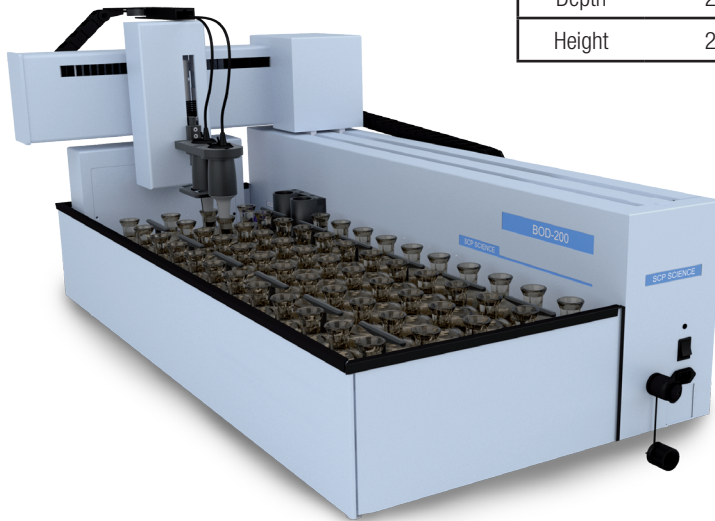
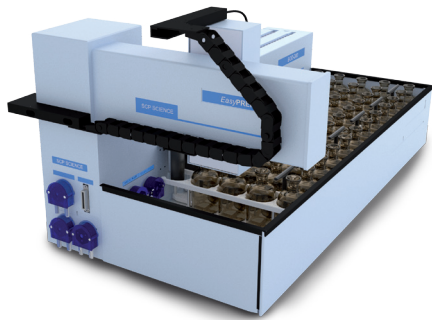
- BOD and cBOD calculations compliant with international ISO, EPA, JIS and EN regulations.
- Measure sample BOD and cBOD in the same run for best quality control of BOD results.
- Set 5-day, 7-day or n-days incubation period.
- Rack-specific time tracking of incubation period.
- Data exportable to a LIMS in a compatible .csv format.
- Automatic flagging of “out-of-range” results by applying pre-defined criteria for blanks, seed controls and standards.
- Automatic barometric pressure compensation.
- Automatic temperature compensation.
- Seed and inhibitor volume additions are user definable.
- Easy and quick probe calibration function.
- Date and time stamp.

300 ml RACK A B C

Operator's Name: Comments:

LEGEND: In Process, Completed, Blank, Seed, QC Sample

| RACK | BOTTLE | SAMPLE | SEED | ADD |
|-------|--------|--------|-----------|-------|
| # | ID | # | ID | # |
| A. 11 | 105 11 | 1 | Blank | seed1 |
| A. 11 | 102 13 | 2 | Seed | seed2 |
| A. 11 | 103 13 | 3 | QC Sample | seed3 |
| A. 11 | 104 14 | 4 | QC Sample | GG41 |
| A. 11 | 105 15 | 5 | QC Sample | GG42 |
| A. 11 | 106 16 | 6 | QC Sample | GG43 |
| A. 11 | 107 17 | 7 | Sample | tt |
| A. 11 | 108 17 | 8 | Sample | tt2 |



| EasyPREP BOD-200 Dimensions | |
|-----------------------------|-------------------|
| Length | 45.87" (116.5 cm) |
| Depth | 25.60" (65 cm) |
| Height | 25.20" (64 cm) |

Probe Options

| | Optical Probe | Membrane Probe |
|-----------------------|--|--|
| Range: | 0-50 mg/L | 0-50 mg/L |
| Accuracy: | 0 to 20: ±0.1 mg/L or ±1% reading, whichever greater | 0 to 20: ±0.1 mg/L or ±2% reading, whichever greater |
| Resolution: | 0.01 mg/L | 0.01 mg/L |
| Response time: | T90=22 seconds with stirring | T90=30 seconds with stirring |

BOD-200 Ordering Information

| INSTRUMENT | |
|-----------------------------|-------------|
| Description | Catalog No. |
| BOD-200 with Optical Probe | 010-420-001 |
| BOD-200 with Membrane Probe | 010-420-002 |

| RACKS (3 REQUIRED) | | | |
|-----------------------------|---------------|-----------------|-------------|
| Description | Bottle Volume | Bottle capacity | Catalog No. |
| BOD Bottle Rack, glass | 165 ml | 24 | 010-420-054 |
| BOD Bottle Half Rack, glass | 300 ml | 10 | 010-420-086 |
| BOD Bottle Rack, plastic | 300 ml | 20 | 010-420-035 |
| BOD Bottle Rack, glass | 300 ml | 20 | 010-420-036 |
| BOD Bottle Rack, glass | 60 ml | 42 | 010-420-037 |

| INSTRUMENT OPTIONS | | | |
|-------------------------------------|-------------|--------------------------------------|-------------|
| EasyPREP BOD-200 with Optical Probe | | EasyPREP BOD-200 with Membrane Probe | |
| Description | Catalog No. | Description | Catalog No. |
| Dual Probe Kit | 010-420-003 | Dual Probe Kit | 010-420-004 |
| BOD Optical Probe | 010-420-030 | BOD Membrane Probe | 010-420-031 |
| Probe Sensor Replacement Cap | 010-420-090 | Probe Sensor Replacement Cap | 010-420-091 |

| OPTIONS AND ACCESSORIES | |
|---|-------------|
| Description | Catalog No. |
| Set of Replacement Dispensing Tubing | 010-420-088 |
| Barcode reader, for rapid loading of sample identification | 010-600-034 |
| BOD Bottle Cap for 300 ml, plastic or glass bottles, pk. 25 | 010-420-018 |
| Laptop computer, with operating system (N. American orders only)* | 010-400-008 |
| Optical Probe Replacement Stirrer | 010-420-034 |

*For orders outside of North America, please speak to your local Sales Representative or Distributor.

| STANDARDS & REAGENTS | | |
|---|--------|-------------|
| Description | Unit | Catalog No. |
| BOD reagent kit containing reagents required to prepare BOD dilution water. | Kit | 250-110-150 |
| Buffer pH 7.2 (phosphate), for BOD | 500 ml | 250-110-100 |
| Calcium Chloride, CaCl ₂ , 2.75% w/v | 500 ml | 250-110-200 |
| Ferric Chloride, FeCl ₃ , 0.025% w/v | 500 ml | 250-110-300 |
| Magnesium Sulfate, MgSO ₄ , 2.25%w/v | 500 ml | 250-110-400 |
| BOD Glucose Powder for check solution | 10 g | 250-110-500 |
| BOD Glutamic Acid for check solution | 10 g | 250-110-600 |

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