

Complete Water and Product Quality Analysis

# Beverage Industry



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Be Right™



# Your Partner for Quality Analysis in the Beverage Industry



Beverage manufacturers strive to achieve a high quality and consistent product. Increases in automation processes include improving appearance of colour/texture and increasing shelf life while increasing yields. Today's producers aspire to minimise waste and water reuse.

With these goals in mind, it is critical to use the correct instrumentation and chemistries that are designed to withstand the challenges in the beverage industry. Since 1947, Hach® beverage professionals design, manufacture, and distribute world class instrumentation, test kits, and chemistries across many beverage industry applications from start to finish across influent, production control, quality lab, and effluent treatment.

We invite you to take a look at our comprehensive line of product and service solutions. As your plant is unique, there may be additional products that will work for your application. Please reach out to one of our local experts for a customised solution.



# Photometric & Colorimetric



## DR6000 Spectrophotometer

Top-of-the-line benchtop for advanced analysis, including UV.

- Accessories for high volume and high accuracy testing needs
- Advanced quality assurance
- Guided procedures and elimination of false readings

### Brewery Methods

The Brewery Analysis Package software upgrade contains 12 specific brewery assays that conveniently upload via USB to a DR6000. Includes procedures according to the ASBC and MEBAC approved methods for:

Beer Colour, Bitterness Units, Iso-Alpha-Acids, Vicinal Diketones, Free Amino Acids, Anthocyanogens, Iron, Steam Volatile Phenols, Total Polyphenols, Photometric Iodine, Thiobarbituric Acid Number (TAN), and Reductones.



## DR3900 Spectrophotometer

The DR3900 spectrophotometer provides the simplest way to perform tests for water analysis. Used together with LCK cuvette tests, testing steps are reduced. For use in lab verification to monitor incoming water and process efficient of inline instruments.

- Simple preparation
- Fast execution
- Comprehensive documentation

## LCK Bar-Coded Chemistries

LCK cuvette tests use Dosis caps (freeze-dried reagents integrated into a sealed cap) that are easier to use than Powder Pillows or Liquid Reagents, without any risk of contamination.

- Error free and fast – instrument automatically detects and runs the correct method
- Easy, accurate recognition – colour-coded parameters and ranges
- Best results – 10 measurements in one rotation, eliminating outliers; optically superior glassware



## DR900 Colorimeter

Multi-parameter handheld water testing with over 90 colorimetric parameters. For use in lab verification to monitor incoming water and process efficiency of inline instruments.

- Fast and simplest testing for the most demanding field environments
- Your important testing methods are available at your fingertips
- Simple data communication



## TL23 Series Turbidimeters

For high range turbidity applications. The TL23 Series laboratory turbidimeters are available in four different models: two models with tungsten lamp at 460 nm, and two models with LED light source at 860 nm. Suggested application includes final lab QA measurement for product quality.

- Improved and intuitive design
- A smart device for reliable measurements

## Hach Test Kits

Test for critical parameters to support fermentation and monitoring source water contaminants that affect flavour stability.

- Pre-measured reagents
- Accurate colour matching
- Upright reagent storage



## Ozone Accuvacs

Fast, accurate visual method for determining ozone concentrations. Use to perform final lab QA checks for ozone in bottled water. Kit contains 25 tests.

- Simple, low-cost colour disc method is the most accurate visual test kit method
- Indigo trisulfonate method masks interferences from chlorine and other oxidising agents and makes ozone analysis easier

# Titrimetric

## AT1000 Automated Titrator

Automated titration for accurate and repeatable measurement, with complete traceability. Minimal reagent contact and eliminate sample preparation. Use for final QA lab test for total acidity in soft drinks, juices, and beer. Beverage application packs available for key parameters such as Total Acidity, pH, and SO<sub>2</sub>.

- Safe; minimal reagent contact. No need to use colour indicator
- Easy to use for all operators
- Low cost of ownership



# Electrochemical

## HQD Meters & Intellical Probes

Ideal for demanding operating conditions, e.g: lab QA check to verify product quality and process efficiencies.

- Measure pH, DO, conductivity, nitrates and more...
- Hand-held or portable use
- Plug & play with multiple probes on one instrument
- Intuitive user interface
- Enhance data connectivity with easy to read results



## SL1000 – PPA Portable Parallel Analyser

The SL1000 is a portable colorimeter that provides faster testing by using Chemkey reagents instead of powder pillows.

- Faster, less variability and less hassle
- All chemicals and processes are entirely contained inside the Chemkey, so there is no zeroing, no mixing, no shaking, no chemicals or vials to handle
- Interfaces with Intellical sensors for pH, conductivity, and DO measurements
- Key parameters include pH, conductivity, chlorine, and alkalinity



# Oxygen

## Orbisphere 3100 Portable Oxygen Analyser

Accurate oxygen analysis allows the brewer to control the production process so the flavour stability of the beer can be ensured. The 3100 can be connected to a piercer to measure dissolved oxygen packages and the data used to calculate TPO.

- Measure in both phases – gas or liquid
- Designed to withstand the harshest environments
- Rugged, reliable, and maintenance free
- Most stable sensor with the longest calibration interval



DISSOLVED GASES

## Orbisphere 410 / M1100 Luminescent DO Sensor

This controller offers precise and powerful process monitoring capability.

- High accuracy with minimal drift
- Internal diagnostics and reminders for maintenance and calibration
- Multiple channels and communication options, including USB and Profibus
- Can be purchased as a high level oxygen sensor, ideal for the measurement of wort
- Low level oxygen sensor is available for the measurement of bright beer



# Inline Ozone

## Orbisphere 410/510 with C1100 Ozone Sensor

The Orbisphere C1100 sensor is designed to measure ozone in ultra pure water loops, or in the sanitising phase of any beverage production line. Use to measure ozone to ensure proper ozone dosing in the manufacturing process of bottled water.

- True Zero – drift free and accurate measurements
- Fast, easy, traceable, and reliable calibration
- Low cost maintenance



DISSOLVED GASES

# Carbon Dioxide

## Orbisphere 510 / 31490TC CO2

Designed to complement Orbisphere high quality sensors, these instruments provide accurate, repeatable measurements and an impressive level of data management. Depending on the version, the Orbisphere 510 controller can be combined with a 2-channel CO2 controller.



# Package Analysis

## Orbisphere 6110 Total Package Analyser

The ideal solution for final beverage packages analysis.

- Measures CO<sub>2</sub> by both Pressure/Temperature (P/T) and True-CO<sub>2</sub> methods, and at any temperature
- Easy and automated analysis of oxygen and CO<sub>2</sub> concentrations for both head space and liquid in bottles and cans
- All measurements are taken from the gas phase limiting the need for sensor and general maintenance
- Data accuracy guaranteed using industry accepted air injection method to validate information



DISSOLVED GASES

## Dissolved Oxygen / Calculated TPO Analyser

Kit consisting of controller, oxygen sensor, piercing device, and accessories.

- Quick and easy measurements in package for non-carbonated and carbonated drinks
- Fast measurement response
- Quantify oxygen levels for product and package stability





# Chlorine

## CL17 Colorimetric Chlorine Analyser

The industry standard Hach CL17 Chlorine Analyser uses colorimetric DPD chemistry to continuously monitor water for free or total chlorine.

- Analysis method is not affected by changes in chlorine concentration, sample pH, temperature, flow or pressure
- Offers more reliable and accurate measurement with less operator interventions than other methods



WATER QUALITY



## CLF10sc Free Chlorine Sensor

Hach's CLF10sc and CLT10sc provide online amperometric solutions for real-time analysis of free or total chlorine in disinfection applications.

- EPA-approved free or total chlorine analysis
- No reagents to replace, no waste stream

## TU5 Series Process Turbidimeters

The TU5 Series platform employs a patented optical design that sees more of your sample than any other turbidimeter.

- Delivers the best low level precision and sensitivity while minimising variability between measurements
- Ideal for inline quality measurement for efficient manufacturing process

TU5300 and TU5400 process turbidimeters require an SC Controller for operation. Choose either an SC1000 or SC200 controller.



## Test Kit, Chlorine

- Simple, low-cost colour disc method is an accurate visual test kit method
- Achieve fast results with an easy-to-carry test kit



## Hardness/ Alkalinity

### APA6000 High Range Hardness/ Alkalinity Analyser

Measures high-range hardness using USEPA-approved calmagite chemistry.

- Measures high-range hardness using EPA-approved calmagite chemistry
- Accurately and continuously measures up to two sample streams
- Industrial and ultrapure water applications



## pH (Incoming or Waste Water)

### pHD Digital Differential Online pH/ ORP Sensors

- Plug and play capability with Hach digital SC Controllers
- Exceptional performance due to the Differential Electrode measurement technique
- Available in a wide variety of body materials, mounting styles, pH electrode types, and cable connections



# Total Organic Carbon (TOC)

## BioTector B7000i

The ideal online TOC analyser to achieve precise results even for your most challenging applications. Handles difficult samples and significantly reduces the maintenance schedule and costs associated with traditional on-line measurement.

- Eliminates build up issues from salts, particulates, fats, oils, and greases that lead to drift and high maintenance
- Product loss alarm notification system
- Protect capital equipment and lower CO2 footprint



WATER QUALITY

# Conductivity

## 3700 Digital Inductive Conductivity Sensors

Hach Inductive Conductivity Sensors measure 200 up to 2,000,000 microSiemens/cm.

- Used for the control of CIP processes
- Ideal for product monitoring and quality assurance





Be Right™

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We invite you to take a look at our comprehensive line of product solutions and services.

To see the complete portfolio for the beverage industry, please visit:

» [uk.hach.com/beverage](http://uk.hach.com/beverage)

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### Distributed By:

**Camlab Ltd**  
**Unit 24, Norman Way Industrial Estate**  
**Over, Cambridge, CB24 5WE, United Kingdom**  
**T: +44 (0) 1954 233 110 E: [sales@camlab.co.uk](mailto:sales@camlab.co.uk)**

