

# The Fully Automated Lab for the **Beverage Industry**

**ALAB 5000 Series**



# Welcome to the World of **Maximum Productivity**

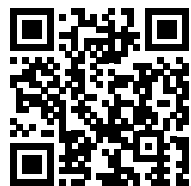
Inspired by decades of experience in the beverage industry, this is a fully automated measuring system you can rely on.

The ALAB 5000 series, designed for use in the production environment, brings automated quality control to the beverage industry – maintaining repeated sampling intervals and executing quality control of packaged beverages 24/7. These systems seamlessly operate either as an independent system alongside your production line or as a fully integrated component.

## Multiple configurations for all your needs

- ALAB 5000 Analytic: Designed to provide fast, at-line quality control of beverages such as beer, soft drinks, and water. Fully automated analysis of packaged beverages to determine the most important physical and chemical parameters.
- ALAB 5000 Torque: Fully automatic measurement of the opening torque and ring crack torque of a wide variety of caps and bottles.

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[www.anton-paar.com/  
apb-alab-5000](http://www.anton-paar.com/apb-alab-5000)



# Reliable Quality Control Through Automation

Since all of the instruments come from Anton Paar, your whole measuring system and instruments are seamlessly integrated into one powerful analysis solution.

1 ALAB 5000 Torque

2 ALAB 5000 Analytic



## Reduced operator dependency, optimized efficiency

- Real-time results at the production line, avoiding costly out-of-spec production
- Consistent, reliable results due to uniform handling of every sample, excluding human error
- Intuitive user interface, streamlining testing and reducing the need for extensive operator training

## Enhanced compliance and measurement accuracy

- Automatic cleaning and system checks, ensuring reliable, reproducible measurements and minimizing the risk of non-conformance
- Both numerical and graphical data readily available via the user interface, for clear insights
- Measurement data securely stored and automatically transferred to the LIMS system for seamless record-keeping

## A flexible solution for all packaging types

- Testing of a wide range of package types and sizes
- Operation as a stand-alone system or connected to the filler line

# Automated Beverage Analysis

ALAB 5000 Analytic

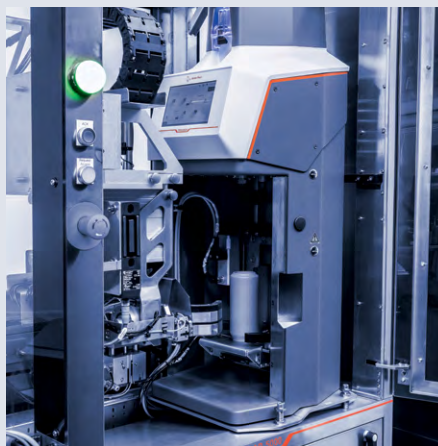
Engineered for seamless integration into production environments, the ALAB 5000 Analytic combines Anton Paar's cutting-edge analytical instruments with decades of expertise in quality control. Designed to provide fast, at-line testing, it ensures superior quality for beverages such as beer, soft drinks, and water.

The system delivers comprehensive gas analysis for carbonated drinks by precisely measuring total package oxygen (TPO) and CO<sub>2</sub> levels. Additionally, its advanced density measurement calculates extract concentration and sugar content (Brix), while modules for alcohol, color, pH, and haze expand its capabilities to meet diverse beverage testing needs.



## Robust and ready for the production facility

Protective housing and enclosed cabinets let it withstand high temperatures and humidity levels. Air conditioning and a dry air supply maintain stable ambient conditions – so you can place your lab instruments directly next to the production line.



## At-line measurements for quick results and analysis

Eight-minute measurement times and at-line analysis empower you to conduct more measurements than ever before. There is no need for specialized (and costly) QC teams for routine checks – any production team member can act on deviations. And since you respond to deviations on the spot, you save future costs on out-of-spec production.



## High-quality instrumentation for reproducible results

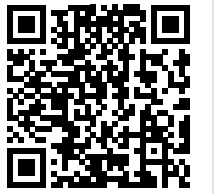
Market-proven Anton Paar analytical instruments are used to complete ALAB's analytics: TPO 5000 performs the piercing of the package and measures head-space oxygen and dissolved oxygen. The instrument also supplies the liquid sample to the connected packaged beverage measurement system for further analysis. Consistent sample preparation without operator influence guarantees precise, reproducible gas analysis for TPO and CO<sub>2</sub>.

→ Parameters:  
Alcohol  
Color  
Extract  
Calories  
pH

Turbidity  
TPO  
HSV  
CO<sub>2</sub>  
... and much more



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[www.anton-paar.com/apb-alab-analytic-video](http://www.anton-paar.com/apb-alab-analytic-video)

# Automated Torque Measurement

## ALAB 5000 Torque

ALAB 5000 Torque performs, fully automatically, measurements of opening torque and ring crack torque in less than 30 s (per bottle). It minimizes human interaction, thereby boosting efficiency and enhancing safety. It can be connected to new or existing filling lines or used as a stand-alone solution.

→ Parameters:  
Opening torque of caps  
Ring crack torque

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[www.anton-paar.com/apb-alab-torque-video](http://www.anton-paar.com/apb-alab-torque-video)



### Gold bottle verification equals peace of mind

ALAB 5000 Torque comes with our gold-bottle torque verification, ensuring you always get measurement results you can rely on.



### Automatic bottle detection

Bottle height and diameter are automatically measured before the torque measurement, which quantifies the correct method for the sample.



### One system for various bottle sizes

With its universal adapter fitting a wide range of closure diameters, ALAB 5000 Torque can measure the seal-break torque and ring-crack torque of cap diameters ranging from 25 mm to 40 mm, no matter the material. The torque curve can be shown on the interface or transmitted to a data system.



|                                                                     | ALAB 5000 Analytic                                           |                    |
|---------------------------------------------------------------------|--------------------------------------------------------------|--------------------|
|                                                                     | Trace range sensor                                           | Wide range sensor  |
|                                                                     | ↓                                                            | ↓                  |
| Oxygen in the gas phase                                             | 0 hPa to 45 hPa                                              | 0 hPa to 1,000 hPa |
| Dissolved oxygen                                                    | 0 ppm to 2 ppm                                               | 0 ppm to 45 ppm    |
| Density                                                             | 0 g/cm³ to 3 g/cm³                                           |                    |
| Alcohol (optional)                                                  | 0 % v/v to 12 % v/v                                          |                    |
| Original extract (optional)                                         | 0 °Plato to 30 °Plato                                        |                    |
| Color (optional)                                                    | 0 EBC to 120 EBC                                             |                    |
| CO <sub>2</sub> concentration                                       | 0 Vol. to 5.5 Vol. at 35 °C,<br>0 Vol. to 10 Vol. at < 10 °C |                    |
| Turbidity (optional)                                                | 0 EBC to 100 EBC / 0 NTU to 400 NTU                          |                    |
| pH value (optional)                                                 | pH 0 to pH 14                                                |                    |
| Typical measurement time per sample                                 | 8 min                                                        |                    |
| Ambient temperature                                                 | 2 °C to 49 °C                                                |                    |
| Relative humidity (not condensing)                                  | at 2 °C to 35 °C: 0 % to 90 %,<br>at > 35 °C: 0 % to 50 %    |                    |
| Package diameter                                                    | 55 mm to 95 mm                                               |                    |
| Package height                                                      | 80 mm to 300 mm                                              |                    |
| Package volume*                                                     | 150 mL to 2,000 mL                                           |                    |
| Dimensions TPO housing (L x W x H)                                  | 1,750 mm x 880 mm x 2,430 mm                                 |                    |
| Weight TPO housing                                                  | Approx. 670 kg (1,477 lbs)                                   |                    |
| Dimensions Packaged Beverage Measurement System housing (L x W x H) | 560 mm x 950 mm x 2,110 mm                                   |                    |
| Weight Packaged Beverage Measurement System housing                 | Approx. 230 kg (507 lbs)                                     |                    |

\* For TPO only, >260 mL for TPO and Packaged Beverage Measurement System.

|                                    | ALAB 5000 Torque                                          |
|------------------------------------|-----------------------------------------------------------|
|                                    | ↓                                                         |
| Measuring area                     | 0 Nm to 2 Nm                                              |
| Typical measuring time             | 30 s                                                      |
| Ambient temperature                | 2 °C to 49 °C                                             |
| Relative humidity (not condensing) | at 2 °C to 35 °C: 0 % to 90 %,<br>at > 35 °C: 0 % to 50 % |
| Package diameter                   | 55 mm to 95 mm                                            |
| Package height                     | 80 mm to 300 mm                                           |
| Cap diameter                       | 25 mm to 40 mm                                            |
| Controls                           | 19" multi-touch industrial PC 1920x1080 px                |

TrademarksALAB (017423997)

# Reliable. Compliant. Qualified.

Our well-trained and certified technicians are ready to keep your instrument running smoothly.



## Maximum uptime

Regardless of how intensively you use your instrument, we help you keep your device in perfect shape and safeguard your investment. For at least 10 years after the discontinuation of a device, we'll provide you with any service and spare part that you might need.



## Warranty program

We're confident in the high quality of our instruments. That's why we provide a full 3-year warranty. Just make sure to follow the relevant maintenance schedule. You can also extend your instrument's warranty beyond its expiration date.



## Short response times

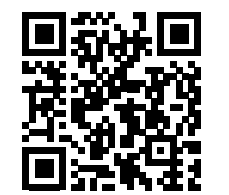
We know that sometimes it's urgent. That's why we provide a response to your inquiry within 24 hours. We give you straightforward help from great people, not from bots.



## A global service network

Our large service network for customers spans 86 locations with more than 600 certified service technicians. Wherever you're located, there's always an Anton Paar service technician nearby.

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service

