Anton Paar

Alex 500

BEER: PILSNER
Alcohol   Orig. Extract   15:15:03
5.25 %v/v   11.66 °Plato
Density   Er
1.0050 g/cm³   3.65 %w/w
Measurement finished
Menu   Repeat   Status

Alcohol and Extract Meter

Alex 500

Alcohol and Extract Meter
for Beer, Wine, Cider, Spirits,
Liqueurs, and Sake

Enjoy your freedom every day

With the alcohol and extract meter Alex 500 you enter a new era of independence at your craft beverage production site. It provides you with the freedom you need for creative thinking that will make your beverage stand out from others on the market. Alex 500 delivers alcohol and extract results for beer, wine, cider, spirits, liqueurs, and sake.

01 Beer Measure any beer that's part of the latest market trends in craft beer production: wheat beers, porters, stouts, beer mixtures, hoppy beers, and more.

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02 Wine Have the daily proof that your wine fermentation is under control: ready for red, white, and rosé wines, sparkling and still as well as bottle- or tank-fermented products.

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03 Spirits & liqueurs Measure your high-proof alcohol – from spirits aged in wooden barrels to liqueurs with a sugar content of up to 450 g/L.

04 Cider Monitor the fermenting apple juice, perform blending checks, and measure the final product: ready for dry apple wines, traditional cider, and flavored cider mixtures.

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05 Sake Get a snapshot of the alcohol and extract present in your sake product – without the need for distillation.

01 02 03 04 05

Determine your beverage's alcohol and extract content whenever you wish

With the Alex 500 alcohol and extract meter, you are entirely independent from external labs. A new recipe just came to mind and you want to give it a try right away? Alex 500 is ready to measure alcohol and extract in any of your new creations from scratch.

Have certainty every day during production

Alex 500 accurately measures all of your samples, in all production steps, from your juice, wort, or mash to the fermentation process and your bottled product. You can swiftly react to all undesired deviations as soon as they occur.

Always keep your label's promise

Always keep your beverage's great taste and quality consistent: With Alex 500, what's on the label is in the bottle. You will be able to keep your customer promise.

Count on the analysis experts for alcoholic beverages

Anton Paar is the world's leading provider of density and alcohol measurement solutions for alcoholic beverages. Alex 500 is the result of decades of expertise distilled to meet your exact needs. And because of our worldwide sales and service network, you can be sure that there's always an expert close by.

Focus on quality before quantity

Your innovative spirit helps you generate products the crowd loves. Make sure you know which wheels to turn to keep your quality and taste unmatched before you scale up your business.

Certainty from fermentation monitoring to final quality control

Visual fermentation monitoring – have your product's fermentation under control

Don't tempt fate and leave your fermentation unwatched. If you want to keep all exclusive aromas, the fermentation must not get stuck. In its fermentation monitor mode, Alex 500 directly displays a fermentation curve for you, assigned to a tank via sample ID. The measuring value of your daily measurement is automatically added to the chart shown on the large display. Your production process is reliably monitored, so you can immediately correct undesired deviations.

Measure alcohol and extract during blending and final quality checks

Get to know the outcome of your blending procedure, perform a quick check before bottling your beverage, or open up a bottle-fermented product for final checks: after switching Alex 500 to its standard mode it will determine your beverage's alcohol- and extract content with lab-grade accuracy. With this measuring instrument under your own roof, you can be certain that your craft beverage's taste and quality are stable from batch to batch. Your taxes are correctly calculated and your bottles contain what their labels say.

Standardized sample handling for easy lab-grade analysis

Alex 500 is designed for quick and intuitive operation. What's best of all is that you can do everything yourself. The basic steps are clearly defined. Samples with some carbonation first require degassing, turbid samples undergo a filtration procedure. You choose the appropriate measuring method and sample name on the instrument, push the button and just wait until Alex 500 displays your result. The instrument turbidity warning will even alert you in case your sample requires additional filtration.

Perfect documentation and traceability of your data

Up to five parameters are displayed together on the large screen and stored on the instrument's memory for later reference. Print your results out wirelessly via Bluetooth® or export your data for complete, fully traceable documentation. This is how you can compare values from one production batch to the next and adjust your production process to make your beverages' quality and taste surpass themselves.

Single-handed calibration and adjustment – for measuring any product at any time

You simply check Alex 500 for correctness of results. If results are off track, you perform an adjustment with the reference standard you will always find at home, even on Sundays: water. After a zero adjustment with deionized water the instrument is ready for measurements all day. In this way the instrument is ready for use at any time – making it the entry ticket for your independent in-house lab analysis.

Patented measuring technology that makes your life easier

Alex 500 is based on a patented combination of technologies: absorption measurement via NIR spectroscopy and density measurement based on the oscillating U-tube technology. Based on these measurements, a comprehensive statistical model is used to determine the alcohol and total extract content. Additionally, the measured density value is used to monitor the fermentation process.

In contrast to glass hydrometers, Alex 500 covers the entire relevant measuring range, not just part of it. It provides you with direct, real-time results at all times, without the necessity for a separate calculation or distillation. It is one single instrument for all samples in your production – and a truly robust one that will not break.

Applications and specifications

With the alcohol and extract meter Alex 500, you can simply put Anton Paar's world-renowned testing technology to work throughout your entire craft beverage production.

Beer Especially if you perform bottle fermentation or add ingredients like fruit juice after your beer's fermentation is finished, an alcohol content calculated from the extract loss during brewing is just an estimated value. Alex 500 is regularly verified for its suitability for the latest craft beer trends to ensure you are free to work on new creations any day. Measure anything from bright lager to deep black stouts, from strong bock beer to light beers, or even beer mixtures. Provided measuring units are not only density and alcohol but also related values such as real extract, original extract, calories, degree of fermentation, or degrees lost.

Measuring range, alcohol: 0.5 %v/v to 15 %v/v   Accuracy alcohol: 0.2 %v/v

Wine Even if you are legally bound to send in your final wine for official certification by an authority, Alex 500 gives you daily certainty that you have your production process under control. A fine-tuned alcoholic fermentation reveals all of your grapes' hidden treasures, so having a daily look at your fermentation curve is your insurance to excite wine enthusiasts with your wines' taste each and every year. Alex 500 is ready to measure white, rosé, and red wines; sparkling wines are simply degassed before measurement. Relevant values are alcohol and total extract.

Measuring range, alcohol: 8 %v/v to 20 %v/v   Accuracy alcohol: 0.2 %v/v

Spirits & liqueurs Why estimate and calculate, if you can measure? Adding flavors, sugars, or juice to your spirits or storing them in wooden barrels will increase the extract content, creating the challenge of affordable final quality control. Alex 500 measures spirits and liqueurs with a total extract content of up to 450 g/L without the need to distill the sample before the measurement. The instrument is ready to measure clear spirits. Color isn't a problem – as long as you can see through the sample with your eyes, Alex 500 can do so too, with its unique measuring cell.

Measuring range, alcohol: 10 %v/v to 47 %v/v   Accuracy alcohol: 0.2 %v/v (total extract <100 g/L);
                                                     0.4 %v/v (total extract 100 g/L to 450 g/L)

Cider Due to its capability of measuring samples from dry apple wine to traditional cloudy ciders and the sweet ciders with e.g. cherry, strawberry, and elderflower flavor, Alex 500 is ready to cover a huge range of typical products of this industry. Furthermore, the instrument accompanies you from the fermenting apple wine throughout the blending procedure with apple juice or flavors to the final product. No matter whether pear or apple wine is the basis of your cider product – Alex 500 is ready to deal with all ciders and gives you the alcohol and total extract as well as information about calories.

Measuring range, alcohol: 2 %v/v to 10 %v/v   Accuracy alcohol: 0.2 %v/v

Sake With its origin in Japan, sake (rice wine) undergoes a unique and complex fermentation procedure during which Alex 500 assists you with a daily density or sugar concentration measurement, from the day the starch in the Kōji part is changed into sugar. During the fermentation process the fermentation chart informs you about the progress. Finally, Alex 500 will give you the alcohol and extract (Ekisu) as well as the Nihonshu-do value. As a matter of course the measured values for the sake industry are reported at a reference temperature of 15 °C instead of 20 °C.

Measuring range, alcohol: 5 %v/v to 20 %v/v   Accuracy alcohol: 0.2 %v/v

Specifications	
Patents granted	US 8106361 B2; AT 504 436 B8
Measuring range, density	0.95 g/cm³ to 1.2 g/cm³
Accuracy, density	0.001 g/cm³
Repeatability, s. d.	Alcohol: 0.1 %v/v Density: 0.0005 g/cm³
Sample volume	approx. 40 mL per measurement
Output parameters, standard mode	Alcohol at 15 °C or 20 °C, density, SG, apparent/total/real/original extract, original/present gravity, real/apparent degree of fermentation, calories, degrees lost, spirit indication, Nihonshu-do, Ekisu
Output parameters, fermentation monitor mode	Density, SG, °Brix, °Balling, °Plato, °Baumé, °KMW, °Öchsle, °Babo
Sample filling	Integrated peristaltic pump
Adjustment	Deionized water
Dimensions (L x W x H)	320 mm x 230 mm x 100 mm (12.6 in x 9.1 in x 3.9 in)
Weight	2.4 kg (5.3 lbs)
Power supply	AC 100 to 240 V, 50/60 Hz, 1 A; DC 15 V, 2.6 A
Controls	Softkeys
Ambient temperature	10 °C to 32 °C (50 °F to 89.6 °F)
Communication interfaces	1 x Bluetooth, 1 x USB, 1 x RS-232
Internal storage	Standard mode: 1000 measured results Fermentation monitor mode: 40 fermentation IDs; 100 measured results per ID
Included accessories	Connection cable to PC; peristaltic pump incl. hoses
Optional accessories	Portable Bluetooth printer, Serial printer, Sample preparation kit

www.anton-paar.com