

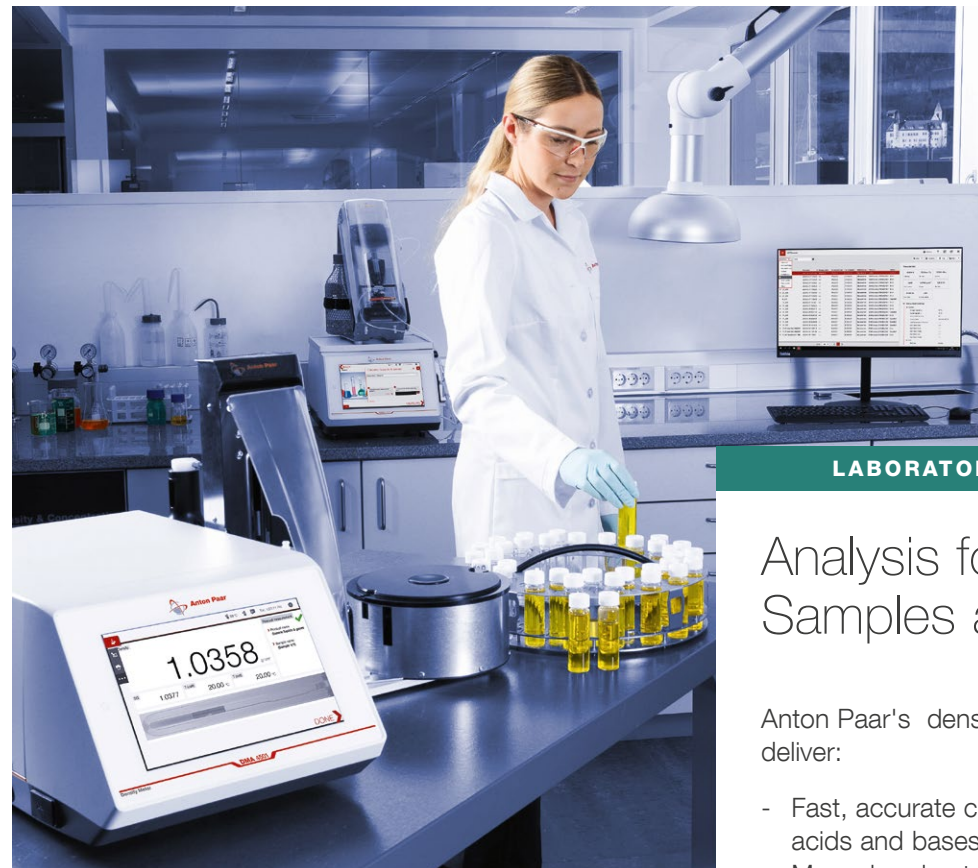
Solutions for Your Solution

Acids & Bases



Solutions for Your Solution

Anton Paar stands for precision and reliability in the laboratory, at-line, and for a wide range of process measurement technology. We manufacture 80% of critical mechanical parts in our in-house high-tech production facilities. Whatever your needs, and whatever degree of automation you require, we have the solutions for your solution.



LABORATORY INSTRUMENTATION

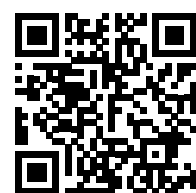
Analysis for Multiple Samples and Parameters

Anton Paar's density meters and refractometers deliver:

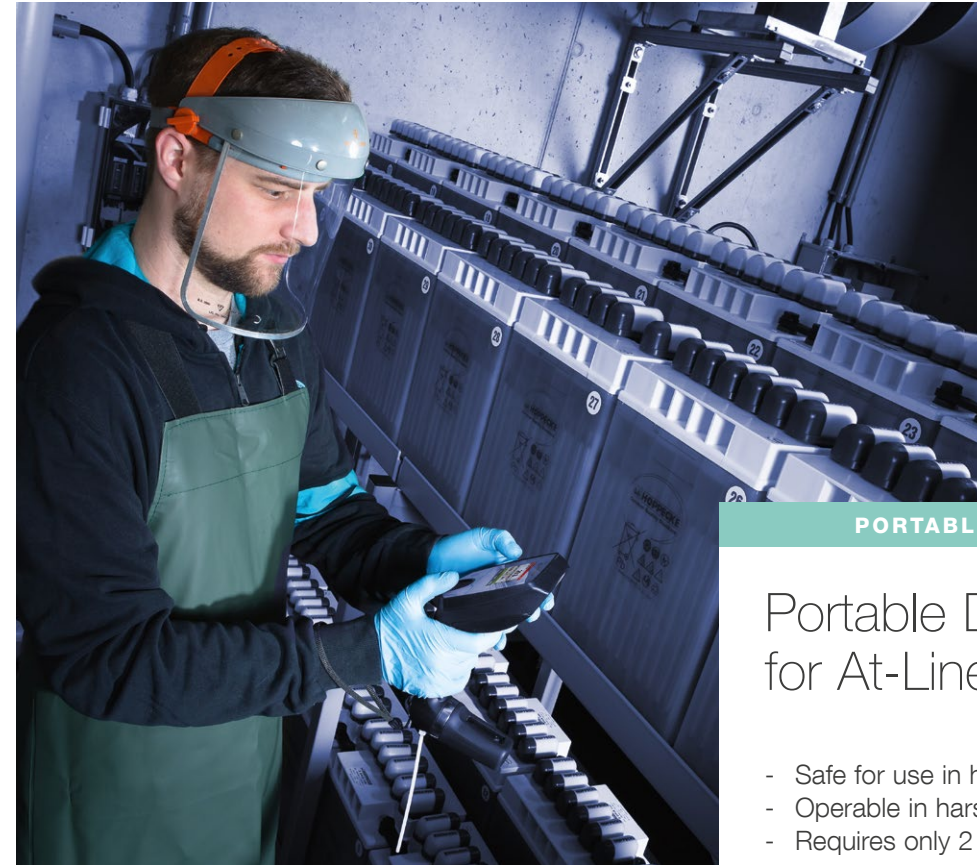
- Fast, accurate concentration determination for acids and bases – even ternary solutions
- Manual and automated sample-filling options
- High chemical resistance to corrosive samples

Benchtop instruments for concentration determination are widely used in chemical analysis laboratories. Easy sample preparation and handling are the basis for quick and accurate measurement of density, refractive index, and sound velocity. Our instruments are available for different accuracy classes to cover R&D, quality control, and incoming goods inspection. The AP Connect lab execution software allows convenient data management and transfer. Benchtop instruments operate stand-alone, and can be automated with Xsample sample changers to avoid manual handling of corrosive substances. Several parameters can be combined to form a highly automated multiparameter analyzing system.

FIND OUT MORE



www.anton-paar.com/apb-acids-bases



PORTABLE INSTRUMENTATION

Portable Density Meter for At-Line Use

- Safe for use in hazardous areas
- Operable in harsh conditions
- Requires only 2 mL of sample

Anton Paar's portable density meters take samples directly from the storage container with the help of a built-in pump, and measure them on-site. The instruments are built to withstand the knocks and spills of outdoor use. Results come as density or concentration, e.g. in %v/v alcohol, or %w/w H₂SO₄. There's no risk of error from writing down results because measurement data is stored on the instrument and can be easily transferred via Bluetooth®.



PROCESS INSTRUMENTATION

You Have to Know It, to Control It

- 24/7 information from your process line
- Highly precise, maintenance-free process sensors
- Easy integration, start-up, and operation

Process sensors are the key factor in increasing plant productivity and maintaining high product quality. Continuous process measurement optimizes raw materials and energy consumption, so production runs at maximum capacity. We offer plant operators reliable and highly accurate density, sound velocity, and refractive index sensor technologies for process control with minimal installation effort.

APPLICATION DEVELOPMENT BUILT ON DECADES OF EXPERIENCE

With decades of experience in acids and bases concentration measurement, and a skilled team of specialists ranging from process engineers to chemists, we provide broad knowledge across a variety of industries. We offer comprehensive, professional support for customer-specific application development. We either deliver a solution drawn directly from our extensive application database or we develop a tailored application for your sample.



HERE'S HOW IT WORKS:



WE CHECK IF THE APPLICATION ALREADY EXISTS IN OUR EXTENSIVE APPLICATION DATABASE. IF NOT:



ANALYSIS OF SAMPLE WITH A WIDE RANGE OF TECHNOLOGIES



SELECTION OF THE BEST MEASURING TECHNOLOGY (OR COMBINATION OF TECHNOLOGIES) FOR OUR CUSTOMER'S APPLICATION



WORLDWIDE SERVICE AND SALES SUPPORT VIA 350+ CERTIFIED ANTON PAAR SERVICE ENGINEERS

- Our customers send in a sample, or the application team buys a sample.
- For delicate samples, the application team agrees an alternative procedure in consultation with the customer.

A Complete Range of **Technologies** to **Determine** **Concentration**

Anton Paar's 65 years' experience in measurement technology, and extensive application know-how, make it a strong partner in the complex field of acids and bases measurement. We offer reliable, highly accurate technologies for laboratory, at-line, and process measurement. They're ideal for quality control, R&D, and process control, and ensure smooth operation across your entire production facilities. Whatever your specific measuring requirements are, we have solutions for your solution.

Anton Paar's concentration determination portfolio for binary and ternary liquids comprises various technologies with a focus on density, refractive index, and sound velocity. They represent a way of measuring concentration with low sample volumes and with almost zero consumable material, leading to precise, cost-effective results.



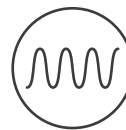
DENSITY

Anton Paar instruments use the reliable, highly accurate oscillating U-tube measurement principle to measure the density of liquids. The sample flows through a U-shaped tube oscillating at its frequency, which depends on the density of the sample.



REFRACTIVE INDEX

Refractive index is a material property optically measured by a refractometer. A light-emitting diode shines through an optical prism which is in contact with the liquid being measured. The refractive index is calculated based on analysis of the reflected light.



SOUND VELOCITY

Sound velocity instruments measure the propagation time of sound pulses between a transmitter and receiver. Since the distance between transmitter and receiver is known, the sound velocity of the process fluid can be calculated. Sound velocity can be used as an additional parameter to determine concentration in ternary solutions.

