

The Fully Automated **Factory-Control Lab**

Sugarlyzer 5000



Sugarlyzer 5000: Powerful. Reliable. Smart.

Combining multiple state-of-the-art Anton Paar instruments, Sugarlyzer 5000 is a ready-to-use lab that can reliably conduct all stages of the sugar analysis process. This includes all liquid-, syrup-, molasse-like and sugar crystal samples.

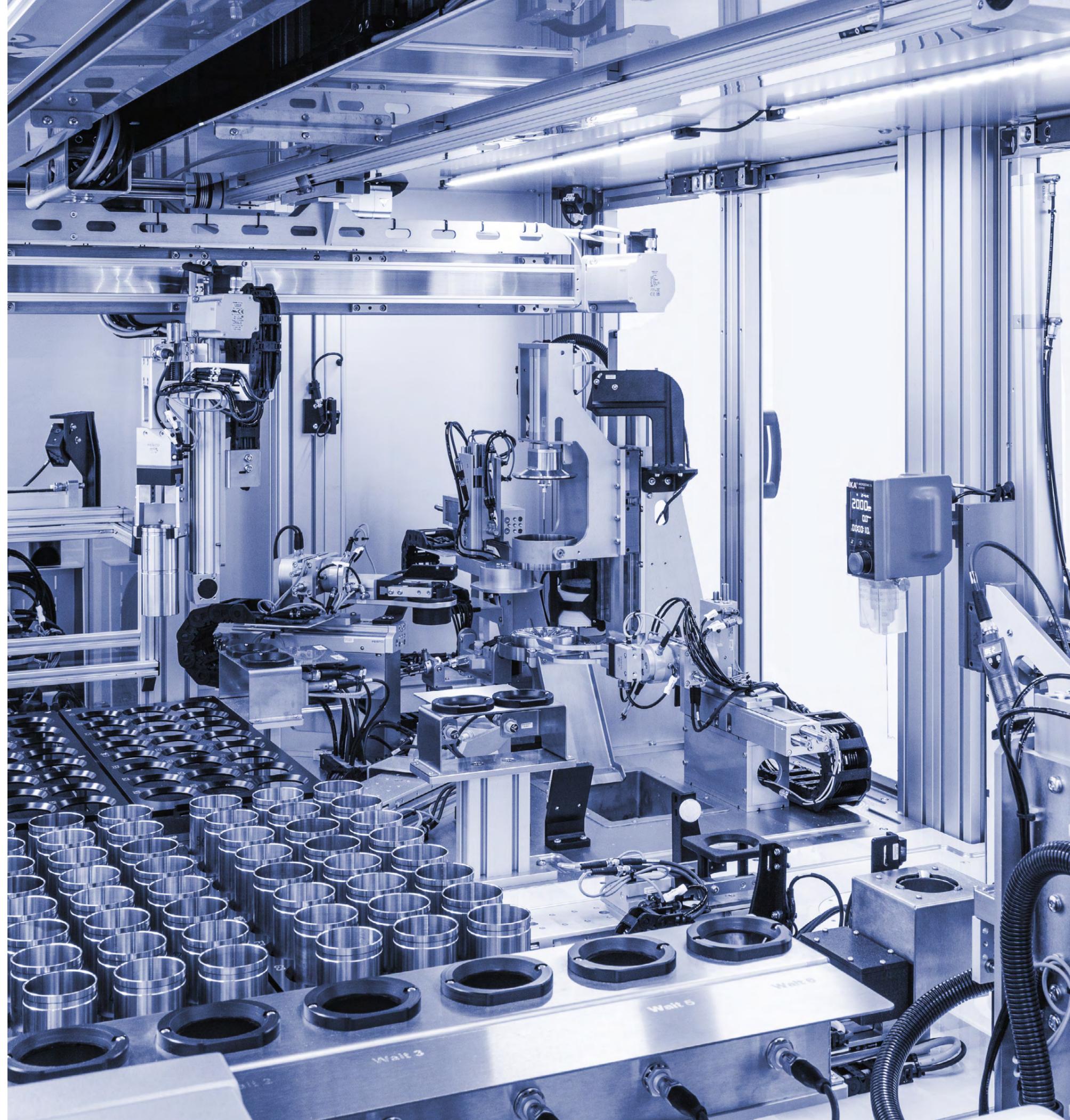
Integrating sample preparation, high-precision measurement and data transfer, Sugarlyzer 5000 substitutes a whole lab, eliminating up to eight manual worksteps with one conclusive system that mobilizes pre-defined steps.

Simply allow Sugarlyzer 5000 to oversee the execution of your pre-defined standard operating procedures for every sample, and obtain highly precise and complete results whilst you get on with other tasks. Enjoy all the benefits of world-class instruments in one combined, ready-to-use lab that facilitates Anton Paar's high-precision guarantee.

FIND OUT MORE



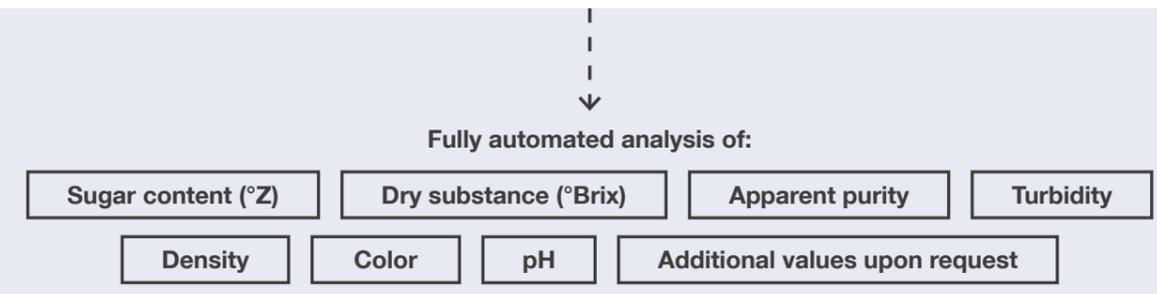
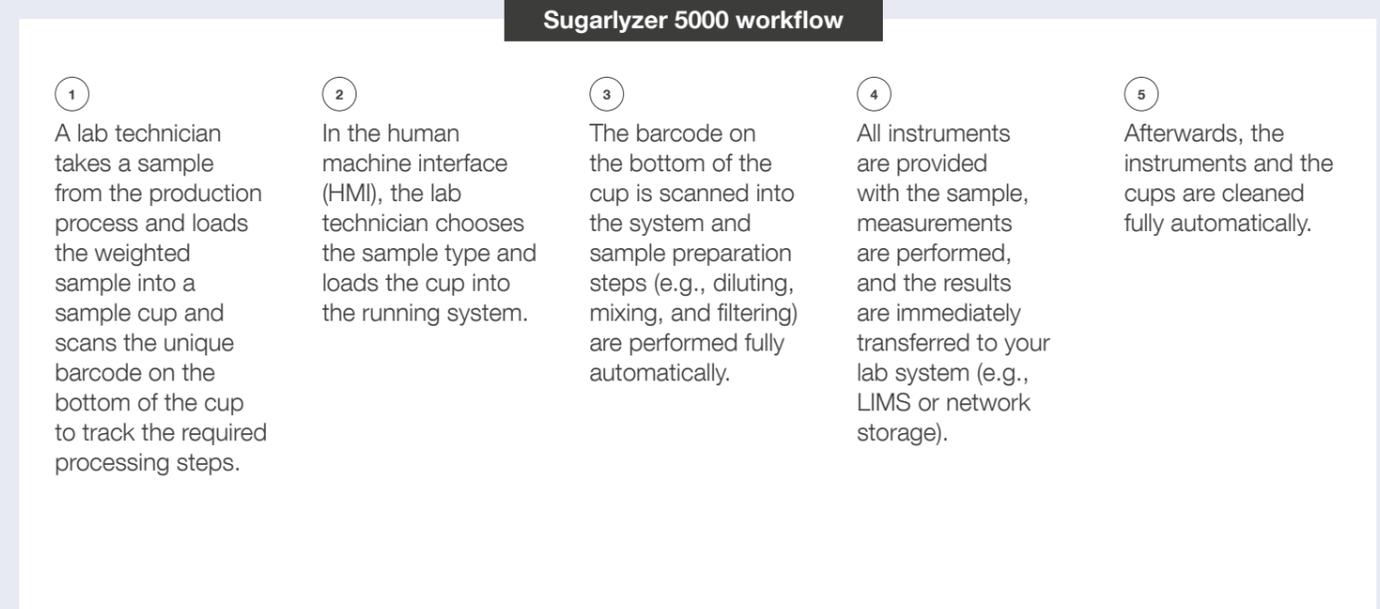
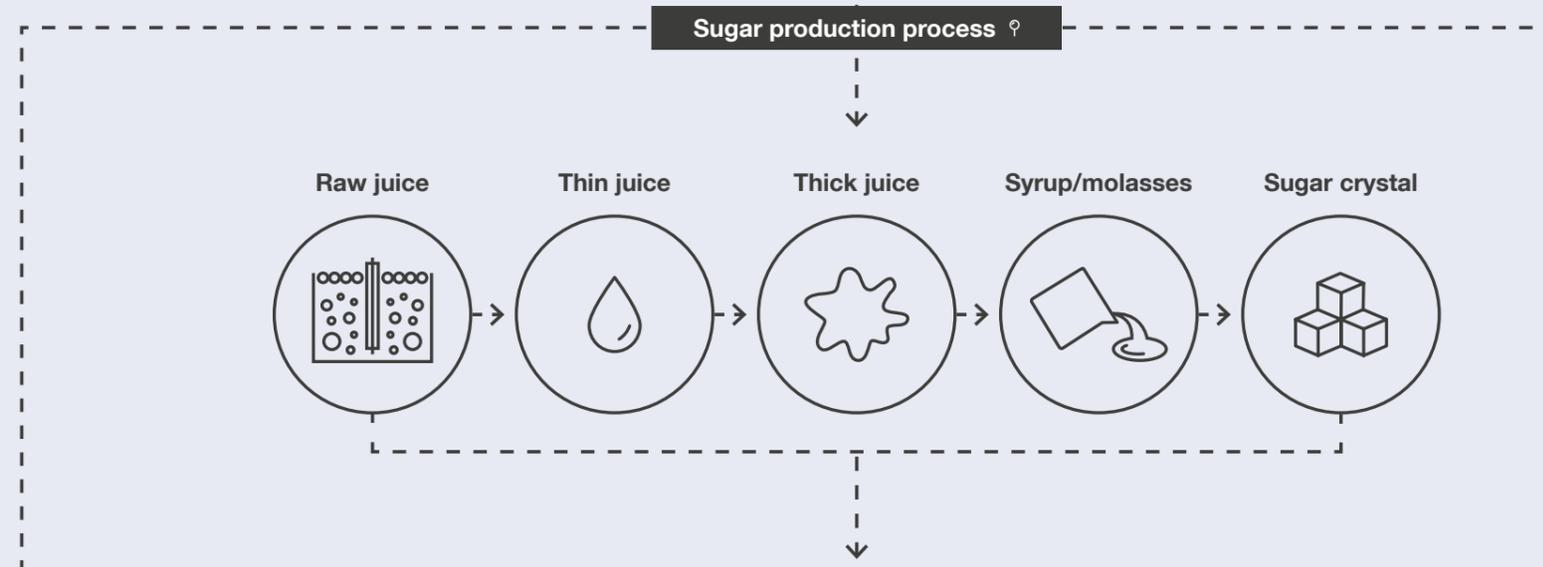
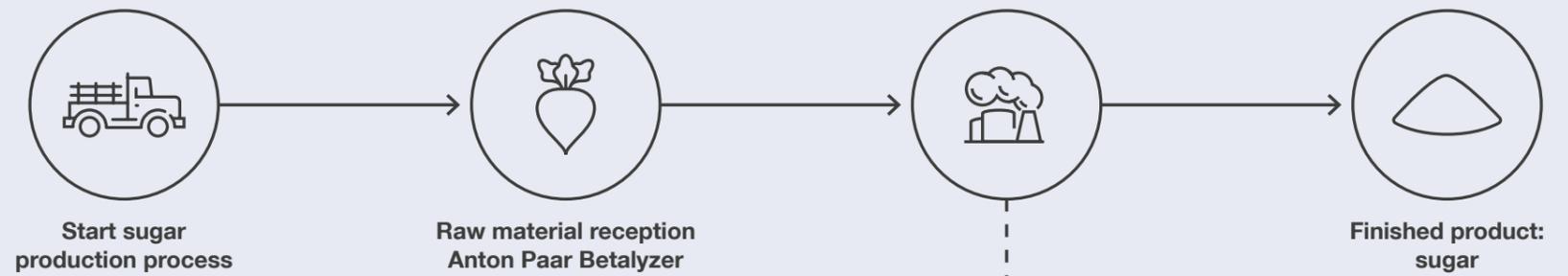
www.anton-paar.com/apb-sugarlyzer



One Process, One Solution

Samples from different process steps of sugar production have different requirements. Sugarlyzer 5000 allows customers to choose from different modules covering all liquid- and syrup-like samples. Whether your sample needs dosing, mixing or filtering, this all-in-one solution handles your sample every step of the way. For all sample preparation steps, automation ensures the highest repeatability, as well as swift execution.

- **Dosing:** Clarifying agents or diluents may need to be added to the sample. If not done properly and with the wrong amount, measurement errors may occur. Accurate automated dosing ensures consistent results.
- **Preheating:** Due to parallel heating while dosing, time is saved. Heating allows even the most difficult pan and molasses samples to be run without problems.
- **Mixing:** Ensures that samples are sufficiently homogenized, according to the defined operating procedures. Automation ensures consistent homogenization for every sample.
- **Filtration:** Enables the measurement of all kinds of beet juice samples. The complete filtration process is fully automatized.
- **Automated cleaning of instruments and sample cups:** Ensures that you are ready to fill your next sample without any additional effort.

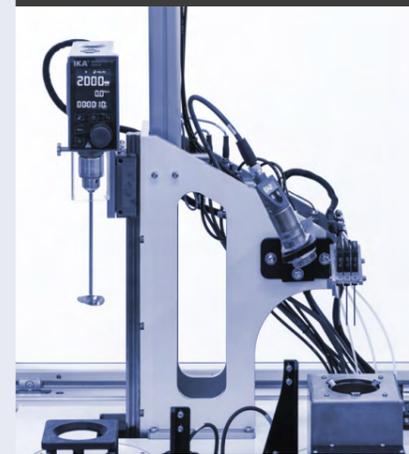


The Fully Automated Factory-Control Lab

Sugarlyzer 5000 offers the swiftest shift to automation. It ensures the reliable processing of samples 24 hours a day, including sample preparation and measurement. Achieve a high throughput of up to 300 samples per day without the need to obtain skilled workers or train manual laborers to manage complex equipment. Sugarlyzer 5000 is equipped with extensive storage to free up users for more than six hours, allowing them to get on with other important tasks.



SMART



Minimum input: planning security for your quality control

Digital job management in combination with automation ensures that every sample will be treated according to predefined standard operating procedures (SOPs). For every sample type, the customer can define how the sample is run (neat, diluted, filtered), and Sugarlyzer 5000 allows users to customize clarification chemistries, mixing times, as well as the temperature during sample preparation. When starting a new job, simply assign the correct type to the sample, and the system knows what to do. This enables repeatability and consistency throughout the process.

POWERFUL



Automated sample preparation: free up time and resources

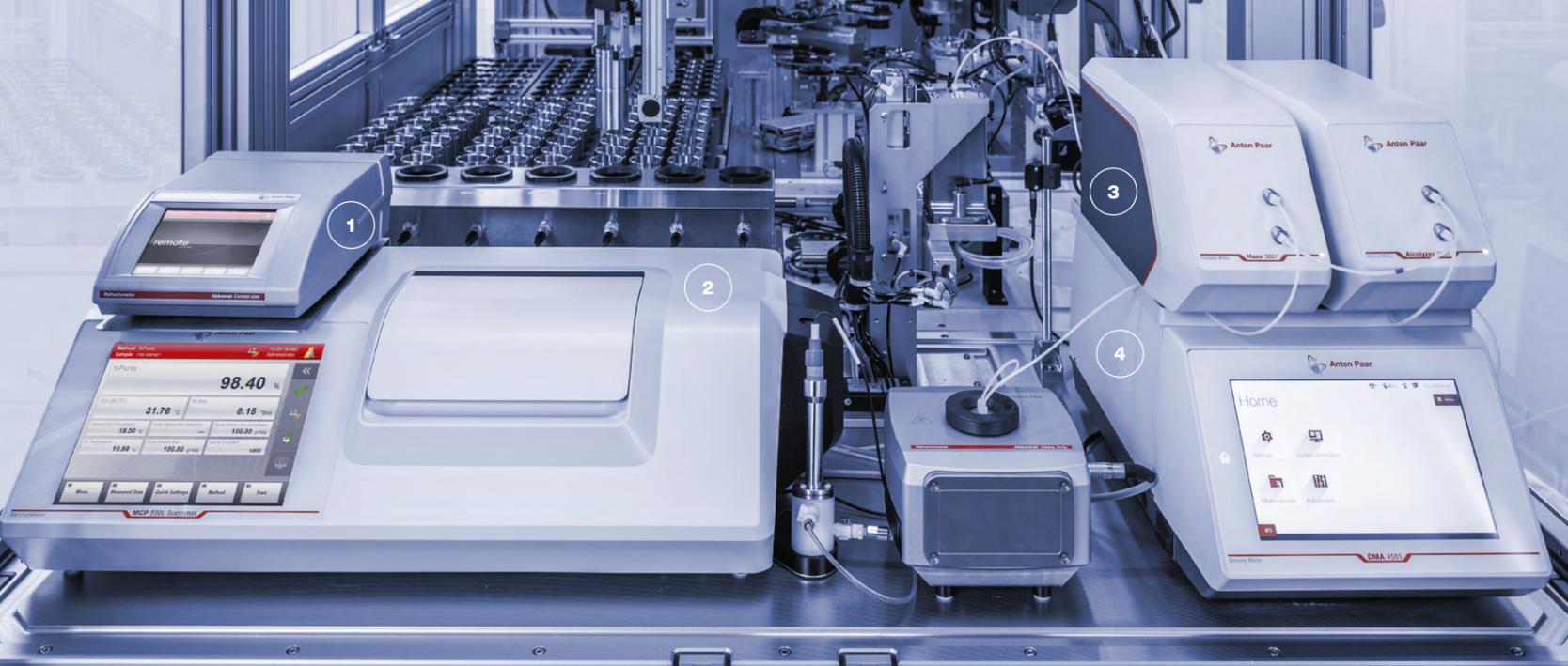
By leaving Sugarlyzer 5000 to autonomously prepare, process and clean samples, time and resources are saved. High-performing modules for sample preparation allow the most difficult pan and molasses samples to be run without problems. Sugarlyzer 5000 achieves maximum productivity by working on up to five samples at the same time. It eliminates the need for constant management and observance of samples as Sugarlyzer 5000 mobilizes all repetitive tasks according to your requirements with the highest repeatability.

RELIABLE



Quality control results you can rely on

Thanks to the sample processing unit (SPU), users can guarantee the fast, precise, and simultaneous provision of samples to all instruments. There is no need to intervene with the sample during or after preparation, minimizing human error and the risk of cross-contamination. Supplemented by the pre-defined SOPs, this facilitates consistent and accurate results across the board. Measurement of all important parameters for sugar quality control are conducted with one automated job.



A Sweet Solution: Instruments that Empower

High-precision instruments brought together for an all-in-one solution

1 Abbemat 650: Digital Heavy Duty Refractometer

For measuring the concentration and refractive index of liquids and pastes, the Abbemat refractometers embody reliability and precision. They are not affected by environmental conditions and require minimal cleaning and maintenance.

2 MCP Sucromat 5300: Modular Circular Saccharimeter

The MCP Sucromat series precisely determines sugar content (Pol, °Z) with a high accuracy of up to 0.01 °Z across the entire measuring range from -259 °Z to +259 °Z. Over 30 years of experience and the highest quality in development, production, and customer support have made Anton Paar's sugar polarimeters the standard for sugar analysis around the world.

3 Haze 3001: Turbidity Meter

The Haze 3001 turbidity measuring module measures turbidity in liquids and is part of Anton Paar's modular measuring system. Check your final quality parameters at the earliest possible stage – with turbidity analysis in just three minutes – as part of your production control process.

4 DMA 4501: Benchtop Density Meter

Equipped with best-in-class U-tube technology based on our patented Pulsed Excitation Method, our density meters are the industry's fastest, most-precise benchtop density meters. Five-digit accuracy in density gives you results you can rely on.

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Productivity off the shelf

For sugar factories aiming to boost productivity and cut down operating costs of their quality control, Sugarlyzer 5000 is the perfect solution. It ensures increased lab efficiency and traceability of your quality control results. It also enables increased lab safety by reducing the time that lab technicians are exposed to chemicals.

To reduce consumable requirements, the system uses stainless steel sample vials that are automatically washed after each use. Each vial is coded with a unique datamatrix code for sample traceability throughout the process.



Measurement instrumentation

Sugarlyzer 5000 allows customization of the instrumentation included to meet customer specific needs. The measurement instrumentation currently available provides results for:

- Sugar content (°Z)
- Dry substance (°Brix)
- Apparent purity
- Turbidity
- Color
- Density
- pH

Additional measurements are available upon request. Measurement results are transferred fully automated to your LIMS.

Sugarlyzer 5000



MEASURING RANGE ¹	
Temperature control and measurement	20 °C
Sugar content (°Z) at 589 nm	±259 °Z (±89.9 °OR)
Refractive index	1.26 nD to 1.72 nD
Turbidity – Absorbance at 420 nm	0 to 1, or 0 NTU to 400 NTU (4 NTU \approx 40 Helms \approx 69 ASBC \approx 4600 FTU)
Color – Absorbance at 420 nm	0 to 1
Density	0 g/cm ³ to 3 g/cm ³
pH value	pH 0 to pH 14

REPEATABILITY S.D. ¹	
Temperature control and measurement	±0.1 °C
Sugar content (°Z) at 589 nm	±0.003 °OR ; ±0.01 °Z"
Refractive index	±0.000001 nD
Turbidity – Absorbance at 420 nm	0.3 % + 0.08 NTU
Color – Absorbance at 420 nm	±0.0001
Density	0.000005 g/cm ³
pH value	0.02 (in the range pH 3 to pH 7)
Sample loading capacity	72 sample cups
Typical cycle time per sample	Approx. 5 min.

SAMPLE PREPARATION	
Dosing accuracy (DI water and clarifying agent)	0.04 ml or 1 %
Mixing speed	0 rpm to 2,000 rpm
Sample pre-tempering station	65 °C
Sample volume required	90 ml to 150 ml / cup

ENVIRONMENTAL CONDITIONS	
Ambient temperature	22 °C (min. 20 °C, max. 25 °C)
Relative humidity (not condensing)	At 15 °C to 30 °C: 0 % to 70 %

TESTED SAMPLE TYPES ²	
Sample types	Raw juice, thin juice, thick juice, syrup, molasses, sugar

FURTHER DETAILS	
Pressurized air	ISO 8573-1:2010 [7:4:4], Particle: Class 6, Water: Class 4, Oil: Class 3, Pressure 6 – 10 bar, Pipe diameter Ø12 mm
DI water hot	4 bar to 6 bar abs., chlorine-free (55 °C to 60 °C) 10 l/min
DI water cold	2 bar to 4 bar abs., chlorine-free (Room temperature; approx. 20 °C ±1 %) 1 l/min
Communication interface	Export of results via CSV-files or bidirectional connection to a LIMS system
Power supply	1 x 230 V, 50 Hz to 60 Hz, 16 A

Sugarlyzer 5000



Dimensions (L x W x H) (without signal lights and ventilation)	3,300 mm x 1,600 mm x 2,300 mm
Distance from the nearest wall	900 mm
Weight	Approx. 2,300 kg (5,071 lbs)
Altitude	Max. 2,000 m (max. 6,560 ft)
Ventilation (connection to suction line from customer)	200 m ³ /h
Air consumption	300 l/min; peak 800 l/min
Sound pressure	Weighted average sound pressure level La = 62 dB(A), short term below 85 dB(A)
Display	Industrial-PC 1920x1080 px
Controls	Mouse + keyboard

1 Other parameters and units on request.
2 Approval for other sample types on request.

Reliable. Compliant. Qualified.

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

FIND OUT MORE



www.anton-paar.com/service



Maximum uptime



Warranty program



Short response times



A global service network

