



Anton Paar

::: Superior Optical Instruments



Abbemat Juice Station – Vertically Good

Reliable Brix measurement of samples containing pulp or other particles

Fruit juice – a complex beverage

Fruit juices are natural products and therefore highly complex beverages with many ingredients. To ensure the expected product quality, fruit juices need to be characterized according to their composition and have to meet the defined product specifications.

One of the most important quality analysis parameters in juice production is °Brix, which gives insight into the sugar concentration and the composition of the juice. Abbemat refractometers are common instruments used for °Brix measurement of fruit juice. They are fast and reliable and give valuable information about the composition of the juice.

Many juices, especially orange juices, contain pulp which remains in the juice. This pulp content causes several problems for the °Brix measurement, due to sedimentation of the particles on the measuring prism of the refractometer.

Abbemat Juice Station – the ideal solution for beverages containing pulp

Anton Paar is aware of the problem with juices containing pulp and solved it decades ago with the Abbemat Heavy Duty line refractometer, which can be put in an upright position. The vertical set-up of the Abbemat avoids sedimentation of particles like pulp on the measuring prism and assures reliable and stable measuring results.

With the Abbemat Juice Box the refractometer range for vertical setup is extended to the Abbemat 200, 300 and 550 models:

The attached filling funnel allows fast and easy serial analyses, e.g. in quality control: The next sample flushes out the previous one, so that no cleaning of the measuring prism in-between samples is required. An internal temperature control assures the correct measuring temperature.

The measured data can be recorded and/or printed.

The Abbemat Juice Box models are easy to operate and the results are independent of the operator. A menu-guided adjustment procedure allows easy adjustment of the instrument. For cleaning, the measuring cell can be easily be removed by loosening the supporting ring.

For further details on the features of the different Abbemat models, refer to the separate Abbemat series brochure.



	Abbemat 200 Juice Station	Abbemat 300 Juice Station	Abbemat 550 Juice Station
Measuring ranges			
Refractive Index (RI)			
Range nD	1.30 to 1.72	1.26 to 1.72	1.30 to 1.72
Resolution nD	± 0.0001	± 0.00001	± 0.000001
Accuracy nD ¹⁾	± 0.0001	± 0.0001	± 0.00002
Brix			
Range	0 to 100 %	0 to 100 %	0 to 100 %
Resolution	0.01 %	0.01 %	0.001 %
Accuracy	0.05 %	0.05 %	0.015 %
Sample/prism temperature control by built-in solid state thermostat (Peltier)			
Temperature range	10 °C to 60 °C	10 °C to 85 °C	10 °C to 85 °C
Temperature probe accuracy ¹⁾	± 0.05 °C	± 0.05 °C	± 0.03 °C
Components			
Wavelength 589 nm by LED light source, average lifetime > 100,000 h			
Dimensions			
W x H x D [mm]	300 x 145 x 330		
Weight [kg]	8.8 kg, 19.4 lb		

¹⁾ valid at refractometric standard conditions ($T = 20\text{ °C}$, $\lambda = 589\text{ nm}$, ambient temperature = 23 °C)

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