

ADS400 Series Saccharimeter

SODIUM 589nm & NIR WAVELENGTH INSTRUMENTS AVAILABLE AS STANDALONE OR PLUG-IN PURITY PACKAGES. DESIGNED FOR SUGAR FACTORIES AND TARE HOUSES.



**Bellingham
+ Stanley**

a xylem brand



- ATC or Patented XPC Peltier
- ICUMSA and Tropical Scale ATC
- Funnel flow or standard tube packages
- High definition 4" full colour display
- Continuous or single shot readings

Purpose built for the sugar industry

The ADS400 Series Saccharimeter is a purpose built polarimeter that displays results in the ISS (°Z) scale.

This series of Bellingham + Stanley instruments has been primarily designed for busy sugar laboratories, factories and tare houses. The ADS400 Series is available in 2 wavelengths: Sodium (589nm), and NIR (850nm) which facilitates "lead-free measurement". Both models can be purchased with or without XPC Technology - Xylem's patented on-board Peltier temperature control system for measuring optically active samples at stable temperatures.

Funnel flow tubes are easily installed thanks to the interchangeable lid of the ADS400 Series. Funnel flow tubes are ideal for areas of your business that have a rapid throughput of samples. Customers may use standard ICUMSA tubes with the ADS400 Series, so existing tubes can be used whilst replacements are easy to obtain.

Available as part of a complete Automatic Purity System

The ADS400 Series Saccharimeters are designed to operate in isolation (no PC required) but work best when connected to an RFM300 or RFM700 Series Refractometer from Bellingham + Stanley. By connecting a digital refractometer to the ADS400 you can create a complete Purity system which will offer automatic, accurate purity readings directly pushed to the ADS400 Series display. Automatic Purity Systems not only speed up your process, but can save you money with accurate and consistent results.

Speak to your Bellingham+Stanley representative today to find out more about a low cost complete Automatic Purity System.

Robust casing, energy efficient and easy to use

The ADS400 Series is built in the UK using a corrosion-free polyurethane foam case - sealed to prevent moisture and dust ingress to its optics, as well as keeping out insects and small rodents that can sometimes find their way into other instruments in certain environments. Low power consumption and low maintenance is achieved using an LED light source which offers light for the length of the product lifetime¹.

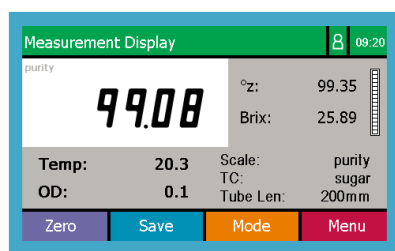
The external power unit keeps internal temperatures minimal, and in combination with the sealed casing makes the ADS400 Series Saccharimeter a great choice for working in high humidity environments. Waterproof power supplies are also available.

Thanks to its intelligent setup wizard, easy-to-use keypad with colourful HD display and intuitive software, operating the ADS400 Series is quick and simple. RFID login allows several levels of access, as well as offering an audit trail, meaning settings can be hidden away so users can only take readings; ideal for allowing use of the instrument no matter what level of training.

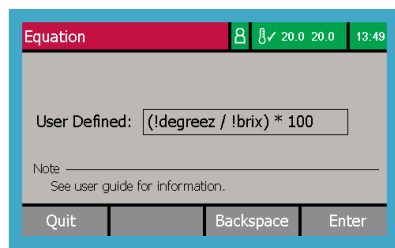
A METHODS system allows for quick configuration, with reading type (continuous or single-shot) and limit checking against pre-defined product specifications made simple. Configurable Purity equations are also accessible through the easy-to-use software using the keypad.

ADS400 Series Saccharimeters

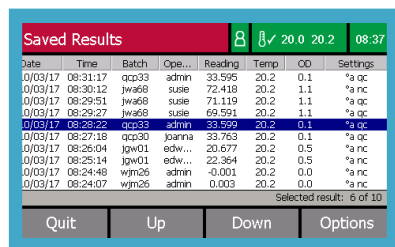
Designed with the Sugar Industry in mind



ADS400 displaying all purity parameters



ADS400 purity calculation is selectable from international standards or fully configurable



ADS400 can store and display results as well as output via printer, secure USB or csv/XML data string for connecting to LIMS

General Specifications

Sodium (589nm)

NIR (850nm)

Scales		
International Sugar Scale (°Z)	-225 to +225	-225 to +225
User Scales/Methods	100	100
Resolution		
International Sugar Scale (°Z)	0.01/0.001 (selectable)	0.01/0.001 (selectable)
Accuracy		
International Sugar Scale (°Z)	± 0.030	± 0.060
Precision (Reproducibility)		
International Sugar Scale (°Z)	± 0.005	± 0.010
User Scales & Methods Library	Rotation (°Z), % Concentration, Purity, angular (°A), % Invert Sugar, % Inversion (A-B)	
Reading Time	Continuous measurement and display or <i>single shot</i> (selectable)	
Tube Length	100 to 200mm	
Sample Illumination	Light Emitting Diode (100,000+ hours)	
Beam Diameter	4mm	
Optical Density	0.0 to 3.0 OD (using OD filters at 589nm & 850nm)	
Instrument Housing	Polyurethane foam with aluminium base	
Interfaces	1 x USB (A), 1 x USB (B), 1 x Ethernet	
Power	Instrument: 24 V DC, ±5%, <2A External PSU: 100-240V, 50-60Hz (supplied)	
Data Output	Print to USB, print to printer, csv, XML	
Humidity Range	<90% RH (non condensing)	

Temperature Specifications

ADS400 ATC

ADS400 XPC (Peltier)

Compensation	None, ICUMSA, Tropical, Quartz or User Defined	
Control	None or external waterbath	Patented XPC Technology
Measuring Range	5-40 °C	15-35 °C
Sensor Accuracy	± 0.1 °C	± 0.1 °C
Stability	Waterbath dependent	± 0.2 °C
Stability Checks	None/delay on single-shot	None/delay or SMART

Latest Software Features

- Save over 8000 readings
- Methods system with limit
- Connectable to refractometer
- Onboard Purity
- User audit trail
- Date/Time for GLP
- USB "Back-up & Clone"
- User maintenance prompts

Purpose built packages

The ADS400 Series Saccharimeter is available in predefined packages to make choosing the right system for you as simple as possible. All packages are supplied with appropriate cell, lid, onboard purity, LIMS logger PC software, RFID tags & certificate of conformity.

ADS400 ATC

ADS400 XPC (Peltier)

	200mm Glass	100mm Funnel	200mm Funnel	200mm Metal	100mm Funnel	200mm Funnel
Sodium (order code)	ADS435 37-25	ADS435-F100 37-26	ADS435-F200 37-27	ADS455 37-45	ADS455-F100 37-46	ADS455-F200 37-47
NIR (order code)	ADS438 37-85	ADS438-F100 37-86	ADS438-F200 37-87	ADS458 37-95	ADS458-F100 37-96	ADS458-F200 37-97



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¹ LED lifetime guaranteed through normal use and with no interference.