

# SAC - i

Cat.No.5951

# SAC - i 589 / 882

Cat.No.5952

## Automatic Polarimeter / Saccharimeter



### SAC-i 589/882

It has become common that dark color - raw sugar samples are measured at 882nm without decolorization treatment.

SAC-i 589/882 can measure samples at both 589nm and 882nm by changing the optical units.

High Performance Sugar Analysis, Now Easier Than Ever.

**ICUMSA** compliant

**FDA 21 CFR Part11** compliant

# Smooth and Accurate Operations, Guaranteed

Touch Screen

003 A.R.  $\alpha = +33.1298^\circ$

JAN. 21, 2015 14:38 PRESENT 20.0°C

FIX CH1 26.1°C

MODE 1

200mm [200.00mm]

000sec.

ZERO START

## Measurement screen with setting sub-window (lower left)

Basic settings are easily accessible from a sub-window within the main measurement screen. With a touch on the screen, it can switch to display the last 10 measurement history.

MODE

A.R. 1

MODE 1

200mm [200.00mm]

1

0 sec.

QUIT ENTER

## Measurement mode screen

Customize measurement methods – mode, wait time, consecutive measurements, temperature, and more.

HISTORY

No. 0010-0001

No.	Date/Time	Mode	Range	Angle	Temp
10	JAN. 21, 2015 14:38	A.R.	589	+34.6473°	20.0
09	JAN. 21, 2015 14:38	A.R.	589	+34.6473°	20.0
08	JAN. 21, 2015 14:38	A.R.	589	+34.6467°	20.0
07	JAN. 21, 2015 14:37	A.R.	589	+34.6473°	20.0
06	JAN. 21, 2015 14:37	A.R.	589	+34.6467°	20.0
05	JAN. 21, 2015 14:36	A.R.	589	+34.6473°	20.0
04	JAN. 21, 2015 14:35	A.R.	589	+34.6458°	20.0
03	JAN. 21, 2015 14:35	A.R.	589	+34.6467°	20.0
02	JAN. 21, 2015 14:35	A.R.	589	+34.6458°	20.0
01	JAN. 21, 2015 14:12	ZERO	589	ZERO SET END	20.0

MEMORY FULL

AUTO OVERWRITE

USB

ALL RESULT

PRINT

CLEAR 001 QUIT

## History screen

Up to 5,000 each of measurement and zero-setting / calibration data can be stored.

SCALE EDIT

003 TYPE A.R. NAME A.R.

$\alpha = +0.0000^\circ$

FIX CH1 26.1°C

MODE 1

200mm [200.00mm]

001

000sec.

QUIT ENTER

## Sale edit screen

Edit and save your own scales with ease.

JAN. 21, 2015 14:38 PRESENT 20.0°C

ADMIN1 HONDA

ADMIN2

ADMIN3

ADMIN4

ADMIN5

USER1 SUZUKI

USER2

USER3

USER4

GUEST

## High-security protection

Design your ideal data security system with the 4 system levels in combination with 9 individual user passwords.

MANUAL CALIBRATION

A.R.

$\alpha = +34.6471^\circ$

PRESENT 20.0°C

FIX CH1 26.1°C

MODE 1 SCALE 001

1.0000

QUIT ENTER

## Manual calibration

Correct measurement discrepancies among units within the accuracy specification for consistency across multiple units.

# SAC-i

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# SAC-i 589/882

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Automatic Polarimeter / Saccharimeter



Home screen

Choose from a total of 6 options –  
3 graphic themes, each with 2 background options.



## New Generation Saccharimeter

# Here at last – the product of our uncompromising pursuit of ultimate usability.

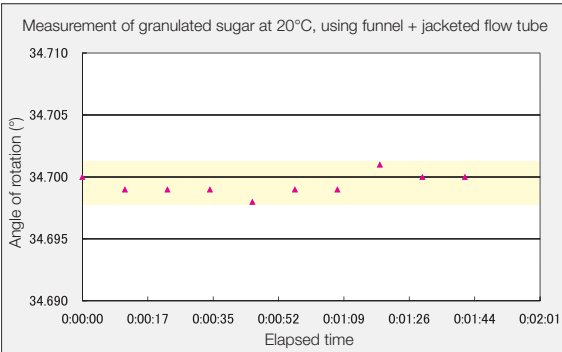
- FDA 21 CFR Part 11 Software Included in Standard Delivery **NEW**
- Measurement stability in **12 seconds**  
(4 seconds in the high-speed & consecutive measurement mode)
- Resolution of up to **4 decimal places**
- Repeatability of  **$\pm 0.003^\circ$**  Angle of Rotation and  **$\pm 0.0090^\circ Z$**
- Up to **999** automatic consecutive measurements followed by average value display
- **Sleep & timer feature** to take measurement later at specified time
- Improved usability with the use of **touch screen** technology
- **Connectivity to RX Digital Refractometers** for automatic purity measurement



# Exceptional Stability & Reliability

## Increased repeatability

ATAGO's innovations in technology has made high-stability measurement possible. The repeatability is the best in its class, and sample types that are conventionally difficult to measure can be measured with great repeatability and accuracy.



## PTB traceability

Manufacturing and calibration is executed with quartz control plates made to the German PTB standards.



## Approved by CONSECANA

The SAC-I has passed the vigorous approval process by CONSECANA, the group representing ORPLANA, the Brazilian sugarcane growers association.



## User-Friendly Construction



An observation tube length of up to 200mm can be accommodated.

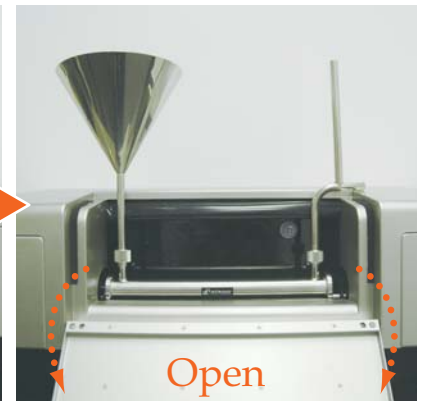


USB ports are easily accessible from the front of the unit.

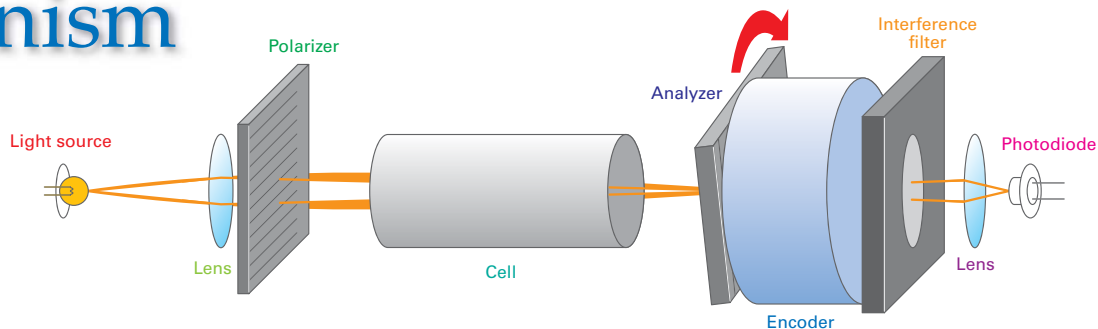
## Hardware

### Flow cell (sold separately)

The chamber cover opens forward, allowing for hassle-free installation of the flow cell attachment.



# Mechanism



# Specifications

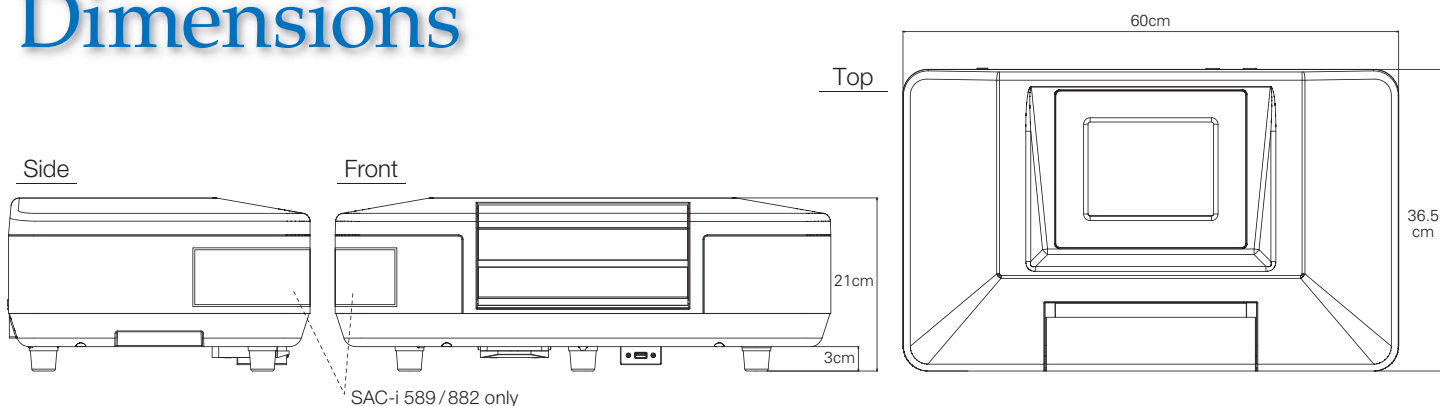
SAC-i Cat.No.5951	
Measurement accuracy	Angle of Rotation: $\pm 0.002^\circ$ (-5.0000 to +5.0000°) $\pm 0.005^\circ$ (-45.0140 to -5.0001°, +5.0001 to +45.0140°) International Sugar Scale: $\pm 0.0150^\circ Z$ (-130.0000 to +130.0000°Z) Other ranges Angle of Rotation: $\pm 0.010^\circ$ International Sugar Scale: $\pm 0.0300^\circ Z$
Repeatability	$\pm 0.003^\circ$ Angle of Rotation and $\pm 0.0090^\circ Z$
Measurement wavelength	589nm (equivalent to the sodium-D line spectrum)
Light source unit	LED: 589nm interference filter

SAC-i 589/882 Cat.No.5952	
Measurement accuracy	589nm: Angle of Rotation: $\pm 0.002^\circ$ (-5.0000 to +5.0000°) $\pm 0.005^\circ$ (-45.0140 to -5.0001°, +5.0001 to +45.0140°) International Sugar Scale: $\pm 0.0150^\circ Z$ (-130.0000 to +130.0000°Z) Other ranges Angle of Rotation: $\pm 0.010^\circ$ International Sugar Scale: $\pm 0.0300^\circ Z$ 882nm: Angle of Rotation: $\pm 0.005^\circ$ (-19.3000 to +19.3000°) International Sugar Scale: $\pm 0.0150^\circ Z$ (-130.0000 to +130.0000°Z) Other ranges Angle of Rotation: $\pm 0.010^\circ$ International Sugar Scale: $\pm 0.0700^\circ Z$
Polarizer	Glan Taylor Prism
Measurement wavelength	589nm (equivalent to the sodium-D line spectrum) 882nm (near infrared ray)
Light source unit	LED: 589nm interference filter, 882nm interference filter

\* Checked by reading a standard quartz plate.

SAC-i series Common Specifications	
Measurement Scales	Angle of Rotation International Sugar Scale (without temperature compensation) International Sugar Scale (with Automatic Temperature Compensation) Specific Rotation Concentration Purity User scale Angle of Rotation of Quartz Plate (with Automatic Temperature Compensation) Temperature (°C/°F)
Measurement range	Angle of Rotation: -89.9999 to +90.0000° and -360.0000 to +360.0000° International Sugar Scale: -259.0000 to +259.0000°Z
Resolution	Angle of Rotation: 0.0001° International Sugar Scale: 0.0001°Z
Temperature compensation range	10 to 40°C
Temperature display accuracy	$\pm 0.2^\circ C$
Ambient temperature	Use the instrument where the temperature is between 10 to 40°C
Display method	7.5-inch color LCD + touch screen
Printer output	Digital printer DP-AD/DP-63 (sold separately) Output method: RS-232C (9 pin D-Sub male connector)
Data output to USB flash drive	CSV text file format
Communication with computer	Communication via: USB-Serial
Observation tube included	Observation tubes (100mm [5ml], 200mm [10ml])
Power supply	AC100 to 240V, 50/60 Hz
Power consumption	140VA
Dimensions and weight	60×36.5×21cm, 20.0kg (main unit only)

# Dimensions



All ATAGO polarimeters are designed and manufactured in Japan.

**ATAGO CO., LTD.**  
<http://www.atago.net/> [overseas@atago.net](mailto:overseas@atago.net)

Headquarters: The Front Tower Shiba Koen, 23rd Floor  
 2-6-3 Shiba-koen, Minato-ku, Tokyo 105-0011, Japan  
 TEL: 81-3-3431-1943 FAX: 81-3-3431-1945



**HACCP GMP GLP**  
 ATAGO products comply with HACCP, GMP, and GLP system standards.

- ATAGO U.S.A., Inc.
- ATAGO INDIA Instruments Pvt., Ltd.
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- ATAGO RUSSIA Ltd.
- ATAGO NIGERIA Scientific Co., Ltd.

- TEL: 1-425-637-2107 customerservice@atago-usa.com
- TEL: 91-22-28544915, 40713232 customerservice@atago-india.com
- TEL: 66-21948727-9 customerservice@atago-thailand.com
- TEL: 55 16 3913-8400 customerservice@atago-brasil.com
- TEL: 39 02 36557267 customerservice@atago-italia.com
- TEL: 86-20-38108256 info@atago-china.com
- TEL: 7-812-777-96-96 info@atago-russia.com
- TEL: 234-707-558-1552 atagonigeria@atago.net

**novatech**  
 INTERNATIONAL  
[sales@novatech-usa.com](mailto:sales@novatech-usa.com)  
[www.novatech-usa.com](http://www.novatech-usa.com)  
 Tel: (866) 433-6682 Fax: (866) 433-6684  
 Tel: (281) 359-8538 Fax: (281) 359-0084

\* Specifications and appearance are subject to change without notice. [ENV.08] 15110000PP Printed in Japan