TOA DKK

ISO9001·ISO14001

SU-300

Sugar Analyzer

From monosaccharide, disaccharide to polysaccharide

Easy Measurement

DKK-TOA CORPORATION

SU-300 can simultaneously measure concentrations of various sugar with simple pretreatment !

Ion chromatography is one of the general sugar analysis methods and a reliable method as adopted for official testing method for specific health food. SU-300 enables everyone to measure sugar with easy operation, taking advantage of the features of ion chromatography. As "electrochemical detection method" is adopted for the sugar detector, specific sugar can selectively be detected. As this measuring method is hardly affected by foreign substance co-existing in sample, only simple pretreatment such as elimination of solid substance and fat, and dilution, is needed before injecting samples to the analyzer.

Features

Simultaneous measurement of 5 kinds of sugar and ethanol or 7 kinds of sugar alcohol

As ion chromatography is adopted, several kinds of sugars can be simultaneously measured.
Ethanol can be measured in addition to monosaccharide and disaccharide at "Sugar Mode" of the analyzer.
As alcohol and sugar are separately detectable, alcohol in liquor and sugar can be simultaneously analyzed.
7 kinds of sugar alcohol are simultaneously detectable at "Sugar alcohol mode" of the analyzer.

Measuring mode	Measuring objects
Sugar Mode	Monosaccharide : Glucose, Fructose Disaccharide : Lactose, Saccharose, Maltose Alcohol : Ethanol
Sugar Alcohol Mode	Inositol, Erythritol, Xylitol, Arabitol, Sorbitol, Mannitol, Multitol

Simple & easy pretreatment

As "Pulsed amperometory" being adopted, sugar can be selectively detected. Because it is hardly affected by foreign substance in the sample, only simple pretreatment such as dilution, is required before injecting the sample.

Simple flow composition

As the columns and detector that allow direct flow of alkali solution, are employed, separation and detection is easy. And as the solution is non-organic solvent, only pH treatment of neutralization with acid is required for waste solution treatment.

No need of PC : Analyzer automatically analyzes & calculates

The measurement is easy, just injecting the sample to the analyzer. As automatic data processing function is integrated in the analyzer, the analyzer automatically analyzes, calculates, then indicates and prints out the measurement results. It eliminates what was required before - manual operation of PC for data processing.

Easy maintenance

All of maintenance work such as exchanging columns and connecting tubes can be done from the front side. "Maintenance mode" facilitates easy-to-understand maintenance and trouble shooting with visual support on the display.
Maintenance is easy. Special tools are not required in release of working electrode and reference electrode from the detector cell.

Manpower saving system

Auto-sampler (option), if added to the analyzer, enables multi-sample automated measurement.

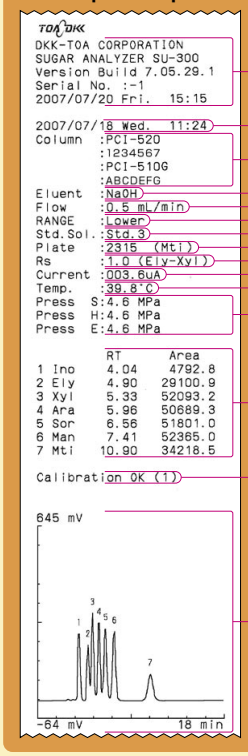
Examples of Measur

Calibration data

The result of calibration is displayed and printed out after calibration

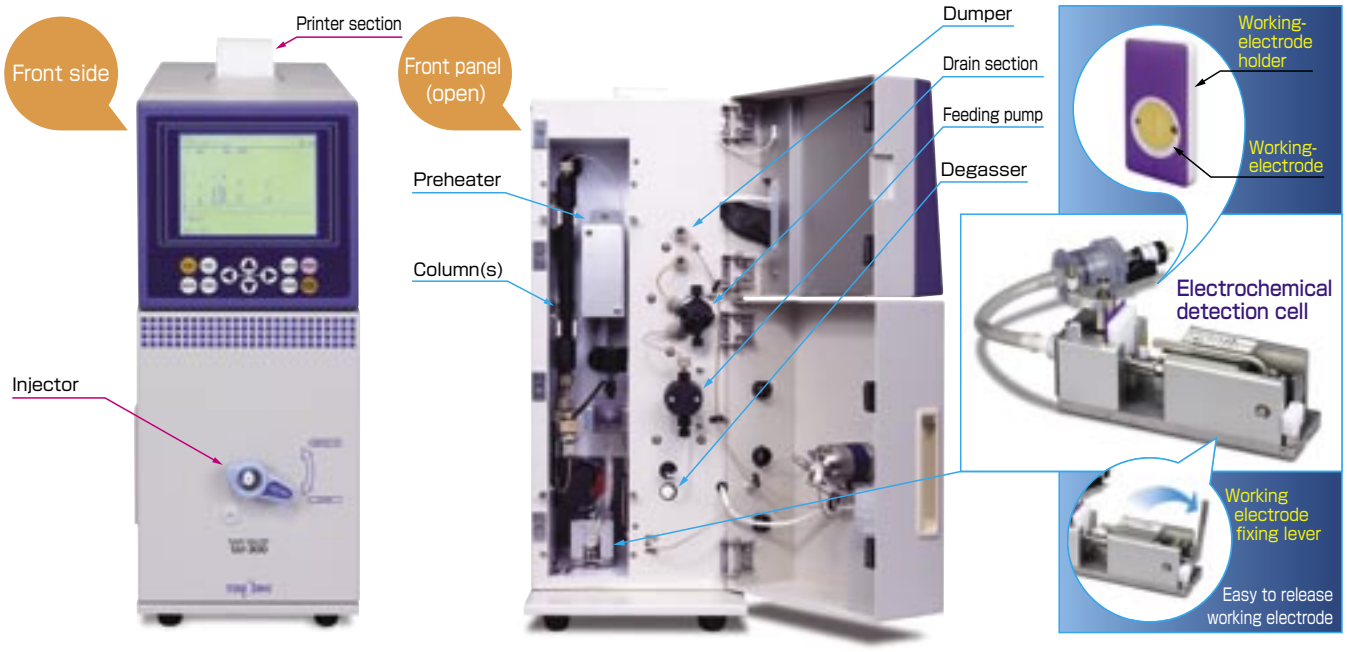
Example of the calibration results on the displayN:

Example of printout



Composition of analyzer

Ion chromatography function (feeding pump section, sample injection section, detector, data processing section, printer section and etc.) is put into one package for SU-300. Just one injection of sample to the analyzer gets the concentration of the object sugar.



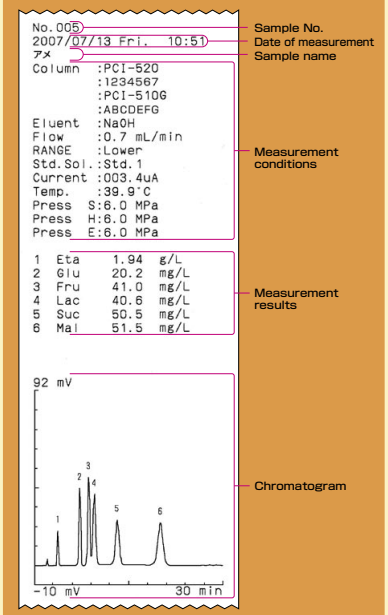
ement Data

Measurement data

Sugar calibration solution

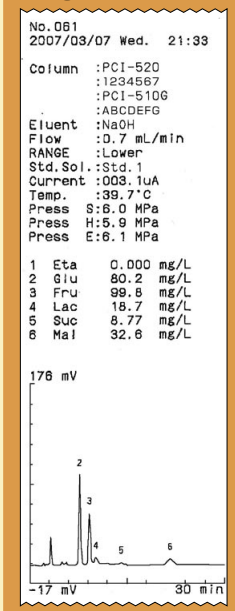
Example of the measurement results on the display :

Example of printout

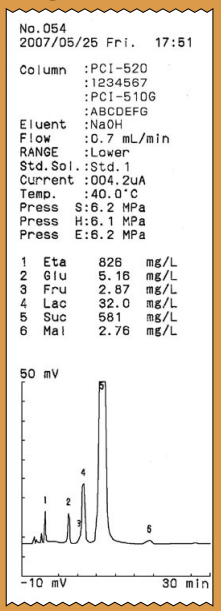


Examples of actual sample

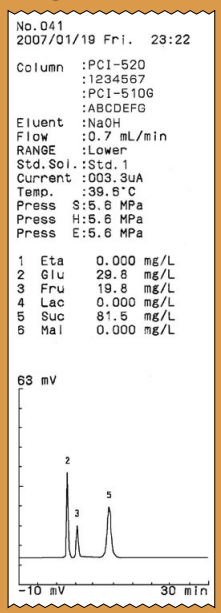
■Raw material for food : Sugar mode



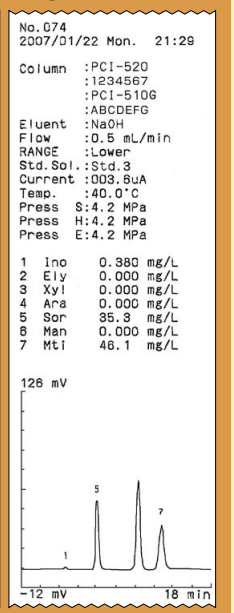
■Alcohol beverage : Sugar mode



■Soft drink : Sugar mode



■Nutritious drink : Sugar alcohol mode



Specifications

Model	SU-300			
Measuring method	Ion chromatography electrochemical detection method			
Measuring mode	2 kinds (Sugar mode, sugar alcohol mode)			
Measuring item/range	Sugar mode	Measurement parameters	Low concentration range	High concentration range
		Ethanol	0.2 - 4 g/L	4 - 30g/L
		Glucose	10.0 - 100mg/L	100 - 300mg/L
		Fructose, Lactose	10.0 - 100mg/L	100 - 750mg/L
		Saccharose, Maltose	20.0 - 100mg/L	100 - 750mg/L
	Sugar Alcohol 'mode	Inositol, Erythritol	10.0 - 100mg/L	
		Xylitol, Arabitol Sorbitol, Mannitol Multitol	10.0 - 200mg/L	
Repeatability	Within C.V. 3% at the concentration of calibration solution			
Sample injection	Manual sample injection and manual change-over valve			
Sample volume measurement	Loop cut method Loop capacity 10μL			
Measurement time	Sugar mode: 30 min./ batch, Sugar Alcohol mode: 18 min./ batch			
Calibration	One point calibration by specified concentration of calibration solution			
Column temperature bath	Room temperature			
Column	Anion exchange column PCI-520			
Data processing	Integrated			
Detector section	Method : Pulsed amperometory method (gold electrode) Cell Part : Room temperature, a preheater is arranged at previous step to cell (40℃)			
Indication	Graphic LCD			
Printer	Thermal printer is integrated			
Ambient temperature	10 - 32℃ subject to no sudden temperature change			
Output	Analog : 0 - 1V Digital : RS-232			
Terminal to Auto-sampler	Provided as standard			
Power Source	AC line 50/60Hz			
Power Consumption	Max. 130VA			
Dimensions, Weight	Approx. 190 (W) x 469 (H) X 530 (D)mm, Approx. 17 Kgs			

Standard Accessories

- 1mL disposable syringe
- Injection needle
- Sample loop (10μL)
- Air removing syringe set
- Spanner (6x8,8x10: each 1)
- Hexagonal wrench (1.5mm, 2.5mm, 3mm : each 1)
- Cell spacer (5 pieces)
- Plunger seal replacement jig
- Tank introduction tube
- Printer paper (2 rolls)
- Saturated KCl solution (100mL)
- Reference electrode
- Gold electrode
- Electrode polishing kit
- Power cord
- 2P converter adapter
- Ground cable
- Instruction manual

Essential Accessories (Separate order)

Description	P/ No.
Sugar analysis column	PCI-520
Guard column for sugar analysis column	PCI-510G

Other Accessories

Description	P/ No.	Remarks
Replacement disc for PCI-510G	PCI-510GD	Replacement disc for PCI-510G (5 pieces of disc)
Printer chart paper (5 rolls)	PAP-HCS	Thermal chart paper
Connection cable to ICA-200AS Auto-Sampler	118B412	Connection cable for 1 unit of SU-300
Connection cable to ICA-200AS Auto-Sampler	118B413	Connection cable for 2 units of SU-300

Peripheral Equipment

Auto-Sampler ICA-200AS

- Automated measurement for max. 80 samples
- Cooler function (factory option)

DKK-TOA CORPORATION

⚠ CAUTION Do not operate producuts before consulting instruction manual.

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