COMPACT

Micro Bioactivity Analyzer

MODEL AMIS-301

Simple measurement system for enzyme reactions

Coloring and labeling process free

Desktop/portable

Reduced in size and weight of laboratory use AMIS-101

Suitable to on-site analysis

Label Free

Direct conversion of ion change by enzyme reaction to electric signal.
Complicated and troublesome coloring and luminescence process is not required.

Real-time

Direct measurement and real-time monitoring of enzyme reaction

Micro Sample

High sensitive Semi-conductor sensor requires only a few micro litter sample

Digital Sensor

Measured signal is immediately converted and stored as Excel accessible digital data

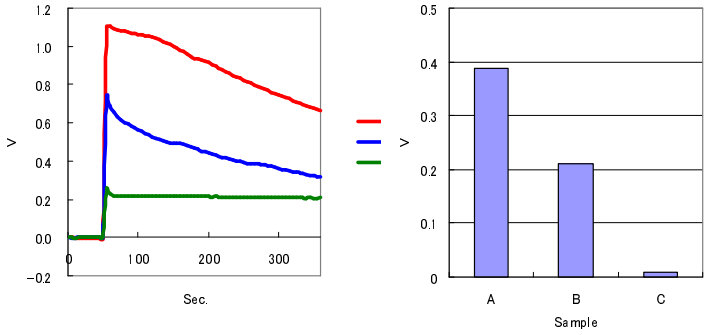
Portable

Desktop / portable size enables on-site analysis

● **Measurement of Total Polyphenols in drink (Pre-treatment free direct measurement)**

Catechin in Japanese Tea

Sample: Japanese Tea
A: Extra high Catechin contained tea (1.54mg/mL)
B: High Catechin contained tea (0.85mg/mL)
C: Regular green tea



Note: AMIS-301 requires 20mM or more concentration of NaCl or KCl in the solution

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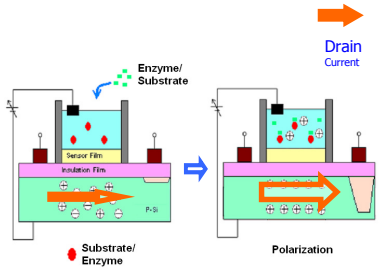
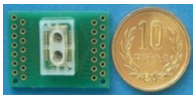
Principle



Chemical ion change by Enzyme reaction causes polarization in semi-conductor, which change the current flowing through gate channels.

Comparison with optical analysis

	Optical measurement	AMIS
Sample cell	 	
Sample condition	Centrifugal separation or filtering required	Turbidity of sample does not affect electric sensing
Sample amount	a few mL	a few uL
Enzyme reaction	Requires chromogenic process for each enzyme reaction	Simple proton amount detection for any reactions
	Analysis of early reaction not possible Special reagents required Complicated operation	Real-time monitoring possible No special reagent necessary Simple operation

AMIS-301 Specification

Measurement	Components	Signal accumulation ISFET sensor with reaction cell + relative electrode
	Method	Detection of ionic change by AMIS Sensor (AMIS: Accumulation Method Ion Sensor)
		Sensor input voltage 0 - 4V (0.01 - 10V Step)
		Sensor output voltage 0 - 2.5V (Resolution 1mV)
	Reaction cell	Built-in cell on the sensor (batch system), Cell capacity 30 ul
	Total sample amount in a cell	15ul minimum, 30ul maximum (Ex. Reaction reagent 18ul + sample 2ul = 20ul)
	Temperature control	Room temp. to 45 degree C
	Measuring interval	1 - 120 sec
	Maximum continuous measurement	100,000 Times (Maximum continuous measurement time 3,333hrs/)
Output Data	Format	CSV
Construction	Configuration	Main unit + PC for control and data management
	Weight	Main unit 2 Kg
	Dimensions	195W X 225D X 90H (mm)
	Power consumption	AC 100 -240V DC3.5VA

Note: Outlooking and specicifications may be chaged for improvement without notice

Attachiment

AC adapter, USB cable, PC for control and data storage, Software

[Distributor]

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