



# YSI 2900 Series Biochemistry Analyzers

FERMENTATION CONTROL

FOOD & BEVERAGE

CLINICAL RESEARCH



a xylem brand

# Fast and Accurate: The YSI Gold Standard

YSI has earned a reputation as the Gold Standard in bio-analytical instruments with highly accurate sensors and rapid results.

The key to generating analyte-specific results in 60 seconds or less is YSI's innovative biosensor technology. Using the inherent specificity of enzymes for a single target analyte, YSI's proprietary immobilized enzyme electrodes allow a rapid, accurate and largely interference free measurement to be made in about a minute. The unique fluidics and chamber design resist clogging - even at high cell densities.

Combining trusted measurement technology with the latest in automated sample handling, the YSI 2900 furthers YSI's legacy of expertise in the following applications:

- Critical bioprocess monitoring and fermentation control
- Biofuel production and research
- Clinical blood chemistry
- Food and beverage processing

Fully modular and with a range of upgrades available, the YSI 2900 and 2950 Series feature an intuitive graphical user interface and a touch screen display, making 2900 series analyzers the easiest to use and most cost effective way to measure the following chemistries in a wide range of matrices:

Glucose	Ammonium*	Methanol	Choline
Lactate	Potassium*	Sucrose	Glycerol
Glutamine	Xylose	Galactose	Hydrogen peroxide
Glutamate	Ethanol	Lactose	

\*YSI 2950

# YSI 2900

## Biochemistry Analyzer



### Versatile

Measure >10 chemistries-  
each in under 1 minute

### Analyte-specific results

Even in complex matrices

### Modular

Expandable from 2 to 6 chemistries with  
the YSI 2950

### Anti-clogging fluidics and chamber design

Measure high cell density samples with ease



**EAGLE** Registrations Inc.  
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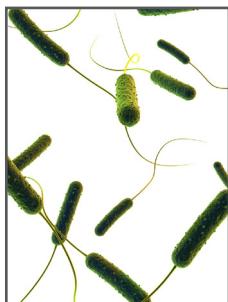
YSI's quality management system is registered:  
ISO 9001: 2008 and ISO 14001: 2004.

# Applications and Measurement Expertise

A wide range of application notes is available online for download.



## Fermentation Control



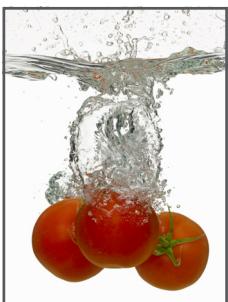
Bioreactor glucose and lactate. YSI analyzers are an essential part of many stages of bioprocessing, including: R&D, bioreactor optimization, scale-up and production. Our analyzers help companies manufacture vaccines, small molecules, a variety of chemicals, and biofuels.

## Clinical Applications



Whole blood glucose in diabetes management and research. The 2900 uses the same core technology as YSI's gold standard glucose instrument, the YSI 2300 STAT™, recognized as the industry standard for this measurement.

## Food and Beverage



Lactate and ethanol in tomato products. YSI analyzers measure lactate and ethanol as an indicator of spoilage in ketchup, salsa and other tomato products. The same technique can be used for fruit processing.

## Typical Results

Application	Sample Preparation	Typical Results	Analysis Time
Bioreactor glucose	None	CV < 2% at cal pt.	< 1 min.
Lactate/ethanol in ketchup	Diluted 1:1 with reagent water	Lactate CV = 1.8% at 72.5 ppm Ethanol CV = 2.1% at 181.2 ppm	< 1 min.
Whole blood/serum glucose	None	Whole blood CV < 2% at 75 mg/dL	< 1 min.

NIST Serum Controls 965A  
CV 0.5% - 1.1% for 34-292 mg/dL

# Technical Specifications

## Chemistries

	Fermentation Control	Food and Beverage	Clinical Research
Glucose	✓	✓	✓
Lactate	✓	✓	✓
Glutamine	✓	✓	✓
Glutamate	✓	✓	✓
Ammonium	✓	✓	
Potassium	✓	✓	
Xylose	✓		✓
Ethanol	✓	✓	✓
Methanol	✓		✓
Sucrose	✓	✓	✓
Galactose	✓		✓
Lactose		✓	✓
Choline		✓	✓
Glycerol	✓	✓	✓
Hydrogen peroxide	✓	✓	✓

✓ Primary application  
✓ Secondary application

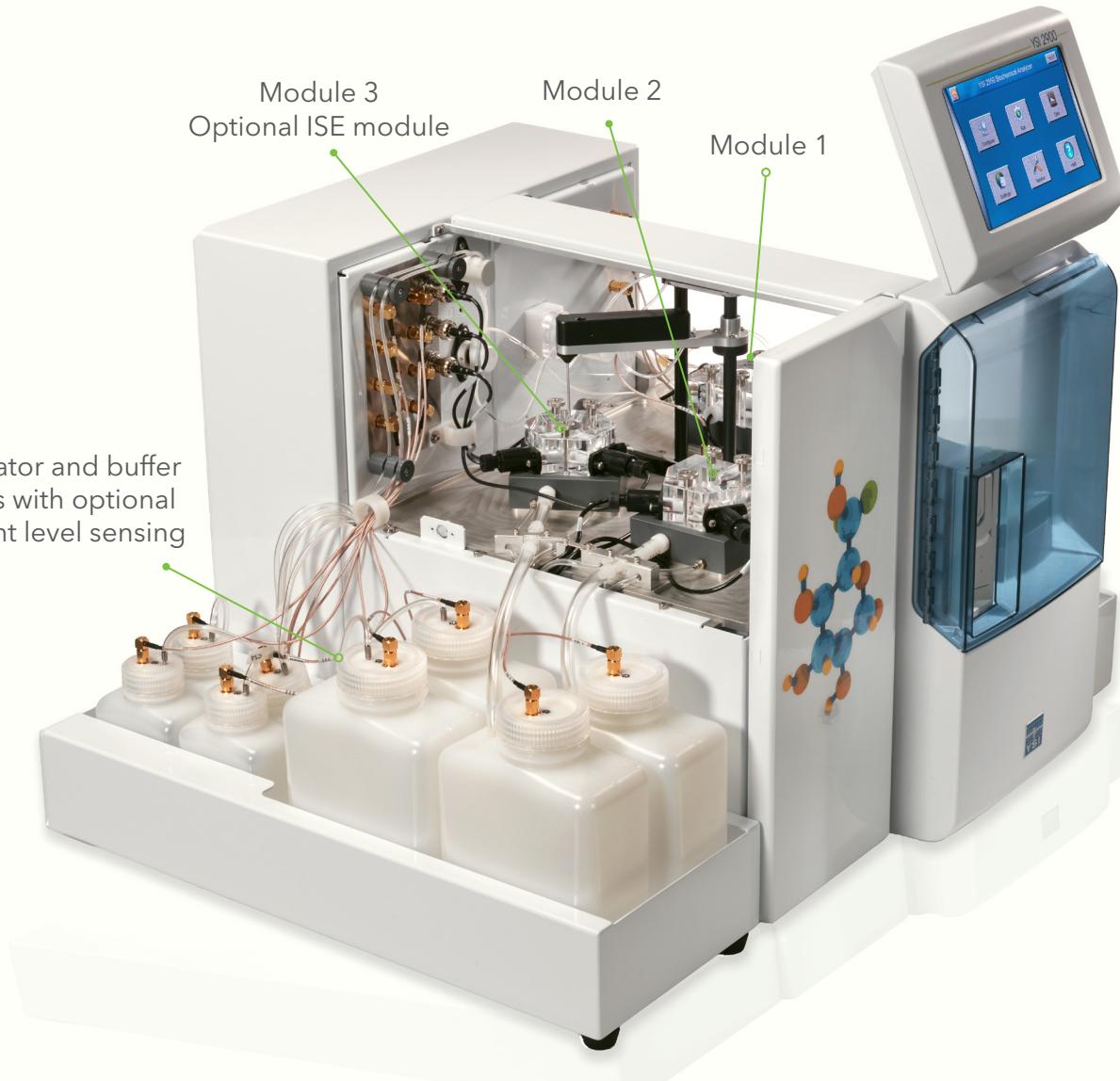
## Specifications

Aspirated Sample Volume	User-defined from 5 to 65 $\mu$ l
Analysis Time	60 seconds
Precision	Application specific, typical CV <2%
Linearity	+/- 5% Cal value to maximum
Dimensions	YSI 2900: 8.0" W x 20.5" D x 15.75" H 20.3 cm W x 52.1 cm D x 40.0 cm H YSI 2950: 14.0" W x 20.5" D x 15.75" H 35.6 cm W x 52.1 cm D x 40.0 cm H Bottle rack adds 9" (22.9 cm)
Working Environment	15 to 35° C ambient temperature, 10 to 90% relative humidity (noncondensing)
Power Requirements	110-120 VAC or 220-240 VAC, 50-60 Hz, 50 Watts nominal
Regulatory Compliance	CE, RoHS
Automation	Up to 96 samples
Weight	YSI 2900: 28 lbs./12.7 kg YSI 2950: 39 lbs./17.7 kg Each without bottle rack

# Modularity

## 2900 to 2950

The YSI 2900 Series is a flexible, modular platform with a range of configurations, options, and accessories to meet your lab needs. The base platform is the YSI 2900D. Also available, is the YSI 2950 platform, configurable with up to 3 sensor modules capable of measuring up to 6 chemistries. Module 3 may be configured for biosensor or ISE measurements.



Calibrator and buffer bottles with optional reagent level sensing

### Printer Option

If you need a hardcopy or printout of your results, an optional thermal printer is available. Of course, your data can also be retrieved electronically.

### Tube Holders

The 2900 series can accept a wide range of sample holders including any standard 96 well, 4, 8 and 24 place test tube holders and microcentrifuge tubes.

### Plate Sealers

Evaporation of volatile analytes like methanol or ethanol is not a worry - the sipper needle is capable of piercing and sampling from a range of films available to seal 96 well plates.

# Configurations & Accessories

Instrument	Modules	Chemistries	Field Upgrade?
2900 D	●	2	No*
2950 D-0	●	2	Yes
2950 D-1	●●	4	Yes
2950 D-2	●●●	6	Yes
2950 D-3	●●●●	6	Yes
2950 D-4	●●●●	4	Yes

\*2900D to 2950 platform upgraded at an authorized service center

- Biosensor Module
- ISE Module



## Features & Benefits

Features	Benefits
Icon-driven user interface with touchscreen	Easy to learn
Data download options	Save data on a memory stick, send it over the network or access it in a database anytime
Onboard training videos	Minimizes operator learning curve
Foreign language capability	Programmable in English, Chinese, French, Spanish, Portuguese, German, Korean, Italian
Proprietary Enzyme Electrode	Fast, accurate and analyte-specific results
Short, wide aspiration path with proprietary chamber measurement system	Highly resistant to clogging, handles the highest cell counts without pretreatment
Uses biological separation technology	No hazardous chromatography solvents to dispose of
Slim modular design	Easily expand analytes or chemistries, and multiple units use much less bench space
Connect with OPC, ethernet, USB, RS232 to computer or other instruments and systems	Ease and flexibility of connection
Results automatically saved in searchable database	Multiple convenient methods for data retrieval

## About YSI

Founded in 1948, YSI develops and manufactures scientific instruments, sensors and systems that serve a variety of scientific, environmental and industrial markets worldwide. YSI has a long history in the life sciences and bioanalytical markets, most notably with our introduction of the world's first commercial whole blood glucose analyzer in 1975. Today there are over 10,000 YSI instruments installed around the world, trusted in critical situations to provide the most accurate data in the shortest time.

## About Xylem

We're 12,500 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to  
[www.xyleminc.com](http://www.xyleminc.com)



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