

YSI 2900

Biochemistry Analyzer



Speed and Accuracy Made Simple

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
- Biofuel production and research
- Clinical blood chemistry
- Food and beverage processing

The YSI 2900 features 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

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

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

Ease of Use

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

Technical Innovations

Features	Benefits
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
Automate with multiple types of sample vials	Flexibility to suit current sampling protocols
Ergonomic modular profile	Multiple units use much less bench space

Flexibility

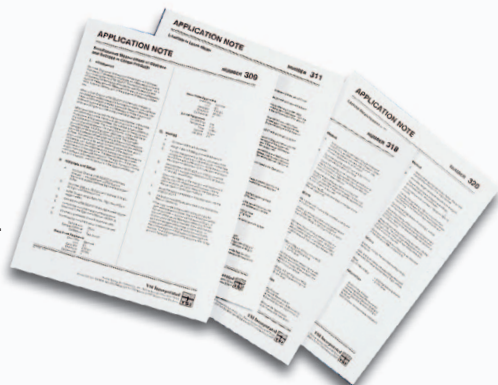
Features	Benefits
Slim modular design	Easily expand analytes or chemistries, and multiple units use much less bench space
Connect with OPC, ethernet, USB, RS232 to computer or other instruments and systems	Ease and flexibility of connection
CE, GLP, 21 CFR 11, RoHS compliant	Trusted and safe technology
Results automatically saved in searchable database	Multiple convenient methods for data retrieval

Flexible Automation



Applications

Over 30 application notes are available online for download.



BioProcessing Applications

Such as, 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 and a variety of chemicals.

Application	Sample Preparation	Sample Information	Typical Results	Analysis Time
Bioreactor glucose	None	13 µl sample size	CV < 2% at cal pt. Agreement with HPLC: $y = 0.903x - 0.087$ $R^2 = 0.996$	< 1 min.



Clinical Applications

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

Application	Sample Preparation	Sample Information	Typical Results	Typical Analysis Time
Whole blood/serum glucose	None	25 µl Up to 900 mg/dL (9000 mg/L, 50.0 mM) glucose	Whole blood CV < 2% at 75 mg/dL NIST Serum Controls 965A CV range of 0.5% - 1.1% for concentrations 34-292 mg/dL	< 1 min.

Additional chemistries are available in all of the above application areas in a wide range of sample matrices requiring minimal pretreatment, including: a variety of sugars, amino acids, alcohols and other chemicals in



Food and Beverage Applications

For example, 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.

Application	Sample Preparation	Sample Information	Typical Results	Analysis Time
Lactate/ethanol in ketchup	Diluted sample 1:1 with reagent water	25 µl	Lactate: CV = 1.76 - 2.25% at 72.5 - 72.8 ppm Ethanol: CV = 2.13% - 2.19% at 181.2 - 181.7 ppm	< 1 min.



Biofuels Applications

Such as, xylose and glucose in corn stover fermentation in bioethanol production. YSI analyzers provide a simple, fast alternative to HPLC for cellulosic biofuels research and production.

Application	Sample Preparation	Sample Information	Typical Results	Analysis Time
Glucose/xylose in corn stover fermentation	Samples > 30 g/L xylose were diluted	13 µl	Glucose correlation with HPLC: $y = 0.903x - 0.037$ $R^2 = 0.996$ Xylose: $y = 0.994x - 0.252$ $R^2 = 0.985$	< 1 min.

breakfast cereals; potatoes, baked goods, molasses, whole blood, spinal fluid, plasma, fermentation broth, cell culture media and more. Please visit www.ysilifesciences.com for more details.

Specifications

Aspirated Sample Volume	User-defined from 5 to 65 μ l
Analysis Time	60 seconds
Precision	Application specific, typical CV <2%
Linearity	+/- 5% Cal value to maximum
Dimensions	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
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	28 lbs./12.7 kg

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.

In your country:

YSI Incorporated Life Sciences

1725 Brannum Lane
Yellow Springs, Ohio 45387
USA
+1-800-659-8895
+1-937-767-7241
Fax: +1-937-767-8058
Email: support@ysi.com
www.ysilifesciences.com

YSI (UK) Ltd.

119 Fleet Road
Fleet, Hampshire, GU51 3PD
England
+44-1252 819844
Fax: +44-1252 819544
Email: UKinfo@ysi.com
www.ysiuk.com

YSI (Hong Kong) Limited

Room A, 11th Floor
Hoover Industrial Bldg.
26-38 Kwai Cheong Road
Kwai Hing New Territories
Hong Kong
+852 2891-8154
Fax: +852 2834-0034
Email: ysihk@ysi.com.hk

