



# FAST... LOW SAMPLE VOLUME... RELIABLE

Vi-CELL MetaFLEX ANALYZER



pH

pO<sub>2</sub>

pCO<sub>2</sub>

Glucose

Lactate

Electrolytes:

K<sup>+</sup> Na<sup>+</sup> Ca<sup>2+</sup> Cl<sup>-</sup>

CHARACTERIZED  
*by ingenuity.*

 **BECKMAN  
COULTER**  
*Life Sciences*



## R&D, QC and Manufacturing Applications

Ideal for micro to large scale cell culture applications, the Vi-CELL MetaFLEX is designed for rapid and accurate Bioanalyte analysis.

### Analyzer Performance

#### Measuring System

Sample volume (all parameters)	65 $\mu$ L
Measuring time (all parameters)	35 sec*
Cycle time	60 sec*
Throughput	44 samples / per hour*
Average uptime	23.5 hours / per day**

\* May vary during startup

\*\* May vary during startup; 2.5 min for system calibration is the longest activity

#### Sensor Cassette

In-use lifetime	30 days (or until max number of tests)
Shelf life	4 months
Storage temperature	2-8° C / 35-46° F
Automatic QC	Yes
Number of tests	300

#### Solution Pack

In-use lifetime	30 days (or until solution pack is empty)
Shelf life	6 months
Storage temperature	2-25° C / 35-77° F

### Fast

Results in 35 sec.

### Small Sample Volume

65 $\mu$ L sample volume

### Reliable

Ready for use when you need it, high uptime of 23 hours per day

### Quality Management

#### Automatic quality management system

- 3 dedicated QC solutions
- Automatic detection and correction of failures
- Continuous system and analysis checks
- Air detection
- Automatic lockout of parameter that fails QC
- Customizable QC schedule

Measured Parameters			
Type	Parameter	Units	Range of indication
pH	pH	pH scale	6.3 - 8.0
Cell Culture Gas	$p\text{CO}_2$	mmHg; Torr	5 - 250
		kPa	0.67 - 33.3
	$p\text{O}_2$	mmHg; Torr	0 - 803
		kPa	0 - 107
Electrolyte	cK <sup>+</sup>	mmol/L	0.5 - 25.0
		meq/L	0.5 - 25.0
	cNa <sup>+</sup>	mmol/L	7 - 350
		meq/L	7 - 350
	cCa <sup>2+</sup>	mmol/L	0.1 - 9.99
		meq/L	0.2 - 19.98
		mg/dL	0.4 - 40.04
	cCl <sup>-</sup>	mmol/L	7 - 350
meq/L		7 - 350	
Metabolite	cGlu	mmol/L	0 - 60
		mg/dL	0 - 1081
		g/L	0 - 10.81
	cLac	mmol/L	0 - 31
		meq/L	0 - 31
		mg/dL	0 - 279
		g/L	0 - 2.79

The Range of indication for a parameter is the range within which the analyzer is physically capable of measuring.

## Ordering Information

Part Number	Description
B93015	Vi-CELL MetaFLEX
B93029	Vi-CELL MetaFLEX Solution Pack
B93030	Vi-CELL MetaFLEX Sensor Cassette



## Regulatory Compliance

Establishing a strong partnership.

### 21 CFR Part 11

The Electronic Records and Electronic Signatures Rule (21 CFR Part 11) was established by the Food and Drug Administration (FDA) to define the requirements for submitting documentation in electronic form and the criteria for approved electronic signatures. Since analytical instrument systems such as the Vi-CELL MetaFLEX generate electronic records, these systems must facilitate compliance with the Electronic Records Rule. The Vi-CELL MetaFLEX features the following key system components to facilitate 21 CFR 11 compliance:

- Sample results log: 2000
- Activity log: 5000
- Calibration adjustment log: 1000
- Data secured by password protection
- Electronic signature capability
- Secure user sign-on
- 8 user level permissions
- Administrative configuration tools

## Hardware

### Computer specifications

- Processor Intel Celeron® M 600 MHz with 512K L2 Cache
- 1 GB RAM
- 2 GB SolidState storage
- 8.4" color TFT-LCD, resolution 800 × 600 SVGA Touch screen
- 4" thermal-sensitive printer

### Inlet

- Left/right hand operation
- Position for syringe as well as capillary and test tube
- Aspiration from capillary without adapter
- Aspiration time 5 seconds

### Interface

- Built-in barcode reader for operator & sampler ID  
Accepted codes: UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar and more
- Serial interface RS232 with power for external barcode reader
- 3 USB connections
- Optional external keyboard
- Optional external mouse
- Optional external barcode reader

## Software

### Software platform

- Windows® 7 Embedded
- Sybase® SQL Anywhere

### Data capacity

- Sample results log: 2000
- Activity log: 5000
- Calibration adjustment log: 1000
- Data secured by password protection
- 8 different user profiles
- Unlimited ID access verification
- Printer display options
- Auto print (on/off)
- Select derived parameters
- Select input variables
- Reference ranges with results

### Security and QA features

- Advanced planning of replacement and QC schedules
- Optional automatic QC at startup and after replacements
- Customizable QC and calibration schedule

### Communication

- HIS/LIS communication
- High-level protocols:
  - ASTM
  - HL7
  - POCT1-A
- Low-level serial protocols:
  - ASTM 1381-91
  - E1394-91
  - Serial RAW
- Low-level network protocols:
  - TCP/IP

## Additional Information

### Dimensions

- |          |       |          |
|----------|-------|----------|
| · Height | 45 cm | 17.7 in  |
| · Width  | 25 cm | 9.8 in   |
| · Depth  | 29 cm | 11.4 in  |
| · Weight | 11 kg | 24.4 lbs |

### Other

- |                         |   |
|-------------------------|---|
| · Startup time          | 1.5 hours average (less than 4 hours)   |
| · Operating environment | 15 - 32° C / 59 - 89.6° F, 20 - 80% RH  |
| · Altitude correction   | Up to 4000 m / 13,124 feet above sea level  |
| · Power                 | 100 - 240 V; 50 - 60 Hz; 250 VAC  |
| · Thermostat control    | Sensor cassette: 37 ± 0.15° C / 98.6 ± 32.27° F<br>Oximetry: 37 ± 0.30° C / 98.6 ± 32.54° F |

### CLASS 1 LASER PRODUCT

The Vi-CELL MetaFLEX ANALYZER and reagents are not intended or validated for use in the diagnosis of disease or other conditions. In Development.

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