

# Promethion Room Calorimetry System

Room calorimetry system fully integrated with failsafe room design

Sable System's Promethion whole room indirect calorimetry system synchronously records all measured parameters in a completely traceable manner. Key components of this system include the GA-3m2 triple gas O<sub>2</sub>, CO<sub>2</sub>, and H<sub>2</sub>O dual path analyzer with FG-250 flow generator, providing a compact and complete respirometry system.

## WORLDWIDE INSTALLATIONS

More than any other company, for example:

- University of Colorado Medical School
- Columbia University, NYC
- University of California Davis
- St. Luke's Hospital, NYC
- University of Hohenheim, Germany
- Christian Albrecht's University, Kiel Germany
- K'naan Diet, Israel
- Pennington Biomedical Research Center, Louisiana



## FEATURES

System analyzers designed specifically for metabolic measurement, as compared to repurposed industrial gas analyzers used by other systems

Versatile system can quickly be modified for use with mask or canopy configurations for specialized measurements

Highly integrated, temperature-stabilized design provides robust and reliable operation

Pull mode design simplifies converting existing room into a calorimetry chamber

Direct water vapor measurement and compensation using Dalton's Law – no failure-prone water vapor scrubbers

Monitors input and output air streams for precise gas analysis

Background baselining provides uninterrupted data acquisition

System validation can be performed using either methanol, ethanol, butane, propane-burn or nitrogen dilution

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Indirect calorimetry monitoring of  $VO_2$ ,  $VCO_2$  and RER for 20 hours using Sable Promethion room calorimetry system. Subject rode stationary bike for 30 minutes at hours 4 and 5. Gray shading indicates lights out phase.



Resting metabolic rate



Active metabolic rate

## By Scientists, for Scientists

Sable room calorimetry systems are designed by our team of published scientific experts in metabolic measurement. Sable founder, John R. Lighton, PhD, wrote the book on metabolic measurement: *Measuring Metabolic Rates - A Manual for Scientists*. Our support team is comprised of PhD-level specialists to support you from initial system configuration, through installation, training and ongoing use.

## Optional Components



### Canopy with Veil

for metabolic measurement during rest in non-whole room environment



### Two-Way Non-Rebreathing Mask

for metabolic measurement during exercise in non-whole room environment



### ESA Environmental Sensor Array

provides real-time measurements of humidity, barometric pressure, temperature, light, movement, and sound within the room

## SPECIFICATIONS

<b>O<sub>2</sub></b>	
<b>Range</b>	0-100% O <sub>2</sub>
<b>Accuracy</b>	0.1% of reading typical over range of 2-100%
<b>Sensor Type</b>	Fuel cell
<b>Sensor Life</b>	Up to 3 years in normoxia, typical; user replaceable
<b>CO<sub>2</sub></b>	
<b>Range</b>	0-5% CO <sub>2</sub>
<b>Accuracy</b>	1% of reading typical over range of 0-5%
<b>Sensor Type</b>	Dual wavelength, non-dispersive infra-red
<b>MAIN FLOW</b>	
<b>Range</b>	FG-250: 50-250 SLPM



Sable Systems International  
3840 N. Commerce Street  
North Las Vegas, NV 89032, USA  
TELEPHONE:  
US: +1 800 330 0465 / + 1 702 269 4445  
EMAIL: sales@sablesys.com

[www.sablesys.com](http://www.sablesys.com)



Sable Systems Europe GmbH  
Ostendstr. 25  
D-12459 Berlin, Germany  
TELEPHONE: +49 30 5304 1002  
FAX: +49 30 5304 1003