Respirometry Course - Las Vegas, Nevada

High-Throughput Respirometry for Metabolic Screening:

The respirometry course - held in Las Vegas, NV - teaches participants how to use indirect calorimetry in metabolic screening. We will apply techniques for measuring real-time O_2 consumption, CO_2 production and water vapor loss for laboratory rodents. Measurement systems also include food & water uptake, body mass monitoring, wheel running and voluntary activity. Data analysis is a significant focus.

Hands On: The course leads participants through all steps of setting up apparatus, configuring data acquisition, acquiring data, and analyzing data with the Promethion metabolic screening system.

Cost: $2,495 per participant. Included in this fee are all laboratory costs and course materials.

Course Materials: All coursework materials are provided including copies of all presentations.

Instructor: The course is taught by Dr. John Lighton and Sable Systems International staff. Dr. Lighton - the president of Sable Systems - is a world expert on respirometry with over 80 peer-reviewed publications on respirometry in scientific literature. Dr. Lighton is also the author of the preeminent work on respirometry: *"Measuring Metabolic Rates: A Manual for Scientists"*, available from Oxford University Press.

Registration: For questions, more information, or to register, contact Sable Systems by e-mail to sales@sablesys.com or by phone at 702-269-4445 in the US or +49 30 53054 1002 in the EU.

Metabolic Screening Course - Schedule

Day 1:

- **Welcome and Orientation:**
  Introduction to workspace and equipment.

- **Classroom Lectures:**
  Theory of respirometry. Fundamentals of gas analysis, data acquisition and analysis. Instruction on integrating instrumentation and an acquisition system for maximum productivity.

- **Introduction to Data Acquisition:**
  Initial work with software and instrumentation begins toward the end of the day.

Day 2:

- **Additional Lecture:**
  Review of Day 1 lectures and additional information about analyzer function.

- **System Setup:**
  Complete setup of a respirometry system. Multiple stations will be set up throughout the course to ensure hands on experience for all participants.

- **Data Acquisition:**
  Using Metascreen software, setup of the acquisition system to monitor all desired parameters. Initial data acquisition from one open-flow respirometry systems.

Day 3:

- **Data Acquisition:**
  Setting up additional systems with the assistance of SSI staff.

- **Data Analysis:**
  Initial work with Expedata data analysis tools begins today.

- **New Techniques:**
  Along with the initial examination of data, validation methods for high throughput respirometry are discussed and demonstrated.

Day 4 & 5:

- **Data Analysis:**
  Using Expedata, analysis of acquired data will be discussed in detail. Methods for automating and repeating data analysis will be covered.

- **Advanced Analysis and Macros:**
  New techniques in data analysis, particularly techniques for the analysis of behavioral data will be covered.

- **Future Considerations:**
  Group discussion on what the data tells us - and what it doesn't. Comparing and contrasting different approaches.

- **Wrap-Up**