SABLE ENABLES

Measuring Metabolism: The energetic currency of life and health-span

- **Accelerated translational phenotyping**
- **Precise calorimetry and food/water intake**
- **High temporal resolution for circadian studies**
- **Instrumentation scales from *Drosophila* to human**
- **High throughput and workflow efficiency**
- **Continuous and multiplexed configurations**
- **GLP-compliant solutions, animal safety focus**
- **Integrated behavioral monitoring including Ethogram capability**

The subtle effects that distinguish signal from noise in biomedical research require metabolic and behavioral measurement of the whole organism with high resolution, repeatability and rapid throughput.

Sable Systems is the proven technology leader in the field of pre-clinical metabolic and neurological profiling. Our instruments are designed and developed "by scientists, for scientists" to accelerate discovery. But, data quality requires more than simply speed and reproducible numbers. Relevant progress is achieved by competent experimental design, rigorous methodology and precise instrumentation. Sable's phenotyping systems are designed for workflow efficiency and data integrity with results that can be validated against standards.

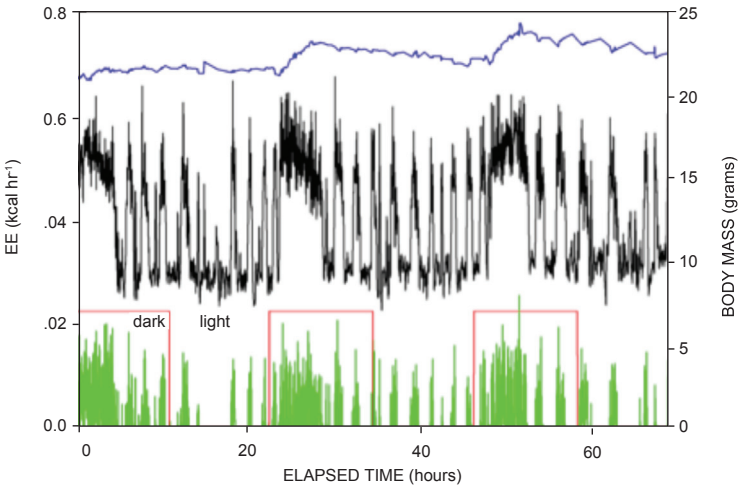
Sable's service provides user training and authoritative expertise in metabolic measurement methodologies. From systems to support, you can trust your Sable data.

Aging, Health and Lifespan

Life is measured out in energy units – as every protein or biologic has a cost or provides a benefit. Metabolic studies are critical in correlating the currency of life with ingestive intake and behavior, sleep patterns, blood pressure, heart rate, frailty, progressive disease, the efficacy of medications or therapies or nutritional re-calibration.

SABLE SYSTEMS INTERNATIONAL

High Definition Pre-Clinical Research



Promethion's high resolution activity detection arrays capture activity with precision (green trace, bottom of graph). Body mass (blue) is shown at the top of the graph. Energy Expenditure of the 22 g C57BL/6J male mouse is the black trace. You can see that the EE drops to a low stable level when the mouse is inactive. The small oscillations visible in the EE during inactivity are real and are not detectable by lower resolution systems. With each bout of activity you can clearly see EE rising to a relatively stable level and falling back down to resting levels after activity ceases. Light / dark cycle is shown in red.

Sable Solutions

Promethion High-Definition Respirometry Phenotyping Systems for Mice or Rats

The Promethion high-definition continuous and multiplexed systems combine ultra-high resolution with the depth-of-field array of synchronously acquired measurements that include energy expenditure, RQ, VO_2, VCO_2 and activity. These systems feature a richer and higher-resolution metabolic data stream, while retaining secure GLP compliant raw data storage and analytical flexibility.

Drosophila Metabolic Screening System

Depending on the method used, Sable Drosophila metabolic screening systems are capable of measuring the metabolic rates of small groups of Drosophila – or even individual Drosophila – in real time. This unique capability provides a powerful tool for biomedical and basic research requiring metabolic data.

Whole Room Calorimetry

Whole room calorimetry provides data on the research subject's energy expenditure and relative utilization of metabolic substrates such as fats or carbohydrates. Compact and complete, the Promethion High-Definition Room Calorimetry System includes the GA-3m2 triple gas O_2, CO_2, and H_2O dual path analyzer with FG-250 flow generator to synchronously record precise metabolic rate, RER, and VO_2.

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