



BreathTracker SC

BREATH HYDROGEN AND METHANE ANALYSIS
WITH SAMPLE CORRECTION FEATURE

The ability to analyze H₂, CH₄ and CO₂ provides physicians with necessary information to confidently diagnose carbohydrate malabsorptions and/or small intestinal bacterial overgrowth (SIBO).

The BreathTracker SC analyzes trace-gas concentrations of hydrogen (H₂), methane (CH₄) and carbon dioxide (CO₂) in a patient's alveolar breath sample using solid-state sensors. The results are measured and displayed in parts per million (ppm) for H₂ and CH₄ and percent (%) for CO₂. The BreathTracker SC also utilizes an added feature for sample contamination detection and correction based on CO₂ measured in patient samples.

As with all breath-tests, you may encounter sample contamination from various sources such as: unsupervised or improper collection, patients that are unable to follow directions, variations in ventilation (ie: patients taking a large inspiration in the early samples of a test and more normal breaths later in the test). The ability to detect and correct for these factors helps smooth out the sample inconsistencies resulting in more realistic patterns of gas production.

CO₂ is the most reliable "normalizing" component in the sample because it ordinarily has the most consistent alveolar composition of any gas in the sample; the body physiologically regulates the alveolar CO₂-pressure (PACO₂) around 40mmHg (torr).

Therefore, the CO₂ correction factor is based on the concept that CO₂ is present in the alveolar (lung) air at a virtually constant concentration while CO₂ in room air is virtually zero (in fact it is present, but in extremely trace concentrations). If an alveolar air sample is accidentally contaminated (mixed) with room air, the CO₂ concentration in the sample will be reduced, as will other gases in the sample.

Detecting this dilution, and by knowing the degree to which the CO₂ is diluted, is indicative of improper sample collection or handling and makes it possible to apply a correction to the analysis of each trace gas, allowing the instrument to estimate the "true alveolar" concentration of these trace gases, unless the sample is completely invalid.

Studies have indicated the importance of measuring H₂ and CH₄, as approximately 35% of healthy adult subjects are methane producers. These tests were for carbohydrate malabsorption and small intestinal bacterial overgrowth (SIBO). (*Reference: Clin Gastroenterolo Hepatol 2006 Feb;4(2):12390*)

Since the BreathTracker SC utilizes CO₂ as an indicator for sample dilution and contamination detection, physicians have the ability to send patients home to collect their samples unsupervised which allows the physician and technicians to see more patients and analyze the breath samples at a later time.†

Catalog Numbers:

QT05000-M - BreathTracker Digital SC, 120V/60Hz
QT05001-M - BreathTracker Digital SC, 230-240V/50Hz

† Requires purchase of SamplXtractor System and EasySampler Kit

Specifications:

Resolution: 1 ppm H₂/CH₄; 2% CO₂
Accuracy: ± 2-3 ppm or 5% of full scale for H₂/CH₄; ± 1% CO₂
Linear Range: 2-150 ppm H₂; 2-75ppm CH₄; 0.1-7% CO₂