

# Breath Monitors

Hydrogenius® & Gastrogenius®

## GASTROENTEROLOGY

Hydrogen and methane breath monitoring to help detect gastrointestinal disorders



**Hydrogenius®**  
Compact breath monitor

**Gastrogenius®**  
Desktop breath monitor

# Hydrogenius®

Compact, hand-held  
hydrogen breath monitor

Hydrogenius® is a breath monitor used for Hydrogen Breath Testing (HBT) and measures hydrogen (H<sub>2</sub>) levels in expired breath. It can be used to detect gastrointestinal disorders like food malabsorption, sugar intolerances and small intestinal bacterial overgrowth (SIBO) in a non-invasive, patient friendly manner.

Hydrogenius® is a user-friendly, hand-held monitor that allows automatic testing for up to 10 patients in one session. It can be used without any start up time, gives quick results and has built-in suggested testing protocols and alarms for increased ease of use.

## HYDROGENIUS® HIGHLIGHTS

- Easy to use interface
- No start up time and quick results
- Multiple patient testing: measure up to 10 patients at the same time
- Large touch screen
- Hydrochart™ software enables easy storage, data analysis, and report printing
- Built-in suggested test protocols and alarms
- Simple calibration required every 3 months
- Maintenance reminders



Free Hydrochart™ software is included with both Hydrogenius® and Gastrogenius®.

# Gastrogenius®

Combined methane, hydrogen,  
and oxygen measurement

The Gastrogenius® is a portable desktop monitor which measures hydrogen (H<sub>2</sub>), methane (CH<sub>4</sub>), and oxygen (O<sub>2</sub>) levels in expired breath samples. It helps health professionals to accurately detect gastrointestinal disorders like food malabsorption, sugar intolerances, and small intestinal bacterial overgrowth (SIBO).

A group of patients does not produce hydrogen and would not be diagnosed by Hydrogen Breath Testing (HBT) alone. By performing Hydrogen and Methane Breath Testing (HMBT) using Gastrogenius®, misdiagnosis can be prevented for patients who only produce methane, or who produce a combination of both hydrogen and methane. The additional O<sub>2</sub> reading, in combination with a real-time traffic light dial and smiley face system, helps motivate patients to provide an end-tidal sample.

The Gastrogenius® provides automatic O<sub>2</sub> correction for more accurate results.

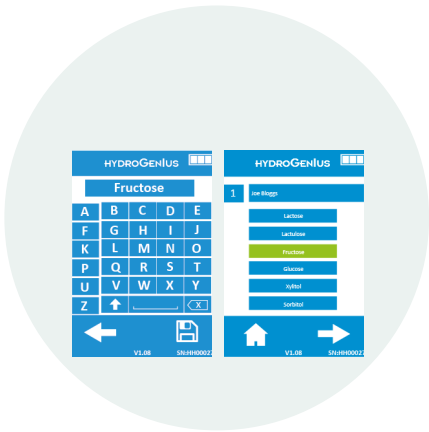


## GASTROGENIUS® HIGHLIGHTS

- Hydrogen and Methane Breath Testing (HMBT) with quick results
- Breath bag option makes it possible to test multiple patients at the same time
- Breath bag option allows samples to be taken in a different room or at a different location
- Automatic O<sub>2</sub> correction for more accurate results
- Real-time traffic light dial and smiley face system to motivate patients
- Hydrochart™ software enables easy storage, data analysis, and report printing
- Fast warm up time of 30 minutes
- Simple calibration only required monthly
- Maintenance reminders



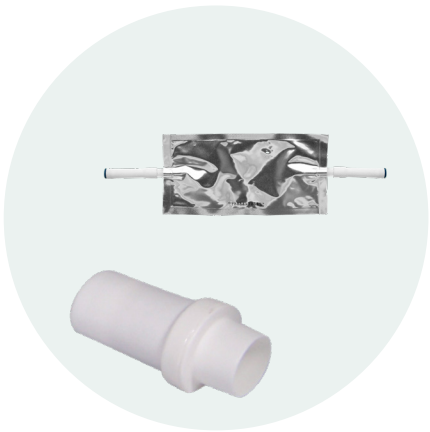
Multiple patient testing



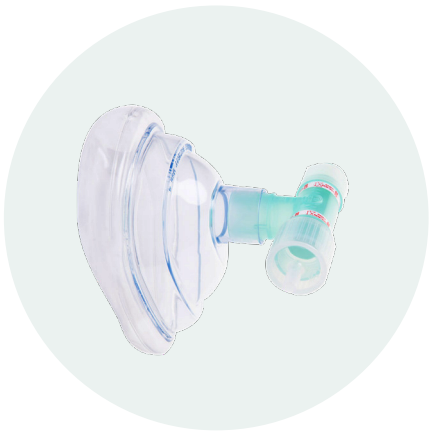
Create and save patient details  
Built-in testing protocol



D-Piece



Direct mouthpiece  
Breath bag



Facemask



Easy interpretation

# Technical specifications

Hydrogenius®	
Concentration range	0 - 500 ppm
Display	Full colour touchscreen
Detection principle	Electrochemical sensor
Repeatability	< 5%
Accuracy	± 3ppm/10% – whichever is greater*
Power	3 x AA (LR6 or equivalent) – up to 1000 minutes, 1 x CR2032 Lithium coin cell
T <sub>90</sub> response time	< 40 seconds
Operating temperature	15 - 35°C
Storage/transport temperature	0 - 50°C
Operating/storage/transport/pressure	Atmospheric ±10%
Operating humidity	15 - 90% non-condensing
Storage/transport humidity	0 - 95%
Sensor operating life	2 years
Sensor sensitivity	1ppm
Sensor drift	< 2% per month
Dimensions	Approx. 37 x 77 x 140mm
Weight	Approx. 215g (including batteries)
Materials	Case: polycarbonate/ABS blend Anti-microbial additive D-piece™: polypropylene SteriBreath™ Eco: paper OneBreath™ Mouthpiece: polypropylene
CO cross reference	< 4%

\*Readings of >200ppm at temperatures between 26-35°C can decrease accuracy to 15%

Gastrogenius®	
Concentration range	0-200 ppm (H & CH <sub>2</sub> )   14-23% (O <sub>2</sub> )
Power input	230V/100V, 50Hz – 60 Hz, 0.5 – 1.0 A
Fuse	T 3.15 AH
Start-up time	≤ 2 minutes
Calibration frequency	Every 4 weeks
Display	Full colour touchscreen

Gastrogenius® continued	
Detection principle	Electrochemical sensor (O <sub>2</sub> & H <sub>2</sub> ) Laser (CH <sub>4</sub> )
Detection principle	Electrochemical sensor
Accuracy – CH <sub>4</sub> & H <sub>2</sub>	
Resolution	1 ppm
Accuracy	± 10% of reading
Repeatability	< 5% difference on consecutive readings
Carbon monoxide cross-sensitivity (H <sub>2</sub> only)	< 4%
Accuracy – O <sub>2</sub>	
Resolution	0.1%
Accuracy	± 10% of reading
Repeatability	< 5% difference on consecutive readings
Temperature range	
Operating	15 - 35°C (59° - 95°F)
Storage	0 - 40°C (32° - 104°F)
Pressure range	
Operating	912 - 1114 mbar (Atmospheric ±10%)
Storage	912 - 1114 mbar (Atmospheric ±10%)
Humidity range	
Operating	30 - 75% RH (non-condensing)
Storage	15 - 90% RH (non-condensing)
Sensor operating life	5 years (CH <sub>4</sub> ), 2 years (H <sub>2</sub> & O <sub>2</sub> )
Dimensions	Approx. 474 x 310 x 135 mm
Weight	Approx. 8.5kg
Monitor construction	Case: aluminum
Classification	Class I ME equipment: (externally powered), Type BF applied part, Method of sterilization (not suitable for sterilization), Not suitable for use in an oxygen rich environment, Intended for continuous use
Response time	≤45 seconds
Warranty	2 years*

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