Gastro+ Gastrolyzer®

bedfont

Breath hydrogen (H_2) monitor

The Gastro+ Gastrolyzer is used to measure hydrogen levels in expired breath. It is intended for multi-patient use by healthcare professionals in a clinical environment to aid in the detection of gastrointestinal disorders.

scientific contributions to health

www.covita.net | (800) 707-5751

covita™ tools for treatment professionals | bedfont

Gastro+ Gastrolyzer®

Hydrogen and gastrointestinal disorders

Hydrogen (H_2) is generated in the intestinal lumen by bacterial action on carbohydrates in the large or small intestine. This resultant H_2 diffuses into the bloodstream and then to the alveoli, after which it can be detected in expiratory air. Levitt (1969)[1] demonstrated the correlation between intestinal lumen H_2 production and H_2 excretion in expiratory air. Thus, accurate measurement of H_2 in parts per million (ppm) in expiratory air reveals abnormal breakdown and/or malabsorption of carbohydrates.

[1] Levitt, M.D. (1969); Production and excretion of hydrogen gas in man. New Engl. J. Med. 281:122-127

Breath hydrogen monitor

The Gastro+ Gastrolyzer is used to measure hydrogen levels in expired breath to reveal abnormal breakdown and/or malabsorption of carbohydrates as well as other gastrointestinal disorders.

The monitor is easy to use and interpret, with a colour touch-screen which shows instant breath hydrogen results which can be viewed in both a table or graphical format.

To obtain a breath sample, either a mouthpiece or facemasks for adults or paediatrics can be attached to the monitor. To ensure infection control is maintained the mouthpiece and facemask should be changed after every breath test.

Benefits

- Allows clinicians the opportunity to offer a low-cost, quick and reliable test to people suffering gastrointestinal symptoms
- Instant results. No need to send laboratory samples as result is shown instantly in ppm on the colour screen
- Results are available in both tabular and graphical format making them easy to read and interpret
- Quick warm up time ensuring no time is wasted waiting to commence test in clinic
- Surgically non-invasive monitor ideal for use with paediatrics or adults
- Easy to calibrate by non-technical personnel with pictorial guide on monitor

Applications

- Lactose malabsorption
- Lactose intolerance
- Carbohydrate malabsorption and breakdown deficiency
- Bacterial overgrowth
- Sucrose malabsorption
- Fructose malabsorption
- Sorbitol malabsorption
- Intestinal transit time

www.covita.net - info@covita.net - tel (800)707-5751 - fax (800)721-2377

Calibration and servicing

The Gastro+ requires calibrating at least every three months. The Gastro+ will give a reminder when calibration is due during start-up of the monitor. Calibration is easy to achieve by non-technical staff with coVita's own calibration kit.

The Gastro+ must be calibrated with coVita 100ppm hydrogen in air gas. This is available direct from coVita in a 34 liter canister for approximately 10 calibrations
A range of annual service packages are also available.

Technical Specification

Concentration Range	0-500ppm hydrogen (H_2)
Display	Colour LCD with 1ppm increments
Detection principle	Electrochemical sensor
Accuracy (repeatability of reading)	± 5%
Carbon monoxide cross-sensitivity	<2%
Batteries	3xAA (LR6 or equivalent) alkaline batteries
Response time	Typically <45 seconds
Operating temperature range	0-40°c (Storage 0-50°C)
Operating humidity	10-90% (Storage 0-95%) non-condensing
Warranty	2 years monitor, 1 year sensor
Sensor sensitivity	1ppm
Dimensions	Approx 44 x 77 x 138mm
Weight	Approx 250g including batteries
Construction	Case - Polycarbonate/ABS blend with elastomeric overmould D-piece - Polypropylene

scientific contributions to health

Consumables

Bedfont Scientific supply a range of consumables to complement your Gastro+ Gastrolyzer. It is recommended that you use Bedfont consumables for optimum performance from your monitor.

1 SteriBreath Mouthpieces

These mouthpieces are individually wrapped for convenience, ease of handling and greater infection control. The patented design allows the mouthpiece to be quickly inserted and removed onto the D-piece. Available in boxes of 250 individually sealed mouthpieces.

2 D-pieces

The D-piece incorporates a one-way valve to prevent air being drawn back from the monitor. The breath then passes through an infection control filter, proven to remove and trap >99.9% of airborne bacteria[2]. This system further reduces the risks of cross infection and protects the instrument from contamination.

[2] Health Protection Agency (HPA), Porton Down, Report No 43/06, pp.10-11

3 Facemasks

Single-use infant, child and adult facemasks for breath sampling with paediatrics and unconscious patients, supplied individually wrapped.

4 Y-piece

Single-use breath sampling system for use with facemasks.

Instrument Cleansing Wipes

Bedfont provide instrument cleansing wipes for the instrument and external D-piece surfaces. Cleaning products containing alcohol should never be used, as they could affect the accuracy of the instrument. It is recommended that wipes are used for one surface only.

Bedfont Scientific Ltd

ISO 9001:2000
Cert No. FM 31664
ISO 13485:2003
Cert No. MD 502905

Distributed by

covita™ tools for treatment professionals

bedfont

Issue 2 - September 2008, Part No: MKT151