# Bedfont Scientific Ltd – Scientific contributions to health.

## CASE STUDY

# GastroCH$_4$ECK™ Gastrolyzer®

***Helping Detect Gastro-Intestinal Disorders***

### About Bedfont Scientific

- www.bedfont.com
- Breath and gas analysis equipment
- Nearly 40 years of innovation
- A wide range of products with different applications

### Goals

- To improve the awareness of breath testing and analysis
- Bring originally expensive testing equipment to primary and secondary public and private health services
- Provide comprehensive information and guidance for the use of breath testing equipment

### Approach

- Completing clinical studies and trials with products to show efficacy
- Creating case studies with products to provide financial data
- Build brand and product awareness for both potential patients and customers

### Results

- More common wide spread use of breath testing
- Provide simple, easy, patient friendly non-invasive tests
- Real time test results for quick treatment

### The Client

The London Bridge Hospital's dietetic service consists of five HCPC registered dietitians who provide support for a wide range of dietary disorders. There is a dedicated gastro – department, which specialises on helping individuals manage gut related conditions. . The aim of this service is to ensure that referred patient's nutritional status and symptoms are monitored, maintained and improved wherever possible.


*The GastroCH$_4$ECK Gastrolyzer is a hydrogen and methane breath monitor. The GastroCH$_4$ECK can help improve a dietitian's service.*

### The Challenges

Previously, if a gastroenterologist consultant needed food malabsorption testing for their patient prior to dietetic consultation they would need to refer their patient to another hospital to provide the tests. The patient would then have to be redirected back to the London Bridge Hospital dietetic service for dietary advice. This proved to be time consuming and not cost effective.

### Bedfont's Response

The GastroCH$_4$ECK is a desk top monitor that measures accurate and real-time combined hydrogen, methane and oxygen exhaled on a patient's breath. The monitor has two testing options, direct mouthpiece and breath bag sample. The breath bags provide the option for the patient to do the test at home (the sample can last for up to 3 weeks in the bag). The mouthpieces have a built in moisture removal and infection control filter and can be used by that patient for the duration of the test, after which they need to

be discarded. There is very little price difference between the mouthpiece or breath bags, cost per patient with the mouthpieces is £3.18 and cost per patient with the breath bag is £3.40. Clinical papers have reported that there are up to 35% of people who are non-hydrogen producers, but produce methane instead. A test using the Gastro$CH_4$ECK will pick up on this proportion of people as it will measure both gases. The Gastro$CH_4$ECK also measures oxygen which is used to correct any samples that may have been contaminated with the ambient air to ensure accurate readings every time.

The benefits for the customer include the relatively low cost of the monitor, non-invasive testing for patients and provided with real-time results. The Gastro$CH_4$ECK is intended for multi-patient use by healthcare professionals in a clinical environment. The cost per patients is relatively low, about £4 per test, this allows for broad reach and high volume of patient testing. The Gastro$CH_4$ECK creates income generation. Due to reimbursement tariffs, after an average of 20 tests per month (Private) or 29 (NHS) over a 12 month period the monitor will pay for itself and then any test after that will be profit. This makes it a well suited monitor to a healthcare environment.

**Results**

The London Bridge Hospital has just completed their first year using hydrogen and methane breath testing with the Gastro$CH_4$ECK Gastrolyzer. The gastroenterology dietetic service uses the monitor to complete carbohydrate malabsorption tests including lactose and fructose testing. They also provide the glucose and lactulose load tests to measure oro-caecal transit times and to help identify the presence of small intestinal bacteria overgrowth (SIBO) providing support for functional gut disorders.

A hydrogen and methane breath test provided by the Gastro$CH_4$ECK Gastrolyzer

Louise Gankerseer-Hodgson, Head of Dietetics at London Bridge Hospital, said, “Hydrogen and methane measures are useful, helping to contribute to our patient’s assessments and therefore tailored therapies. These outcomes also allow the team to consider and add to current clinical reviews. Thereby helping to develop our understanding of our patient groups.”

A trained member of the dietetic team helps the patient take a test with the Gastro$CH_4$ECK Gastrolyzer and the results are used as part of the dietitians assessment with their patient, or sent directly back to the referring consultant for review. The hospital offers tests within the dietetic department and via a home test kit using breath bags, which are useful for when patients cannot return to the hospital for additional visits. The dietetic department commend the Gastro$CH_4$ECK as, ‘a very neat piece of kit, that is portable and of a good size’.

In the words of a London Bridge Hospital patient, who used the dietetic service and had undertaken tests with the Gastro$CH_4$ECK, said, “I found the Hydrogen Breath Testing procedure very useful. The machine and home-kit were efficient equipment where I was able to measure what food groups had been affecting my day-to-day life. I found it a very straightforward test where I held my breath and then took a long breath in the required equipment. The regular breaks allowed me to drink water and rest so I was ready for the next test. The testing procedure ran very smoothly.” Future plans for the dietetic service are to build a larger patient base and buy another Gastro$CH_4$ECK Gastrolyzer.

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