



**kibion**

**NEW!**

# **KIBION® DYNAMIC**

## **<sup>13</sup>C BREATH TEST ANALYSER**

Rapid and reliable diagnosis of *Helicobacter pylori* infections



# Help prevent chronic *Helicobacter pylori* infections and the development of gastric cancer

More than half of the world's population harbour the stomach bacterium *H. pylori* in their upper gastrointestinal tract. Most of these individuals show no signs of symptoms or distress but in others, *H. pylori* is recognised as the main etiological factor for chronic gastritis, peptic ulcers and possibly gastric malignancies. All in all, around 25% of those with *H. pylori* will experience significant health problems.

Accurate early diagnosis followed by appropriate treatment with antibiotics can nevertheless alleviate much suffering and even prevent death. Moreover, several new therapeutic options are currently under development, further underlining the need for better diagnostic solutions.

## A modern, fully-flexible instrument

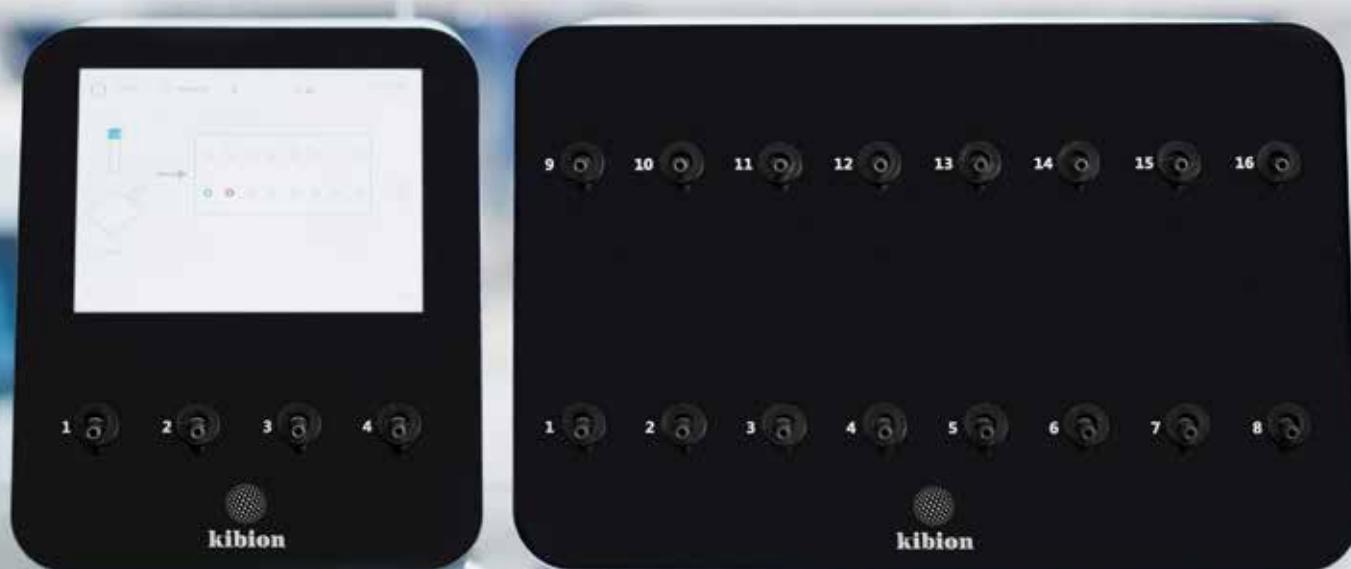
Kibion® Dynamic is a much improved technology platform for rapidly and reliably diagnosing *H. pylori* infections faster and from smaller sample volumes. Based on the gold standard Urea Breath Test (UBT) and the fast-dissolving Diabact® UBT tablet, it represents a modern, fully-flexible instrument that meets all of today's requirements for accuracy, ease-of-use and the highest level of connectivity.

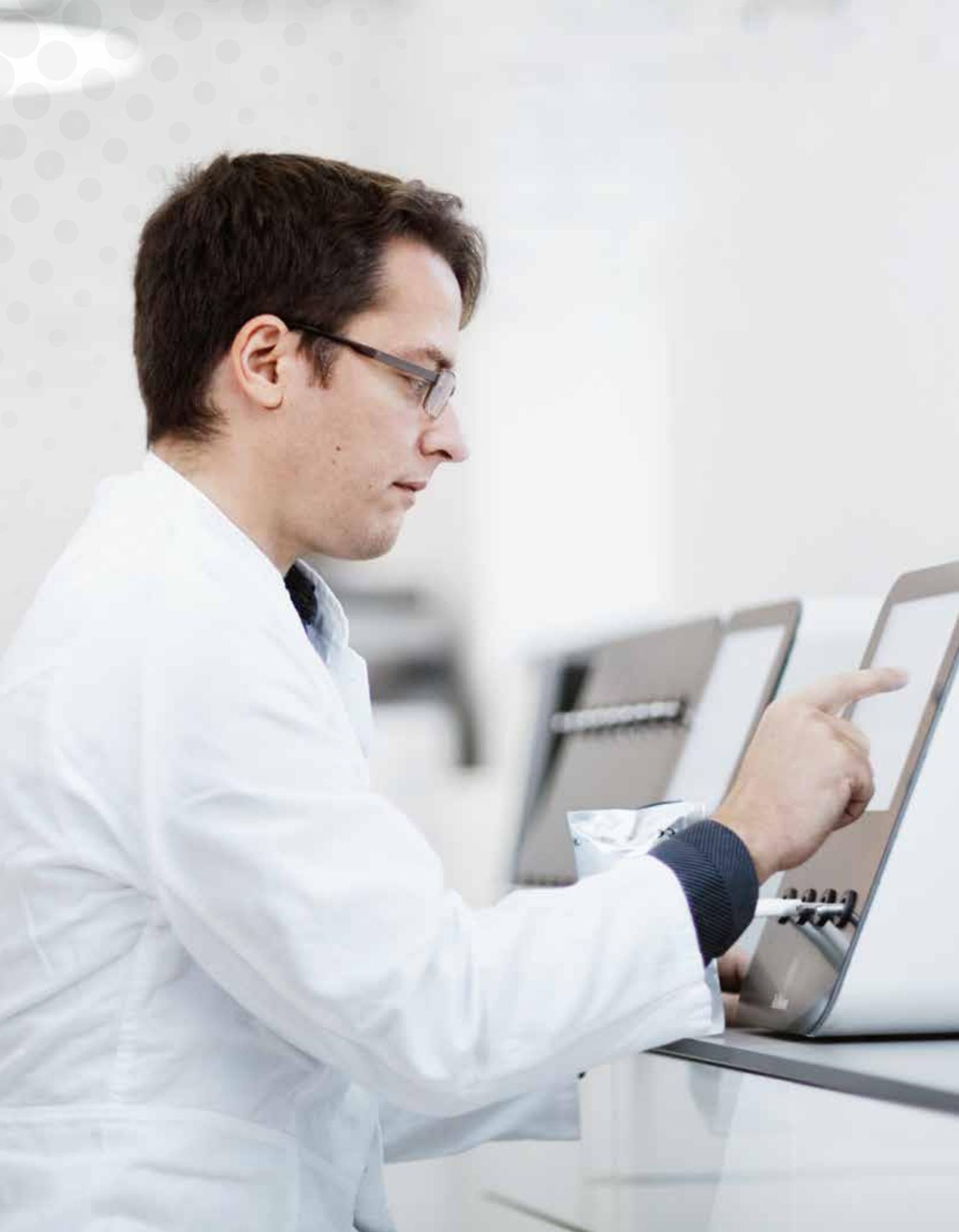
## Other metabolic applications

Kibion® Dynamic breath test analyser may also be used to gain clinical information regarding a number of other metabolic disorders, primarily affecting the pancreas and liver as well as gastric emptying. Please contact your relevant medical product agency for more information and associated responsibilities.

Developed by the world-leader in detecting *H. pylori* infection.

Kibion® Dynamic is a simple yet elegant breath test analyser.





# **Detecting *H. pylori* is this simple**

Kibion® Dynamic offers laboratories, hospitals and doctors' offices speed plus simplicity. No PC is required. A modern touch-screen interface gives access to all key functions and pictograms guide users step-by-step, ensuring intuitive, distraction-free workflows. From measurement to result takes no more than five minutes.

## **Calibrate the instrument**

Daily calibration requires a normal breath sample. Selecting Calibration in the main menu displays a pictogram to guide users. Exhale into the breath bag, connect it to a sample port and press the arrow button. Calibration runs automatically and takes just two minutes.

## **Analyse patient samples**

Selecting Analysis opens a screen to enter test identifier data, either via the keyboard or a barcode scanner. The next screen allows patient specific data to be entered for the internal database. All patient specific fields are optional. On-screen set-up assistance ensures accurate data input and activation. Once again, a pictogram shows users exactly where to connect the sample.

Pressing the arrow button starts the analysis while selecting Status displays its progress. Approximately two minutes is all that is required. Additional samples can be initiated during this time.

## **View the results**

Selecting Result in the main menu opens the results database. All results can be searched or filtered. Selecting a specific result opens a detailed view as a graph or list. Results can be printed, filed to a journal, exported to a computer or downloaded to a USB stick.

## Breathtaking form and function German quality and reliability

Kibion® Dynamic began life as a blank sheet of paper in the capable hands of an internationally recognised industrial design agency. To this we added our own specialist know-how plus the invaluable input of leading gastrointestinal clinicians and testing laboratories in Europe and the Middle East. We simply asked them what functions would add true value to their everyday use of breath test analysers. Then we assembled the final product at our own manufacturing facility in Germany.

The result speaks for itself. Comprising the compact stand-alone Kibion® Dynamic base unit plus the optional high-capacity pro extension unit, you won't find a simpler or more elegant way to detect the presence of *H. pylori* infections.



#### *Touch-screen with quick navigation*



Like all other functions, Kibion® Dynamic's new user interface reflects end-user needs. Its large ergonomic touch-screen enables intuitive menu navigation. Set-up assistance is promoted via dialog boxes for key data input and activation while input and validity checks ensure smooth operation. Results are shown as attractive and easy-to-understand graphic displays.



#### *Easy-to-use software*

Based on WINDOWS operating system, Kibion® Dynamic Software provides touch-controlled routines for calibrations, sample definitions and measurement control. Its database records and stores patient data and test results. Integration with patient management records is standard.



#### *Unrivalled connectivity*

Full integration plus complete connectivity to local infrastructures greatly simplifies result generation and reporting. A built-in, fully-fledged computer eliminates the needs for laptop or desktop computers, for example. Furthermore, devices such as a keyboard, mouse, scanner (all common barcode standards are supported) or printer can be integrated into the workflow without difficulty via USB or LAN connections. Integration with LIS is quick and easy.



#### *Full functional flexibility*

Kibion® Dynamic handles numerous <sup>13</sup>C breath tests (*H. pylori*, pancreatic and liver function as well as gastric emptying function) with its extension device Kibion® Dynamic pro from either breath sample bags or sample tubes. Moreover, its set-up, operation, results generation and reporting can be fully customised to meet individual end-user needs.



#### *High-capacity throughput*

When testing demand increases, the Kibion® Dynamic base module can be supplemented with the innovative extension device Kibion® Dynamic pro. By offering up to 16 additional ports for sample bags or sample tubes respectively, Kibion® Dynamic pro is the fast efficient and economical way to boost throughput.

## **Well-proven technology at its most advanced**

Kibion® Dynamic breath test analyzer measures the  $^{13}\text{CO}_2$  and  $^{12}\text{CO}_2$  concentrations of breath samples and relates their ratios to the PDB- $^{13}\text{C}$  stable isotope standard. The starting point is thus the Urea Breath Test (UBT) performed with Kibion's Diabact® UBT.

### **Taking the Urea Breath Test**

Diabact® UBT is perfectly suited for primary diagnosis and post-treatment follow-up of *H. pylori* infections. It is reliable, safe and it measures active infection. The individual to be tested simply swallows a labelled, fast-dissolving  $^{13}\text{C}$ -urea tablet. If present, *H. pylori* metabolises  $^{13}\text{C}$ -urea to  $^{13}\text{CO}_2$  and ammonia via the enzyme urease. The  $^{13}\text{CO}_2$  is then transported in the blood to the lungs. When the patient exhales ten minutes after swallowing the tablet, this  $^{13}\text{CO}_2$  is captured in a sample bag or tube. (If *H. pylori* is absent, the  $^{13}\text{C}$ -urea is simply absorbed and subsequently voided.)

No special preparation is needed and since the UBT is both non-invasive and non-radioactive, the method enjoys high acceptance. Single-patient Diabact® UBT kits or 10-tablet packs are available.

### **Analysing the breath test sample**

Kibion® Dynamic analyses Diabact® UBT breath samples using Infrared Isotope Analyzer (IRIS) technology. Measurements are made directly on breath samples from sample bags or sample tubes connected to the instrument facia, either on the base unit or the large-capacity pro extension unit. No separation of water or isolation of  $\text{CO}_2$  is required prior to analysis. Standard breath bags have a volume of 120 ml breath gas, which is sufficient for several measurements per sample. Standard tubes have 12 ml, which is sufficient for one measurement.

IRIS technology measures the isotope ratio  $^{13}\text{C}/^{12}\text{C}$  in a breath sample to calculate the relative deviation of the ratio in the sample to the ratio in a reference material (usually denoted by  $\delta^{13}\text{C}$ ).

The correlation between the detector gas and the sample gas provides an extremely high selective sensitivity with regard to gases such as  $^{12}\text{CO}_2$  and  $^{13}\text{CO}_2$ , which are then analysed by Kibion® Dynamic.

# Technical information

## Analytical data

	Kibion® Dynamic base	Kibion® Dynamic pro
<b>Reproducibility</b>	<0.5‰ (standard deviation)	<0.5‰ (standard deviation)
<b>URAS analyzer</b>	URASmed	N/A
<b>Sample measurement</b>	2 (min/sample)	2 (min/sample)
<b>Sample ports</b>	4	16
<b>Stability</b>	<0.5‰ (standard deviation)	<0.5‰ (standard deviation)

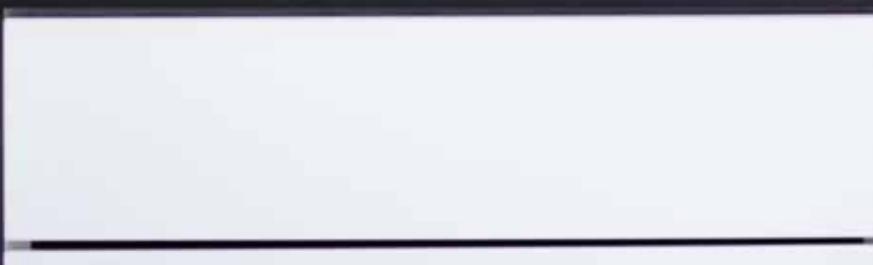
## Technical data

	Kibion® Dynamic base	Kibion® Dynamic pro
<b>Width x height x depth (mm)</b>	280 x 320 x 380	500 x 320 x 380
<b>Weight (kg)</b>	13	11.5
<b>Electrical connections</b>	100–120/200–240 (VAC) 50–60 (Hz)	100–120/200–240 (VAC) 50–60 (Hz)
<b>Power consumption</b>	0.12 (kW)	0.12 (kW)
<b>Mains switch with two fuses</b>	2 x 2 A	2 x 2 A
<b>Gas connections</b>	1 gas connection	1 gas connection
<b>Data transfer</b>	2 RJ-45, 2 USB	1 RJ-45

## Laboratory working and storage conditions

Kibion® Dynamic base and Kibion® Dynamic pro	
<b>Temperature (°C)</b>	15–35
<b>Humidity (% rH)</b>	<70

Install Kibion® Dynamic in a vibration and movement-free environment.





## About Kibion

Kibion AB is a diagnostic company and world-leading supplier of rapid, reliable Urea Breath Tests and analytical instruments for detecting the gastric ulcer bacterium *Helicobacter pylori*.

Our products Kibion® Dynamic, Diabact® UBT and Heliprobe® System are currently sold in more than 50 countries with the Middle East and EU being the largest markets.

The company is headquartered in Uppsala, Sweden with a subsidiary, Kibion GmbH, in Bremen, Germany.

Kibion AB is certified according to EN ISO 13485 for Medical Devices.

Read more about Kibion at [www.kibion.com](http://www.kibion.com).



**kibion**

**Kibion AB**

P.O. Box 303. SE-751 05 Uppsala. Sweden  
[info@kibion.com](mailto:info@kibion.com) • [www.kibion.com](http://www.kibion.com)