

- Headquarter: Shenzhen China
- Image: Second Second
- 70,000m<sup>2</sup> Production Area
- Serving 16 Countries & Regions
  Serving 20,000 + Medical Institutions
  Serving 300 Million + People

## Shenzhen Zhonghe Headway Bio-Sci & Tech Co., Ltd.

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# HCBT-01 & <sup>13</sup>C-UBT Kits

www.headwaychina.com











### Vision

To be the leader in global breath detection industry

### Mission

Make the pursuit of health easy

### Values

Innovation, Practicality, Responsibility, Cooperation

Founded in 1996 in Shenzhen, China, Headway is currently the leading manufacturer & supplier of H.Pylori diagnostic—<sup>13</sup>C & <sup>14</sup>C urea breath test—systems in the world. We are committed to making it easier to pursue good health by leveraging our more than 20 years of innovation in breath tests.



Barry Marshall and Robin Warren won 2005 Nobel Prize in medicine for first separating H.Pylori from a gastric mucosal specimen.

H.Pylori colonizes in the gastrointestinal track of nearly 50% of the world's population.

H.Pylori was classified as a class I human carcinogen by the World Health Organization in 1994.

H.Pylori represents a key factor in the aetiology of various

gastrointestinal diseases: Dyspepsia, Duodenal Ulcer, Gastric Ulcer, Chronic Gastritis, Gastric MALT lymphoma, MALT, Gastric Cancer.

H.Pylori is highly associated to the development of gastric

# **Various Testing Methods**



Non-invasive, is perfectly suited for primary diagnosis and for post treatment follow-up of H.Pylori infection.

#### Histology



Invasive, several factors influence the accuracy of histology, such as site, size and number of biopsies, PPIs, antibiotics.

#### Culture



Invasive, less sensitive method. The cultivation in vitro requires particular transport medium, growth medium and incubation environment.

#### RUT



Invasive, several factors influence the accuracy, such as the density of bacteria present in the biopsy specimen, PPIs, bismuth, antibiotics and presence of blood.

#### Stool Antigen



Distasteful process of stool collection. Several factors influence the accuracy, like antibiotic, PPIs, bowel movement and upper gastrointestinal bleeding.

#### Serology



Low accuracy and the positive result may reflect previous rather than current infection, not useful after treatment.

### Global guideline and consensus for UBT H.Pylori diagnosis



"UBT is the most reliable non-endoscopic test to document eradication of H. Pylori infection."

American College of Gastroenterology



"The diagnostic accuracy of the UBT is >95% in studies. The UBT is an accurate, practical, and readily available test."

European Helicobacter Study Group



"A distinct advantage of [UBT] is that it can also be used to determine treatment efficacy." Mayo Clinic Laboratoriesy



UBT have been recommended as the most accurate noninvasive tests for diagnosis of H. Pylori infection and for confirmation of eradication after therapy. Quest Diagnostics Laboratories

(HEADWAY) | Operating proceed

HCBT-01型 呼气试验测试仪

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# HCBT-01 features

Sophisticated optical system

Steady infrared light source

Automatic sampling injection system

Stable temperature regulation system

Precise signal collection system

Automatic self-testing system

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Built-in standard curve algorithm

# **Operation procedure** of <sup>13</sup>C-urea breath test

Headway provides a simple and clean solution for you and your family to protect stomach.

During the test, first you may simply breathe into baseline breath bag. After taking the Headway <sup>13</sup>C-urea capsule and waiting for 30 minutes, you breathe into sample breath bag. If there is an infection, it can be detected in your exhaled breath with HCBT-01.

Take one <sup>13</sup>C-Urea capsule

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Use HCBT-01 to test the two bags of breath





HCBT-01 features | HEADWAY





Principle of HCBT-01 | HEADWAY



# Principle of HCBT-01

CO<sub>2</sub> has several characteristic absorption peaks in infrared band and there is a slight difference between the absorption peak positions of <sup>13</sup>CO<sub>2</sub> and <sup>12</sup>CO<sub>2</sub>. By utilizing such slight difference, the HCBT-01 breath test analyzer is able to measure the concentrations of  ${}^{13}\text{CO}_2$  and  ${}^{12}\text{CO}_2$  respectively and then calculate the variation DOB (‰) of the abundance of <sup>13</sup>C isotopes in the sample and baseline over the natural abundance of <sup>13</sup>C, so as to determine whether the patient has been infected with H.Pylori.



## **Operating Condition**

Indoor (protected from direct sunlight, radiation) Temperature:15°C-30°C, avoiding sharp change in temperature Elevation: ≤2000m Relative humidity: ≤75% Atmospheric pressure: 75kpa-106kpa

## Storage and transportation

The storage environment should be protected against influences of temperature, humidity, dust, salty, corrosive gases and water

The instrument should be prevented from being inclined, inverted, shaken or drastically vibrated in transportation Ambient temperature:  $-10^{\circ}C - +60^{\circ}C$ Relative humidity:  $\leq 75\%$ 

## Physical Specifictions

#### Dimensions

- Length: 540mm
- Width: 399mm
- Height: 333mm
- Weight: 17Kg

## Power supply

Power supply: AC110-240V Maximum rated power consumption <250VA

