

## Detection of *Helicobacter pylori* urease activity in biopsy specimens with Biohit Quick Test

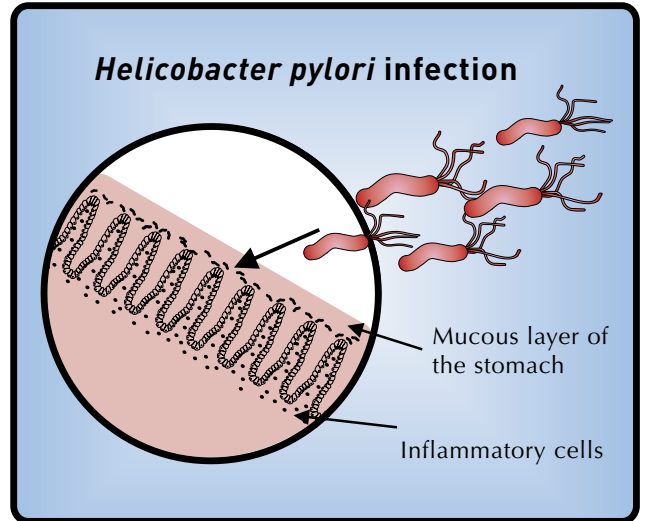
*Helicobacter pylori* infection is the most important cause of chronic gastritis. *H. pylori* is a spiral shaped, gram-negative bacterium that colonizes the human stomach. The organism is found in the mucous layer of the stomach overlying the gastric epithelium and it does not appear to invade tissue. However, the mucosa underneath the area of the *H. pylori* colonization is invariably inflamed; this condition is referred to as a chronic superficial or non-atrophic gastritis, which, if untreated persists for life. The chronic inflammatory process can lead to atrophic gastritis, which has been linked with peptic ulceration and gastric cancer.

The epidemiological evidence of a link between *H. pylori* infection and gastric adenocarcinoma or mucosa associated lymphoid tissue (MALT) lymphoma has resulted in the classification of the organism as a group I carcinogen.

### Biohit *H. pylori* Quick Test

Biohit's Point of Care (POC) *Helicobacter pylori* Quick Test for detecting *Helicobacter pylori* infection in the stomach is based on the activity of urease enzyme in a biopsy specimen.

The biopsy specimen taken from the stomach (antrum and/or corpus) is examined immediately. The development of the color in the test gel informs whether urease enzyme is present in the biopsy sample or not. In strong *H. pylori* colonization (high density) the reaction time is 2 minutes, in low density *H. pylori* colonization the reaction can take up to 30 minutes. *H. pylori* contains large amount of urease, which degrades urea to ammonia (NH<sub>4</sub><sup>+</sup>). The formed ammonia is detected by an indicator color present in the gel.



*H. pylori* is a spiral shaped, gram-negative bacterium that colonizes the human stomach. *H. pylori* infects usually in childhood in person-to-person transmissions.

About half of the global population is infected with *H. pylori*. In crowded living conditions with poor sanitation 80-90% of the adult population can be infected.

The *H. pylori* infection may lead to atrophic gastritis, which may subsequently result in gastric cancer or peptic ulcer disease.



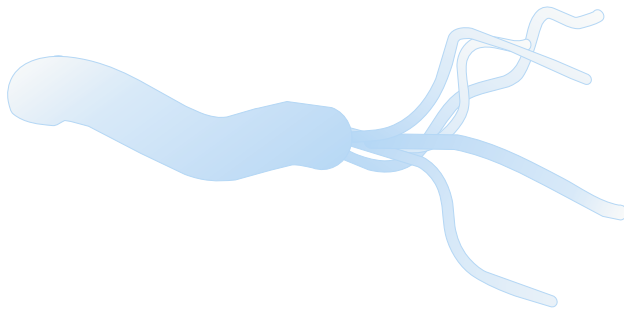
### *H. pylori* Quick Test:

- The biopsy specimen is taken in connection with gastroscopy
- Fast urease activity test
- No reagents or additional equipment needed
- Results available in 2 to 30 minutes\*

**Biohit Quick Tests**  
Fast – Reliable – Easy



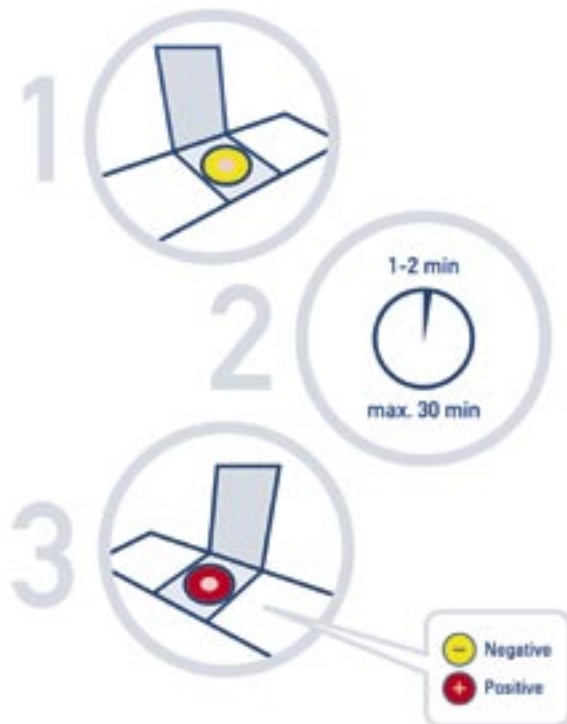
## Biohit *Helicobacter pylori* Quick Test - fast, reliable and easy



*H. pylori* Quick Test comparison to biopsy histology and culture.

<b>N</b>	=	<b>120</b>
<b>Sensitivity</b>	=	<b>94 %</b>
<b>Specificity</b>	=	<b>88 %</b>
<b>PPV</b>	=	<b>89 %</b>
<b>NPV</b>	=	<b>93 %</b>

Performance data, 2004



### Procedure

1. Place the biopsy specimen into the gel of the plate well.
2. Incubate for 1-2 minutes at room temperature (20-25°C). If the color in the well is intensive red, go to step 3. If there is no change in the color, continue incubation for a full 30 minutes.
3. After the incubation period, read the results. An intensive red color indicates that the result is positive.

### *Helicobacter pylori* Quick Test\*\*

Cat. No. 602 015

Includes plates for 50 tests

\* In strong *H. pylori* colonization (high density) the reaction time is 2 minutes, in low density *H. pylori* colonization the reaction can take up to 30 minutes.

\*\* In the United States: For research use only. Not for use in diagnostic procedures.



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