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**Lab Dept:** Microbiology

**Test Name:** HELICOBACTER PYLORI UREASE TEST

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**General Information**

**Lab Order Codes:** HPU

**Synonyms:** H. pylori Urease test; Urease test for *Helicobacter pylori*; Accutest for *Helicobacter pylori*

**CPT Codes:** 87081 - Culture, presumptive, pathogenic organisms, screening only

**Test Includes:** Screening for the presence of the urease enzyme of *Helicobacter pylori* in the gastric mucosal biopsies.

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**Logistics**

**Lab Testing Sections:** Microbiology

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 day

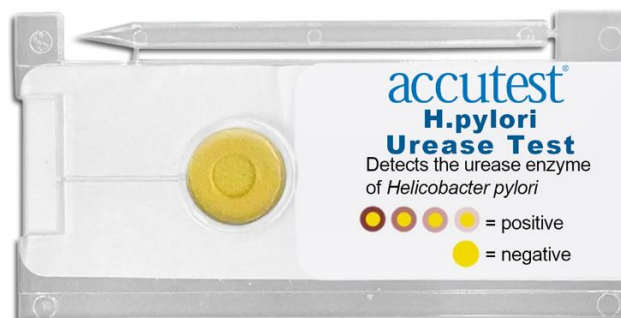
**Special Instructions:** Specimen site and date/time of collection are required for specimen processing. [See Patient preparation.](#)

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**Specimen**

**Specimen Type:** Tissue, gastric mucosal biopsy

**Container:** Accutest H. pylori Rapid Urease Test (available in Microbiology)

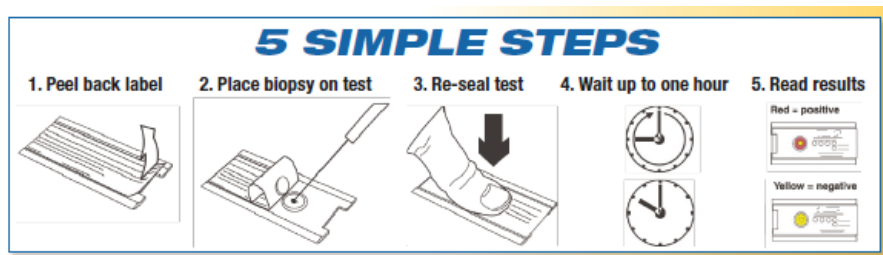


**Volume:** 1 - 3 mm

**Collection:**

**Accutest Procedure:**

1. Check gel to make sure that the color is yellow. Do not use if the test surface is red or magenta.
2. Collect biopsy specimen from the sump of the antrum, along the greater curve. Biopsy an area of normal looking tissue rather than an area affected by erosions or ulcerations.
3. Peel back the label from the plastic slide, exposing the reactive yellow pad. Do not remove the label.
4. Collect specimen with biopsy forceps, approximately 1-3 mm.
5. With a sterile blunt instrument, take biopsy sample from the biopsy forceps and place it onto the reactive pad. Make certain the tissue is positioned to have maximum contact with the reactive pad.
6. Reseal the Accutest by pressing the label back on the plastic slide. Press the label over the reactive pad lightly with your finger to squeeze the tissue contents out of the specimen.
7. Write the name of the patient and collect date/time on the label.
8. Transport to the laboratory immediately.



**Patient Preparation:**

Patient should not have taken antibiotics or bismuth salts for at least 3 weeks prior to endoscopy.

**Transport/Storage:**

Accutest *H. pylori* Urease Test should be stored at room temperature away from direct light.

Transport inoculate tests to the Microbiology Laboratory as soon as possible at room temperature.

**Sample Rejection:**

Improperly labeled specimen; insufficient volume; external contamination. If an unacceptable specimen is received, the physician or nursing station will be notified and another specimen will be requested before the specimen is discarded.

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**Interpretive**

**Reference Range:**

Accutest negative for the urease enzyme of *Helicobacter pylori*.

**Critical Values:**

N/A

<b>Limitations:</b>	<p>False negative results may occur when low numbers of <i>H. pylori</i> are present or the organism has patchy distribution.</p> <p>Test will be less sensitive if patient has recently taken antibiotics or bismuth.</p>
<b>Methodology:</b>	Urease test
<b>Additional information:</b>	<p><i>H. pylori</i> has been shown to cause active chronic gastritis and has been implicated as a primary etiologic factor in duodenal ulcer disease, gastric ulcer and non-ulcer dyspepsia. By causing inflammation, <i>H. pylori</i> may weaken the mucosal defenses and allow acid and pepsin to disrupt the epithelium.</p> <p><i>H. pylori</i> produce large amounts of urease enzymes. Although urease primarily allows <i>H. pylori</i> to utilize urea as a nitrogen source, the breakdown of urea also produces high local concentrations of ammonia, which enables the organism to tolerate low pH. Tests for gastric urease are specific for <i>H. pylori</i> because mammalian cells do not produce urease and, except for <i>H. pylori</i>, the stomach is usually sterile.</p>
<b>References:</b>	<p>Cook, J.H., and M. Pezzlo. 1992. Specimen receipt and accessioning. Section 1. Aerobic bacteriology, 1.2.1-4. In H.D. Isenberg (ed) Clinical Microbiology Procedures Handbook. American Society for Microbiology, Washington, D.C.</p> <p>Miller, J. Michael, A Guide to Specimen Management in Clinical Microbiology, 1999, American Society for Microbiology, Washington, D.C.</p> <p>Miller, J. Michael, and H.T. Holmes. 1999. Specimen Collection, Transport, and Storage in P.R. Murray et al., (ed.), Manual of Clinical Microbiology, 7th edition, American Society for Microbiology, Washington, D.C., pg 33-104</p>
<b>Updates:</b>	<p>10/22/2015: Updated Transport and Specimen Rejection criteria.</p> <p>12/2024: Revised for Jant Accutest. Removed CLOtest.</p>