

THE AGA KHAN UNIVERSITY HOSPITAL CLINICAL LABORATORIES

UPDATE UREA BREATH TEST

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INTRODUCTION:

Urea breath test (UBT) is a noninvasive diagnostic test for patients suspected to have active *H. pylori* infection. It is also used for monitoring response to the therapy. Normally urease is not present in human cells, and hence its presence indicates urease containing microbes. *H. pylori* utilize urease to breakdown urea into ammonia and carbon dioxide (CO₂).

UBT exploits this ability of urease by using urea with a labeled carbon isotope (non-radioactive ¹³ C). *H. pylori* promptly hydrolyze urea into ammonia and carbon dioxide (CO₂). This CO₂ with the labeled carbon isotope (non-radioactive ¹³ C) enters the bloodstream and is later exhaled via the lungs. It can be measured and quantified for the diagnosis of *H. pylori*.

PRINCIPLE:

Test will be performed by Infrared Spectrophotometer methodology.

SPECIMEN COLLECTION:

One-hour fasting is required.

For analysis two breath samples will be taken (Pre dose and Post dose) of non-radioactive ¹³ C labeled Urea.

SPECIMEN STABILITY:

Samples can be stored at 15-30°C for up to 7 days.

REFERENCE RANGE:

≤ 2.4 is interpreted as Negative
≥ 2.5 is interpreted as Positive

SCHEUDLE:

The procedure will be conducted from Monday to Friday, 9:00 am to 1:00 pm. Report will be issued on same day.

PLEASE FILE FOR QUICK REFERENCE