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**Lab Dept:** Microbiology/Virology

**Test Name:** DUODENAL ASPIRATE CULTURE AND GRAM STAIN

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***General Information***

**Lab Order Codes:** DUOC

**Synonyms:** Culture, Duodenal Aspirate

**CPT Codes:** 87071 - Culture, bacterial; quantitative, aerobic with isolation and presumptive identification of isolates, any source except urine, blood or stool  
87205 – Smear, primary source with interpretation; Gram or Giemsa stain for bacteria, fungi or cell types

The following testing may be added if appropriate based on findings for organism identification (multiple additions are possible if more than one organism is identified) and to aid in patient treatment management.

87077 – Aerobic isolate, additional methods required for definitive identification, each isolate (if appropriate)  
87106 – Culture, fungi, definitive identification, each organism, yeast (if appropriate)  
87107 – Culture, mold, definitive identification, each organism, mold (if appropriate)  
87147 – Culture, typing; immunologic method, other than immunofluorescence (e.g., agglutination grouping), per antiserum (if appropriate)  
87184 – Susceptibility studies, disk method, per plate (if appropriate)  
87186 – Susceptibility studies, microdilution or agar dilution, each multi-antimicrobial, per plate (if appropriate)  
87206 – Smear, primary source with interpretation, fluorescent and/or acid fast stain for bacteria, fungi or cell types (if appropriate)

**Test Includes:** Quantitative culture of aerobic flora and Gram stain.

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**Logistics**

**Lab Testing Sections:** Microbiology

**Phone Numbers:** MIN Lab: 612-813-5866

STP Lab: 651-220-6555

**Test Availability:** Daily, 24 hours

**Turnaround Time:** Preliminary report available at 1 day, final report within 2 - 5 days.

**Special Instructions:** **Specimen site** and **date/time of collection** are required for specimen processing.

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### ***Specimen***

**Specimen Type:** Duodenal aspirate

**Container:** Sterile container

**Volume:** 1 mL aspirate

**Collection:** Specimen is obtained by use of a gastroduodenal tube or a fiberoptic endoscopy study, either by direct aspiration or into a trap.

**Transport/Storage:** **Onsite collections:** Transport to the Microbiology laboratory immediately at room temperature.

**Offsite collections:** Do not refrigerate, store at room temperature. Specimens must be promptly transported to the laboratory, with the next available courier, not to exceed 24 hours from the time of collection. However, delayed transport causes a delay of test results.

**Patient Preparation:** Patient must take nothing by mouth after midnight the night before the test.

**Sample Rejection:** Improperly labeled specimen; specimens with prolonged transit time (see [Transport/Storage](#) for requirements); 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:** Duodenal aspirates in most individuals contain some lactobacilli, streptococcus, various fungi and rare *Bacteroides* sp. present in densities of 1000 organisms/mL or less.

**Alert Value:**

- Gram-negative rods identified as ESBL or Carbapenemase producers will be called to the physician or patient's nurse. Infection Prevention will be notified.
- If MRSA is isolated for the first time, and the patient location is not Emergency department, the result will be called to the physician or patient's nurse.

**Methodology:** Quantitative culture

**Additional Information:** Bacterial densities exceeding 10<sup>5</sup>/mL in small bowel fluid usually indicates abnormality of the gastrointestinal tract: blind loop, achlorhydria or some malabsorption syndrome.

**References:**

Cook, JH, and M Pezzlo (1992). Specimen receipt and accessioning. Section 1. Aerobic bacteriology, 1.2.1-4. In HD Isenberg (ed) Clinical Microbiology Procedures Handbook. American Society for Microbiology, Washington DC

Miller, J Michael (1999) A Guide To Specimen Management in Clinical Microbiology, American Society for Microbiology, Washington DC

Miller, J Michael, and HT Holmes (1999) Specimen Collection, Transport, and Storage In PR Murray et al, (ed), Manual of Clinical Microbiology, 7<sup>th</sup> edition, American Society for Microbiology, Washington DC, pp 33-104

**Updates:**

3/22/2010: CPT Updates

6/19/2012: Added Alert Value

11/11/2014: Added offsite collection information