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**Lab Dept:** Chemistry

**Test Name:** GASTRIN, SERUM

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***General Information***

**Lab Order Codes:** GAS

**Synonyms:** N/A

**CPT Codes:** 82941 - Gastrin

**Test Includes:** Gastrin level reported in pg/mL.

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***Logistics***

**Test Indications:** Diagnosis of gastrinoma and Zollinger-Ellison syndrome (triad of gastrinoma, gastric acid hypersecretion, and ulcers); serum gastrin is the best single laboratory test for gastrinoma.

Investigation of patients with achlorhydria or pernicious anemia.

**Lab Testing Sections:** Chemistry – Sendouts

**Referred to:** Mayo Medical Laboratories (MML Test: 8512/GAST)

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

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 1 - 3 days, test set Monday - Saturday

**Special Instructions:** See [Patient Preparation](#)

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***Specimen***

**Specimen Type:** Blood

**Container:** Red top tube

**Draw Volume:** 6 mL (Minimum: 1.5 mL) blood

**Processed Volume:** 2 mL (Minimum: 0.5 mL) serum

**Collection:** Routine venipuncture

<b>Special Processing:</b>	Lab Staff: Centrifuge specimen within 1 hour of draw, remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at frozen temperatures. Forward promptly.
<b>Patient Preparation:</b>	The patient should be fasting overnight, preferably 8 hours (4 hours is the minimal fasting interval). Protein meal can cause a marked increase in serum gastrin. No recent radioactive isotopes. Gastrin may be increased following gastroscopy.
<b>Sample Rejection:</b>	Gross hemolysis; warm specimens; mislabeled or unlabeled specimens

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### ***Interpretive***

**Reference Range:** <100 pg/mL

**Note:** There is no evidence that fasting serum gastrin levels differ between adults and children. Although 8 hour fasts are difficult or impossible to enforce in small children, serum gastrin levels after shorter fasting periods (3-8 hours) may be 50-60% higher than the 8 hour fasting value.

**Critical Values:** N/A

**Limitations:** Isolated serum gastrin levels can only be interpreted in fasting patients, non-fasting specimens are uninterpretable.

Drugs which interfere with gastric acid secretion, in particular proton pump inhibitors (e.g., omeprazole) should be discontinued, if feasible, for at least one week before serum gastrin measurement.

Hypergastrinemia may be observed in improperly prepared patients (e.g., after gastroscopy, non-fasting, or diabetic patients taking insulin), in some patients with pheochromocytoma, or in those with cancer of the colon, pancreas, breast or lung. Renal failure prolongs the serum half-life of gastrin and is associated with increased serum gastrin levels.

**Methodology:** Automated Chemiluninescent Immunometric Assay

**References:** [Mayo Medical Laboratories](#) Web Page (June 2014)

**Updates:** 3/2/2004: Test moved from Esoterix, Inc. to Mayo Medical Laboratories.

8/31/2004: MML has changed methodology on this test from RIA to Automated Chemiluminescent Immunometric Assay. Note change in reference range previously listed as  $\leq 200$  pg/mL. Also note fasting comment on new reference range.