

---

**Lab Dept:** Chemistry

**Test Name:** ARTERIAL BLOOD GAS (ABG), PUMP

---

***General Information***

**Lab Order Codes** ABGP

**Synonyms:** Arterial blood gas

**CPT Codes:** 82803 – Gases, blood, any combination of pH, pCO<sub>2</sub>, pO<sub>2</sub>, CO<sub>2</sub>, HCO<sub>3</sub> (including calculated O<sub>2</sub> saturation)

**Test Includes:** pH (no units), pCO<sub>2</sub> and pO<sub>2</sub> measured in mmHg, sO<sub>2</sub> and O<sub>2</sub>AD measured in %, HCO<sub>3</sub> and BE measured in mmol/L, Temperature (degrees C) and ST (specimen type)

---

***Logistics***

**Test Indications:** Useful in determining arterial oxygen saturation of the patient during certain procedures such as ECMO or heart surgery.

**Lab Testing Sections:** Chemistry

**Phone Numbers:** MIN Lab: 612-813-6280  
STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 30 minutes

**Special Instructions:** For use by ECMO or surgery only. Specimen must arrive within 30 minutes of draw.

---

***Specimen***

**Specimen Type:** Whole blood

**Container:** **Preferred:** Sims Portex<sup>®</sup> syringe (PB151) or Smooth-E syringe (956-463)

**Draw Volume:** 0.4 mL blood

**Processed Volume:** 0.2 mL blood

|                             |  |
|-----------------------------|--|
| <b>Collection:</b>          | Specimen is obtained from the ECMO Pump.<br><br>Draw blood into blood gas syringe. <b>Immediately</b> remove all air from syringe, remove needle, cap tightly, and mix. Send in original collection device. Forward immediately at ambient temperature only. <b>Do Not Expose Specimen To Air.</b> |
| <b>Special Processing:</b>  | Lab Staff: Do not centrifuge. Specimen should be delivered to blood gas workstation for analysis and analyzed within 30 minutes of collection.   |
| <b>Patient Preparation:</b> | None   |
| <b>Sample Rejection:</b>    | Clotted sample; mislabeled or unlabeled specimens  |

---

### ***Interpretive***

|                           |  |
|---------------------------|--|
| <b>Reference ranges:</b>  | N/A  |
| <b>Critical Values:</b>   | N/A  |
| <b>Limitations:</b>       | N/A  |
| <b>Methodology:</b>       | Ion-Selective Electrode, HCO <sub>3</sub> and BE by calculation  |
| <b>Contraindications:</b> | This test is not indicated for general patient assessment.   |
| <b>References:</b>        | ABL90 FLEX Operator's Manual from software version 3.1xx<br>Publication 201403 Edition H, Code 995-646<br><br>Jacobs & DeMott Laboratory Test Handbook (2001) Lexi-Comp<br><br>Tietz Textbook of Clinical Chemistry (1999) 3rd Edition |