Lab Dept: Chemistry

Test Name: VENOUS BLOOD GAS (VBG), PUMP

**General Information**

Lab Order Codes: VBGP

Synonyms: Venous blood gas; Venous pump gas

CPT Codes: 82803 – Gases, blood, any combination of pH, pCO2, pO2, CO2, HCO3 (including calculated O2 saturation)

Test Includes: VpH (no units), VpCO2 and VpO2 measured in mmHg, VsO2 and VO2AD measured in %, HCO3 and BE measured in mmol/L, Temperature (°C) and ST (specimen type)

**Logistics**

Test Indications: Useful in determining venous 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**

Specimen Type: Whole blood, pump

Container:
- Preferred: Sims Portex® syringe (PB151) or Smooth-E syringe (956-463)

Draw Volume: 0.4 mL (Minimum: 0.2 mL) blood

Note: Submission of 0.2 mL of blood does not allow for repeat analysis.

Processed Volume: 0.2 mL blood per analysis
**Collection:**

Specimen is obtained from the ECMO Pump

Draw blood into blood gas syringe. **Immediately** remove all air from syringe, remove needle, cap tightly, and mix. Send in original collection device. Forward immediately at ambient temperature only. **Do Not Expose Specimen To Air.**

**Special Processing:**

Lab Staff: Do not centrifuge. Specimen should be delivered to blood gas workstation for analysis and analyzed within one hour of collection.

**Patient Preparation:**

None

**Sample Rejection:**

Clotted sample; mislabeled or unlabeled specimen; sample containing air

---

**Interpretive**

**Reference Range:**

N/A

**Critical Values:**

N/A

**Limitations:**

N/A

**Methodology:**

Ion-Selective Electrode, HCO3 and BE by calculation

**Contraindications:**

This test is not indicated for general patient assessment.

**References:**

Children’s Hospitals and Clinics ECMO Program, October 2004

**Update:**

7/14/2005: Added clarification on draw volume for repeat analysis.