

Clinical Laboratory Test Update

VENOUS BLOOD GAS (VBG)

Effective Tuesday, 7/12/22

UCHealth South Region Providers:

UCHealth Laboratory performed a study on VBG and O₂ Saturation from samples collected in a syringe versus a green Lithium Heparin blood tube. The results show VBG and O₂ Saturation are negatively impacted by the use of vacutainer tubes. As a result, the UCHealth system is removing green Lithium Heparin blood tubes as an alternative collection method and requiring all these samples be drawn in a heparinized syringe.

Recommendations:

Blood Gas Venous	
Test Name	Blood Gas Venous
Lab Test Code	LAB79
Acceptable Specimen	Heparinized Syringe (ONLY) 250 uL
Specimen Stability	30 minutes
Specimen Handling	Immediately transport to lab at room temperature. Specimen must be received in the laboratory within 30 minutes of collection.
Performed	Sunday through Saturday
CPT	82805

Interpretative Data

CRITICAL VALUES

Analyte	Value	Note
CO	>12%	Arterial, Venous, Capillary
pH (age ≤ 18 years)	<7.00 or >7.60	Arterial, Venous, Capillary
pH (age > 18 years)	≤7.15 or ≥7.65	Arterial, Venous, Capillary
pCO ₂ (≤18 years)	<20 or >75 mmHg	Arterial, Venous, Capillary
tCO ₂ (≤18 years)	<9 mmol/L	Arterial, Venous, Capillary
Na ⁺	≤120 or ≥160 mmol/L	Arterial, Venous, Capillary
K ⁺	≤2.5 or ≥6.4 mmol/L	Arterial, Venous, Capillary
Glucose (age 0 to 3 years)	≤40 or ≥150 mg/dL	Arterial, Venous, Capillary
Glucose (4 to 17 years)	≤40 or ≥200 mg/dL	Arterial, Venous, Capillary
Glucose (≥ 18 years)	≤40 or ≥500 mg/dL	Arterial, Venous, Capillary
iCa ²⁺	<0.83 or >1.55 mmol/L	Arterial, Venous
Hgb	<6 or >20 g/dL	Arterial, Venous, Capillary or Cord Blood

For any questions about this test update, please contact:

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