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| **Capillary Blood Gas Collection** |
| **Purpose** | This procedure provides specific instructions for CAPILLARY BLOOD GAS COLLECTION. |
| **Policy Statements** | This procedure applies to all laboratory staff responsible for collecting capillary blood gas specimens and must be used in conjunction with [*SCM 3.20 Capillary Blood Collection*](http://khan.childrensmn.org/Manuals/Lab/SOP/Gen/SpecCol/205657.pdf). |
| **Materials and Equipment** | Balanced Heparin plastic capillary tube – Radiometer *safe*CLINITUBES (D957P-70-125x1) (Order code 942-893), CHC# 9006 |
| **Sample** | **Whole Blood**: * Two 125 uL heparinized *safe*CLINITUBE (preferred)
* One 125 uL heparinized *safe*CLINITUBES (absolute minimum)
* Collected without air bubbles, or air bubbles removed prior to transport

2016-07-12 11 **Patient Preparation:** The patient should preferably be in a steady state of ventilation before and during the collection of blood sample**Minimum volume:** 0.125 mL**Stability:** Room Temperature; 10 minutes (preferred) or 30 minutes maximum**Rejection criteria**: * Unlabeled specimens
* Clotted specimens
* Air contaminated specimens
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| **Special Safety Precautions** | * Authorized personnel should perform blood sampling.
* Always handle blood samples and capillaries with care.
* Avoid direct contact with the sample by using certified protective gloves.
* Do not re-use sampling devices.
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| **Procedure** | Follow the activities in the table below for CAPILLARY BLOOD GAS COLLECTION.

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| **Step** | **Action** |
| 1 | See SCM 3.20 [Capillary Specimen Collection](file:///C%3A/temp/Loaded%20in%20CMS/SCM%203.20%20Capillary%20Specimen%20Collection.doc). Follow instructions until ready to collect the blood gas sample, go to Step 2.  |
| 2 | Loosely mount a capillary cap on one end of the *safe*CLINITUBE. |
| 3 | Assure the *safe*CLINITUBE contains a mixing wire. Allow it to slide to the same end as the cap. |
| 4 | Fill the *safe*CLINITUBE with freely forming drops, holding the puncture site in a downward position and allowing capillary action to pull sample into the tube. Do not allow air to enter the capillary tube. |
| 5 | Tighten the capillary cap. |
| 6 | Tightly mount a cap on the other end of the *safe*CLINITUBE. |
| 7 | Invert the capillary tube slowly 20 times. Allow the mixing wire to move all the way from end to end with every single inversion. |
| 8 | Place one capillary tube under each Sunquest barcode label, keeping the Sunquest cap gas labels attached to each other, and assuring each sample has its own label. |
| 9 | Transport sample tubes immediately to main lab either by walking, or placing the cap tubes in a biohazard sample bag and immediately transporting the sample via pneumatic tube. |
| 10 | Analyze the sample within 10 minutes. If storage is unavoidable, store the sample for a maximum of 30 minutes. Before the sample is analyzed, mix it again. |

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| **References** | 1. Radiometer *safe*CLINITUBES® Product Insert, Radiometer Medical ApS, Denmark, 989-890.
2. ABL 90 FLEX Flex Operator’s Guide, Radiometer Medical ApS, Denmark.
3. CLSI. *Procedures and Devices for the Collection of Diagnostic Capillary Blood Specimens; Approved Standard – Sixth Edition, H04-06*. Clinical and Laboratory Standards Institute, Wayne, PA. 2008.
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