

Sample Collection and Handling

Correct sample processing is the most important step in obtaining accurate results with your VitalPath™ Analyzer. **Most analytical errors are caused by improper sample collection and handling.**

- IMPORTANT:**
1. Venipuncture precautions must be followed for proper sample collection.
 2. Using the correct sample collection device is critical for valid VitalPath Analyzer results.

Venipuncture Precautions

The following precautions should be observed when collecting blood for use on the VitalPath Analyzer:

- Use a 3 ml or larger syringe with a 22-gauge or larger needle. **Avoid tuberculin syringes.**
- Do not collect blood into any anticoagulant other than lithium heparin or balanced heparin.
- Do not use ammonium heparin or EDTA.
- Do not manually heparinize syringes.
- Do not draw from an IV catheter.
- If using alcohol to clean the venipuncture site, allow the alcohol to dry completely.
- Avoid excessive probing for the vein or suction on the syringe. Thromboplastin from damaged tissues may be aspirated along with the sample, accelerating clotting. Prolonged or difficult venipuncture may also result in clot formation.
- Avoid bubbles or air spaces in the sample when measuring pH, PCO₂, PO₂ and ionized calcium.

Sample Collection Devices and Sample Handling Guidelines

Heparinized Syringes

- **Commercially Available Pre-Heparinized Syringes**

Commercially available 3 ml pre-heparinized syringes are appropriate for use with the VitalPath Analyzer. Heska Corporation recommends syringes designed for blood gas analysis, available from your laboratory materials supplier.

GENERAL GUIDELINES

- Lithium heparin or balanced heparin are the only anticoagulants recommended for use. Balanced heparin must be used for accurate ionized calcium.
 - When using a commercially available heparinized syringe, fill to the recommended volume listed on the package.
 - After collection, roll the syringe gently between your palms for at least 5 seconds, then gently invert the syringe 8–10 times to thoroughly mix.
 - Hold the syringe vertically and tap the sides to dislodge any bubbles or air spaces. Expel the air by pressing gently on the syringe plunger until a solid column of blood remains.
 - For best results, sample should be analyzed as quickly as possible. If a delay is expected, blood should be analyzed within 10 minutes of collection, especially for blood gas and ionized calcium analysis.
- **In-Clinic Heparinized Syringes**
Heska Corporation does not recommend in-clinic preparation of heparinized syringes using bulk heparin.
The excessively high concentration of heparin in bulk solutions results in over-heparinization of samples. Excess heparin causes errors in test results.

VitalPath™

Blood Gas & Electrolyte Analyzer

Product Bulletin

LAB SYSTEMS

Heparinized Collection Tubes

- **Commercially Heparinized Non-Vacuum Collection Tubes**

1.3 ml heparinized non-vacuum collection tubes (CAT #5021) are available from Heska Corporation for use with the VitalPath Analyzer.

- **Commercially Heparinized Vacuum Collection Tubes**

3 ml green-topped vacuum lithium heparin collection tubes are available from your laboratory materials supplier.

GENERAL GUIDELINES

- To transfer blood from syringe into vacuum tube, remove the stopper from the tube and also remove the needle from the syringe. Fill the tube by dispensing blood from the syringe into the tube until it reaches the appropriate fill volume. This procedure prevents sample hemolysis.
- Immediately replace the stopper and mix the sample by gently inverting the tube 8–10 times.
- For best results, sample should be analyzed as quickly as possible.

Heparinized Capillary Tubes

Heparinized capillary tubes are available from Heska Corporation for use with the VitalPath Analyzer.

GENERAL GUIDELINES

- Insert a 22-gauge or larger needle (without syringe) into the vein.
- When the hub of the needle fills with blood, place the end of the capillary tube into the blood and allow the tube to fill by capillary action.

VitalPath Analyzer Sample Introduction

Syringe Sample

- Open the VitalPath flap to the designated syringe (half-opened) position.
- Attach the syringe (always remove the cannula first). Be sure that the needle sufficiently penetrates the interior of the syringe in order to remove the sample without air bubbles. The sample is automatically aspirated.



Heparinized Collection Tube Sample

- Open the VitalPath flap to syringe (half-opened) position and introduce sample to aspiration needle. The sample is automatically aspirated.

Capillary Tube Sample

- Open the VitalPath flap to the labeled capillary position (completely open position).
- Insert the capillary tube into the fill port. The sample is automatically aspirated.



For assistance, call Technical Support Services at 1-800-464-3752, option 3.

