VANDERBILT UNIVERSITY MEDICAL CENTER

**Diagnostic Laboratory Services**

# AMMONIA SPECIMEN COLLECTION TIP SHEET

**Updated September 22, 2023**

1. Collect the lavender top specimen (fill completely) in prechilled tubes

2. Place the specimen on ice immediately and keep the tube tightly stoppered at all times

3. Specimens must be delivered to the lab (on ice) promptly to allow for processing w/in 15 mins of collection

4. Collect before initiating TPN (lipid interference due to fat emulsion)

5. Hemolyzed specimens are unacceptable because red cells contain higher concentrations of ammonia than plasma. If called about gross hemolysis, best practices recommend the following:

    - **Hand walk specimens to the core lab**
        - Rationale: Specimens travel through the pneumatic tube system at greater than 6 G-forces!
        - Click here to watch a specimen traveling via the pneumatic tube system
    - **Avoid "milking" heel sticks**
        - Rationale: Excessive milking or squeezing of the puncture site can result in an unsatisfactory specimen because hemolysis breaks down the blood cells to be analyzed or mixing tissue fluids in the specimen, which can dilute the blood.
    - **Use the correct gauge needle, typically 21 to 22-gauge for most patients**
        - Rationale: Using smaller needles can increase RBC stress or turbulence during collection, leading to hemolysis
    - **Fill lab tubes with the correct volume indicated on the lab tube**
        - Rationale: Filling the tube completely ensures the proper ratio of blood to the additive to prevent hemolysis and clotting

6. Delays in transport or specimens not kept on ice can lead to falsely increased ammonia results

**Please page the Clinical Chemistry attending on call with any questions at 615-831-4257.**