BEST PRACTICES

VACUETTE® BLOOD COLLECTION TUBES

greiner BIO-ONE

Order of Draw and Inversions

Order	Tube Type	Cap Color	Inversions
1	Blood Culture		
2	Coagulation	Blue	4
3	Serum Clot Activator	Red/Gold	5-10
4	Heparin	Green	5 -10
5	EDTA	Pink/Lavender	8-10
6	Glycolytic Inhibitor	Grey	5-10
7	Other Additives		

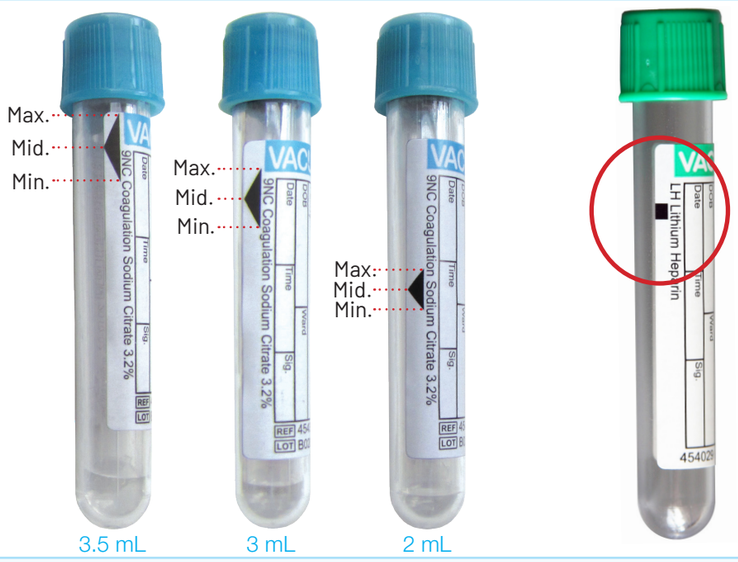
One Complete Inversion

- Collect tubes according to the Order of Draw as established in CLSI GP41* or according to facility policy.
- Following proper order of draw when collecting multiple specimens in a single venipuncture helps to avoid possible test result error due to additive carryover.
- Tube contents must be mixed thoroughly and slowly as it is removed from the holder, so the additive is incorporated into the sample.

Prevent Hemolysis

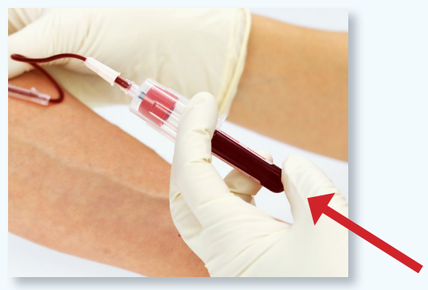
- Tourniquet application should not be overly constrictive, nor should it exceed one minute prior to venipuncture.
- Allow alcohol to dry for 15 – 20 seconds prior to proceeding with venipuncture.
- Choose appropriate equipment (i.e., needle gauge and tube draw volume) based on circumstance of the draw.
- Fill tubes completely and mix with recommended number of gentle inversions. Do not shake tubes when mixing.
- If collecting from a vascular access device, an appropriate transfer device should be used and proper procedures, including your facility's protocol, for flushing the line and discard volume should be followed.
- Avoid excessive pulling force when using a syringe and follow proper procedure for transfer to evacuated tubes following collection.

Fill Volumes



- On coagulation tubes, the black arrow indicates the +/-10% of blood volume needed for a properly filled sample with a 9:1 blood to additive ratio.
- On all other tube types, a black square is the fill mark to indicate proper blood to additive ratio.
- Always fill to completion to prevent quantity not sufficient, QNS.
- If a winged blood collection set is used, the first tube in the series will be under filled. Therefore, if a coagulation specimen is drawn first, a discard tube (no additive or coagulation tube) is recommended to be drawn prior to this tube to prime the tubing and ensure the proper additive-to-blood ratio.

Proper Tube Placement



- Maintain forward pressure by holding tube in place using thumb on bottom of tube to prevent pushback.
- Keep tube in place until the tube stopper is penetrated by the needle and blood ceases to flow, filling the tube to completion.
- Remove the last tube collected prior to terminating the venipuncture.

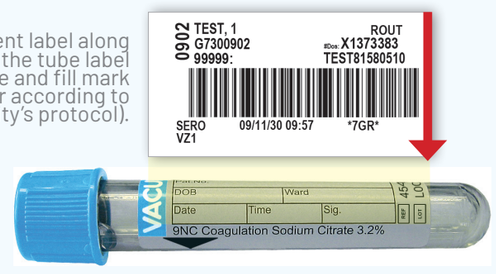
Syringe Transfer

Luer lock syringe + VACUETTE® Blood Transfer Unit + VACUETTE® Blood Collection Tube

- Avoid transferring blood from syringes into other containers unless using an appropriate transfer device.
- Allow the tube to fill without applying pressure to the plunger.

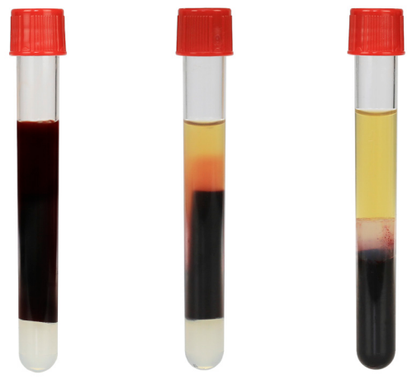
Label

Place the patient label along the top edge of the tube label such that additive and fill mark remain visible (or according to your facility's protocol).



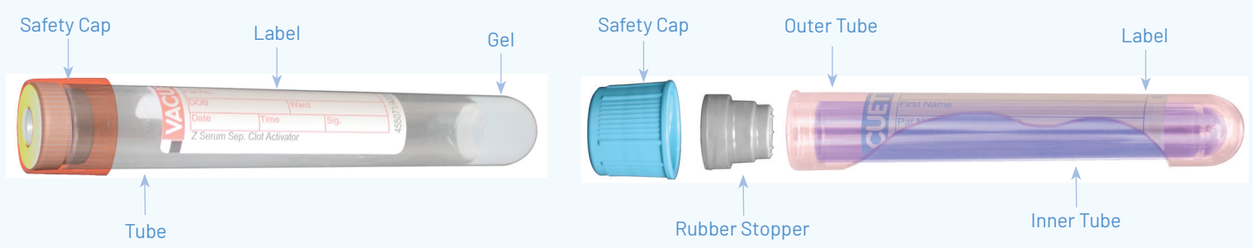
- According to CLSI GP41* all specimen tubes are to be labeled in front of the patient and must include:
  - Patient First and Last Name
  - Patient Specific Identifier (i.e., Date of Birth, Patient ID #)
  - Collection Date and Time
  - Identity of sample collector

Serum Tube Clotting



- Immediately following collection, gently invert the tube 5 - 10 times to allow the clot activator to mix with the sample.
- Allow specimen to clot for 30 minutes in an upright position. Observe for clot formation before centrifuging.
- Within 2 hours, centrifuge per blood collection tube instructions for use or your facility's protocol. A gel barrier will form, separating serum from clot.

Tube Information



- All VACUETTE® Blood Collection Tubes are sterile and latex free.
- Each tube has a color-coded safety cap corresponding to additive.
- Color-coded rings identify the draw volume, or indicate the presence of gel or sodium heparin or use for blood bank.
- Tiered rubber stopper on coagulation tube is designed to ensure seal on inner and outer tube for maximum shelf life.

Gel Separation | Standard Draw | Low Volume Draw | Sodium Heparin | Blood Bank

*Clinical and Laboratory Standards Institute (CLSI). Collection of Diagnostic Venous Blood Specimens. 7th ed. CLSI standard GP41 (ISBN 1-56238-812-6 [Print]; ISBN 1-56238-813-4 [Electronic]). Clinical and Laboratory Standards Institute, 950 West Valley Road, Suite 2500, Wayne, Pennsylvania 19087 USA, 2017.

Greiner Bio-One North America, Inc.
PHONE: 888.286.3883 FAX: 800.726.0052 EMAIL: office@us.gbo.com

www.gbo.com

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