

Tube Fill Requirements and Common Causes of Specimen Rejection Guide for Nurses

The following tubes are used for most routine collections. Specialty tubes are obtained from lab (ext. 54036)

Tube Size/Color (correct order of collection)	Fill Requirement
Blood Cultures – BC blue & purple *	10 mL in each bottle see amt. chart in Lab Policy 1325) 1-4 mL for Peds - in 1 PINK bottle
2.7 mL Blue (solid blue cap)	MUST BE TO THE FILL LINE
1.8 mL Blue (clear cap with blue cork)	MUST BE TO THE FILL LINE
6 mL Plain Red (PRT)	Enough blood for test – no min/max
3.5 mL SST (pumpkin/gold)	Enough blood for test – no min/max
3 mL Mint Green (PST) w gel	At least ½ full for CO ₂ only (call lab to check required volume)
4 mL Lavender (dark cap)	Recommended at least half full (2 mL)
2 mL Lavender (light clear cap)	Recommended at least half full (1 mL)
6 mL Lavender (for Blood Bank)	Recommended at least half full (3 mL)
4 mL Gray	Recommended at least half full (2 mL)

* Patient's extremity or port must be prepped appropriately before collection

Important Notes:

Note that the lavender and blue tubes come in different sizes and must be filled appropriately. Over or under-filled tubes will not be accepted for testing. Lab will reject a specimen if the specimen is in question. The following list includes common causes of specimen rejection.

Clotting:

- All tubes with anticoagulants must be gently mixed 6-8 times (blue, green, lavender, gray) to prevent clotting.
- Blood from a syringe must be transferred to tubes immediately and gently mixed. Clot formation and separation can begin immediately if the syringe is laid down before transfer.

Hemolysis:

- Do not force blood into tubes. The vacuum in the tubes will fill the tubes correctly (always check the blue tube to be sure it is at the fill line – if under-filled, GENTLY tap the syringe to fill the tube to the fill mark.
- When obtaining blood from a line/port or with an IV start, do not pull back forcefully on a syringe – this can damage cells and cause hemolysis.

Contamination:

- Make sure that the line is flushed properly and at least 5cc is drawn and discarded. (Do not discard for blood cultures). Venipunctures cannot be performed above an IV insertion point unless all lines are clamped off, wait two minutes and draw a 5cc discard specimen.
- ALWAYS draw blood cultures first. Keep in mind that by not properly prepping the site (skin or port), or by drawing blood samples before blood cultures, that you are causing the false contamination rates to rise.
- NEVER pour blood from one tube to another.

The sequential order of draw is to help prevent additive carryover from one tube to the next.

Order of Draw for capillary collection (finger/heel): lavender, green, gray, red/yellow. Mix lavender, green, gray at least 10 times. Capillary collection tends to form clots quickly, so tubes w additives are collected first.

Lab will make every effort to process the tube that is sent, however if a result is in question, for any reason, a recollect will be requested.