



In order of draw. Invert gently the number of times shown, right after collection. Never shake.

Tube	Additive and what it does	Invert	Common tests	Handling
 Blood culture bottles (aerobic + anaerobic)	Culture media. Drawn first, so the sample stays sterile.	Per bottle instructions	Blood cultures	Strict skin antisepsis. Butterfly: aerobic bottle first. Adults: about 8–10 mL a bottle.
 Light blue	3.2% sodium citrate. Anticoagulant: binds calcium. The plasma keeps its clotting factors.	3–4 times	PT/INR, aPTT, D-dimer	Fill to the line (9:1); underfilled tubes are rejected. PT/INR: room temperature.
 Gold / red-gray (SST) or red	Clot activator (SST also has gel). Silica clot activator makes the blood clot. SST gel separates serum from cells when spun.	5 times	BMP/CMP, Lipid panel, TSH	Let it clot fully before centrifuging. Glass red: no additive, no inversions.
 Green / light green (PST)	Lithium heparin (PST also has gel). Anticoagulant: gives plasma, so it can be spun right away (no clotting step).	8–10 times	STAT chemistry, Troponin, Ammonia (many labs)	Ammonia: on ice at once; spin within about 15 minutes.
 Lavender (or pink)	K2EDTA. Binds calcium to prevent clotting; whole blood for hematology.	8–10 times	CBC, Hemoglobin A1c, Type and screen (pink)	Invert right away: clotted CBCs are rejected. Pink (blood bank): label at the bedside.
 Gray	Sodium fluoride / potassium oxalate. Fluoride stops glycolysis (preserves glucose); oxalate binds calcium.	8–10 times	Glucose, Lactate, Blood alcohol	Lactate: pre-chilled tube, on ice, separated within 15 minutes. Always drawn last.

Exam traps

Hemolysis falsely raises potassium and magnesium; hemolyzed chemistry samples are rejected.

On ice: ammonia and lactate are the two classic “transport on ice” tests.

Other tubes: royal blue K2EDTA trace-element tube for blood lead (tan K2EDTA also exists).



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Based on the BD Vacutainer chart and the ARUP Laboratories test directory. Requirements vary by lab: follow your lab's manual.

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