








# UCSDH CLINICAL LABORATORIES APPROVED ORDER OF DRAW and RATIONALE

Order	Color	Tube Type	Inversions	Tests	Rationale
1	 Blue/Violet	Blood Culture (plastic bottle)	8-10	Blood Pathogens	<ul style="list-style-type: none"> <li>➤ Blue/violet sterile blood culture bottles (<b>in that order</b>) should be drawn first                             <ul style="list-style-type: none"> <li>○ To prevent contamination from non-sterile tubes</li> <li>○ Blue aerobic bottles before violet anaerobic bottles – oxygen contamination occurs in the first collection</li> </ul> </li> </ul>
2*	 Light Blue	Citrate	3-4	Coagulation	<ul style="list-style-type: none"> <li>➤ Light blue citrate tubes before tubes with clot activator or stronger anticoagulants                             <ul style="list-style-type: none"> <li>○ To prevent adverse effects on coagulation studies (falsely reduced or prolonged PT and PTT)</li> <li>○ Must be filled to the specified level to maintain the proper ratio of blood to anticoagulant to prevent falsely prolonged PT and PTT.</li> </ul> </li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">                     *An additional blue tube must be drawn and discarded if this is the first specimen drawn.                 </div>
3	 Red	Silica or glass particles	5	Blood Bank; Serology	<ul style="list-style-type: none"> <li>➤ Red tubes must be drawn after the blue top to avoid falsely decreased <b>PT</b> and <b>PTT</b>.</li> <li>➤ Can be filled before green, lavender, and gray tubes because carry-over of clot activator will be overridden by strong anticoagulants (heparin, EDTA, oxalate)</li> </ul>
4**	 Yellow	SST w/ silica or glass particles	5-8	Routine and Special Chemistry	<ul style="list-style-type: none"> <li>➤ Yellow serum separator tubes with clot activator must be drawn before green, lavender, and gray top tubes                             <ul style="list-style-type: none"> <li>○ Carry-over of clot activator will be overridden by strong anticoagulants (heparin, EDTA, oxalate)</li> </ul> </li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">                     **Yellow SST tubes should be allowed to sit 15 min. before centrifuging.                 </div>
5	 Green	Li Heparin (PST) Na Heparin	8-10	Routine and STAT Chemistry	<ul style="list-style-type: none"> <li>➤ Li Heparin (Light green) tube must be drawn before the Na Heparin Green tubes.</li> <li>➤ Must be drawn before Lavender to prevent contamination from EDTA.</li> </ul>
6	 Lavender	EDTA	8-10	Hematology; Chemistry	<ul style="list-style-type: none"> <li>➤ Lavender EDTA tubes are responsible for more carry over problems than any other additive.                             <ul style="list-style-type: none"> <li>○ False elevation of <b>Na</b> and <b>K</b> levels if drawn before green, red or yellow top.</li> <li>○ Reduction in <b>Ca</b> and <b>Fe</b> levels if drawn before green, red or yellow top</li> <li>○ Prolonged <b>PT</b> and <b>PTT</b> if drawn before blue top</li> </ul> </li> </ul>
7	 Gray	Fluoride and Oxalate	8-10	Glucose, Lactic Acid	<ul style="list-style-type: none"> <li>➤ Gray sodium fluoride/potassium oxalate tubes last                             <ul style="list-style-type: none"> <li>○ After green tubes for electrolyte measurement – elevation of Na and K levels</li> <li>○ After lavender tubes for hematology - oxalate damages cell membranes and causes abnormal RBC morphology</li> </ul> </li> </ul>