**Frequently asked Questions for Clinical Pathology Lab**

**Q: What is the difference between serum and plasma?**

A: Serum and plasma are both components of blood and are often used interchangeably. Plasma is the clear and yellowish fluid part of the blood that contains fibrin and other clotting factors. Serum is the part of the fluid that remains once the fibrin and other clotting factors are removed. The difference of serum and plasma can affect certain tests for a chemistry analysis.

**Q: How should I store my blood sample for serum analysis?**

A: Samples should be drawn into a normal microcentrifuge tube or a serum collection tube (yellow top) and allowed to clot for at least 30 minutes at room temperature. The sample should then be centrifuged at a minimum of 1500 rpm for at least 10 minutes.

**Q: Does it matter if I use heparin or EDTA?**  
For CBC: it does not matter but an anticoagulant must be used.   
For chemistry: it is preferable to use no anticoagulant. Certain tests will be affected such as electrolytes and calcium (for questions regarding specific tests please call the lab).

**Q: Will EDTA interfere with any chemistry tests?**

A: Yes. EDTA can block and/or interfere with some tests. The following tests are blocked/interfered when EDTA is present in the sample:

* + ALKP
  + D. BIL
  + CA
  + CK
  + LDH
  + MG
  + NA/K/CL (Electrolytes)
  + CO2
  + ALP

Note: It is best if the blood sample is prepared without EDTA or any type of anticoagulant to ensure maximum efficiency of chemistry analysis.

**Q: Are there any limitations to be aware of when asking for a chemistry analysis?**

A: Yes. Samples can be affected if they are hemolyzed, Lipemic, Icteric, and even when exposed to light. The following chart will identify which tests are affected under each condition.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ***HEMOLYSIS*** | ***LIPEMIC*** | ***ICTERIC*** | ***LIGHT*** |
| ***ALT*** | X |  |  |  |
| ***AST*** | X |  |  |  |
| ***CK*** | X |  |  |  |
| ***LDH*** | X |  |  |  |
| ***D. BIL*** | X | X |  | X |
| ***T. BIL*** |  |  |  | X |
| ***MG*** | X |  |  |  |

**Q: How do I prepare a CBC blood sample?**

1. Any tube with EDTA anti coagulant will work (usually purple-top tubes)
2. Samples should be collected and immediately deposited into sample tube
   1. Remove needle from syringe beforedepositing sample into tube.
   2. Whenever possible, use the sample size recommended for the size of the tube, using an insufficient amount (or a larger amount) can alter the reliability of the test results
3. Invert tube 5-10 times
   1. Samples should be submitted to the lab as soon as possible for the best results.
   2. Samples can be refrigerated overnight if necessary however samples can clot overnight and may produce unreliable results
4. Submit the sample and the submission form to our lab (Website instructions attached)
   1. For quicker processing please have your submission form already completed
   2. Samples cannot be processed until we receive your submission form
   3. CBCs should be submitted before noon unless prior arrangements have been made

**Q: When can I submit lab samples?**

The lab is open from 8:30 am to 4:30pm Monday through Friday. CBC samples need to be submitted before 1pm unless prior arrangements have been made.

**Q: Can I freeze my samples?**

CBC samples should NOT be frozen for any reason. The freeze-thaw cycle will cause the red blood cells to break which will produce erroneous results.   
Serum and plasma samples can be frozen. DO NOT freeze the whole blood before separating the serum/plasma. This will cause hemolyzed (red) samples and will affect results.

**Q: What if I do not have enough sample?**  
Samples can be diluted within reason. Please call the lab first if you have questions about quantity.

**Q: How long does it take to get results?**  
CBCs are run the same day. Chemistries are run within two-three days: it depends on the number of samples you submit and the number of tests you are ordering. All results are scanned and sent electronically.