

Centrifuge and Aliquot (Spin and Separate)



Collection Guide

JUNE 2025

Why Centrifuge?

Centrifuging (i.e., “spinning down”) is essential for preserving patient blood samples.

This separates the liquid component (serum or plasma) from the cellular components (red or white blood cells and platelets) ensuring that the target element or compound being tested (e.g. blood sugar, cholesterol, magnesium) is being measured accurately at the time of collection.



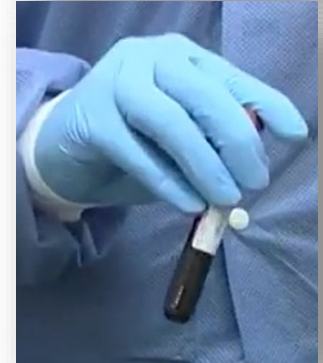
Before you begin

Upon collection you should invert your tubes, whether they need to be spun or not.

Holding the tubes securely, gently rock them upside down and then right-side up 8 - 10 times.

This will cause the air pocket in each tube to travel from one end of the tube to the opposite end, mixing the blood with the additives in the tube.

**Safety first: Always wear gloves for Standard Precautions*



Before you begin

Gold and Red top tubes will produce a serum specimen for testing. Invert the tube 8 -10 times after collection.

These should be allowed to clot fully before centrifugation. Stand the tube upright in a rack for 20-30 minutes before centrifuging.



Before you begin



Lt. Green and Blue top tubes, which will produce a plasma specimen, should be inverted 8 – 10 times.

These tubes can be spun immediately as they do not require clotting.

Before you begin

Most specimens that require centrifugation should be centrifuged within 2 hours of collection* to maintain integrity, and ensure that the specimens are optimal for storage, transport and/or testing.

*This is not true of all tests. Please refer to the test you are collecting in the lab catalog for specific instructions prior to collection:

corewellhealth.org/labcatalog

Choose the region where you will place your orders.

Centrifuge instructions

After collection and preparing the tube:

- 1. Open the centrifuge.**
- 2. Place your specimen tube(s) in the centrifuge.**

Note: Most centrifuges feature a fixed speed, otherwise adjust the speed to 3300 – 3500 rpms for adequate separation of blood components



Centrifuge instructions



3. Balance each tube with a tube of the same size and equal volume of fluid, placing them opposite each other in the centrifuge.

If you have an odd number of specimens, use a balance tube (tube filled with water) and place the balance tube on the opposite side of your specimen tube.

Centrifuge instructions

4. Close and lock the lid.

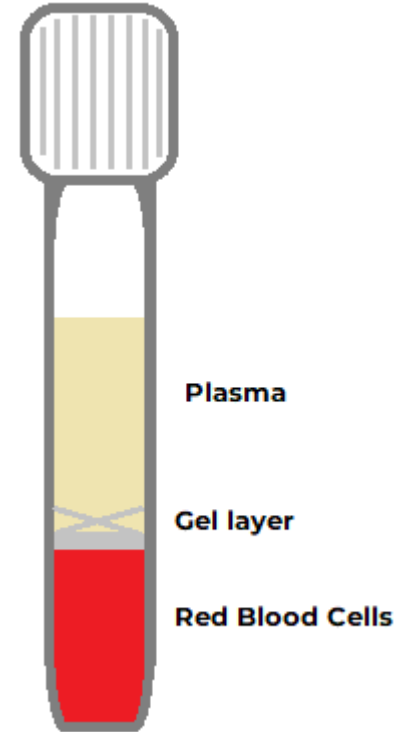
Ensure the spin time is set to 10 minutes and then push start.



Centrifuge instructions

5. After the centrifuge has stopped. Open it and remove the spun specimen.

Check the tubes for a clear separation of serum/plasma from the cells.



Aliquoting

Some specimens require the plasma or serum to be pipetted into an aliquot tube, while others can be poured over.

Always check the specimen requirements in the Test Catalog (corewellhealth.testcatalog.org) to determine if your specimen requires aliquotting or light protection (e.g., amber tubes)

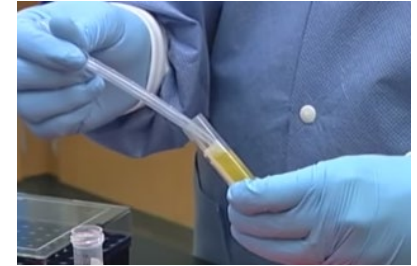


Aliquoting

After the centrifuge has stopped, open and remove the spun specimen.

Grab a sterile pipette and new clear specimen tube or amber tube if specimen needs to be protected from light

Siphon off the plasma or serum from the top of the specimen tube and transfer it into the new tube.

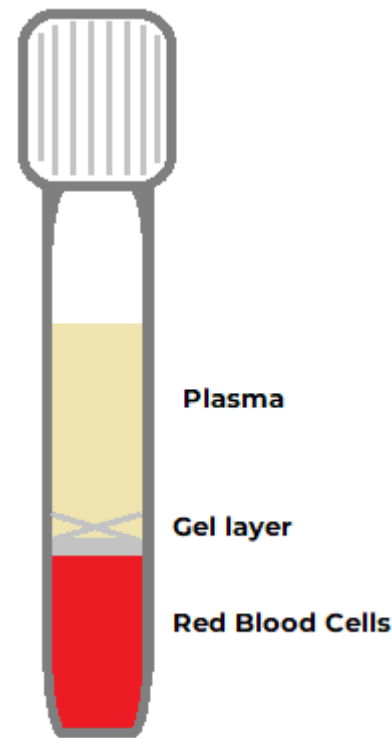


Aliquoting

When removing plasma to send for Coagulation testing (ex. APTT or PT), it is important not to go all the way down to the cells.

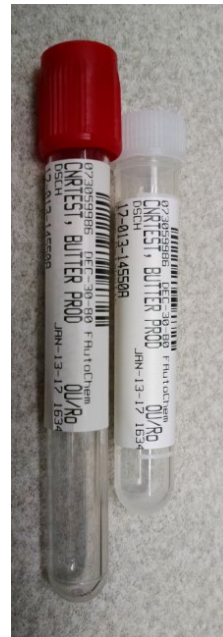
Leave at least $\frac{1}{4}$ inch of plasma on the cells.

This layer contains the platelets which were separated from the plasma during spinning. **Platelets interfere with coagulation testing.**



Aliquoting

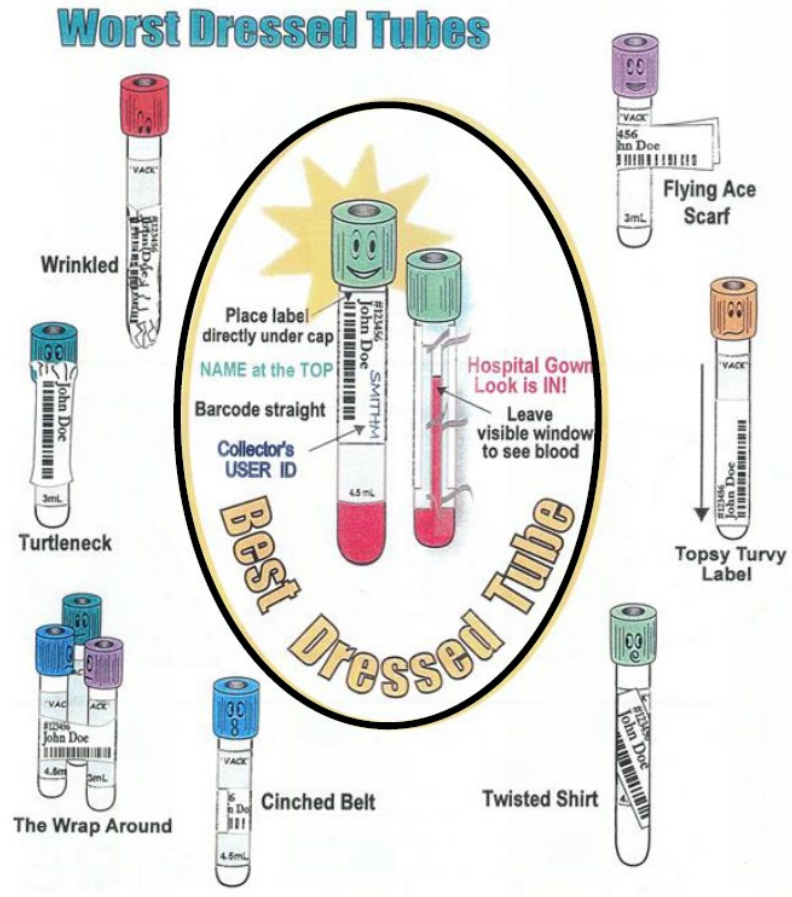
Place the cap on the new tube and ensure it has a label with at least two patient identifiers (legal name and date of birth), matching the original specimen tube.



Labeling

Label the specimen(s) with at least two identifiers: legal name and date of birth.

Place a requisition (i.e. paper orders) or an orders slip in the outside pocket of the bag. Paper orders must have 3 patient identifiers.

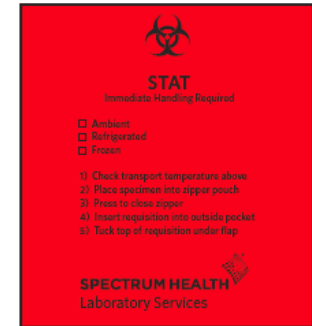


Store the specimen at the appropriate temperature in the appropriate color or type of bag.

See the lab catalog for more information on transport temperature and specimen stability:

[Corewellhealth.testcatalog.org](https://corewellhealth.testcatalog.org)

Hold until routine courier pick up or call for pick up, if needed.

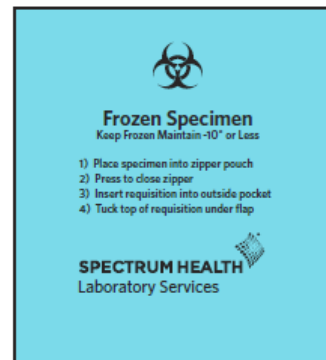


Frozen Specimens

If specimen collection instructions indicate that the aliquot is to be frozen, label specimen and place it into a blue frozen bag.

Place bag in freezer immediately.

Never place a frozen specimen in a lockbox. Wait for your scheduled courier pick-up or call for a routine pick-up by a Corewell Health courier.



Centrifuge Resources

**To have your
centrifuge serviced
or repaired:**

**1-Help: 616.391.4357
(-13457, internally)**

Lab Resources

West:

Corewell Health Regional Laboratory
P: **616.774.7721**

South:

Corewell Health Lakeland St. Joseph
Laboratory
P: **269-983-8311 ext 1**

Test Directory and Collection
Instructions:

[Corewellhealth.testcatalog.org](https://www.corewellhealth.testcatalog.org)

Laboratory News & Updates:
lab.corewellhealth.org