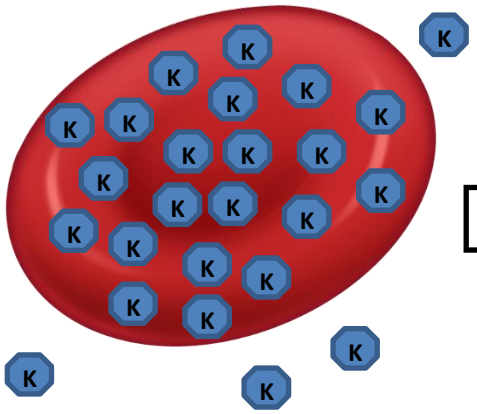


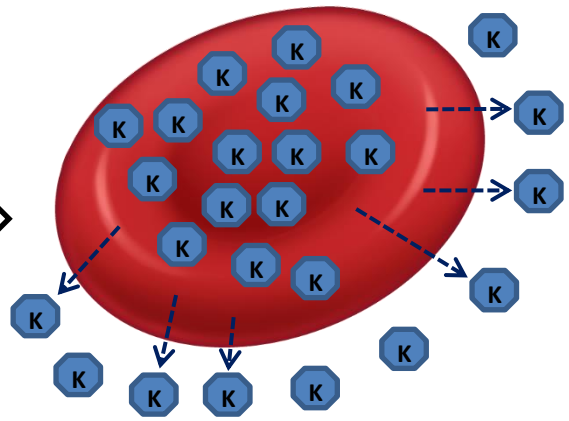
The concentration of potassium (K) is much higher inside red blood cells than outside.

After a blood test, K in the cells in the blood tube will slowly diffuse out of the cell.

Time / Cold temperature

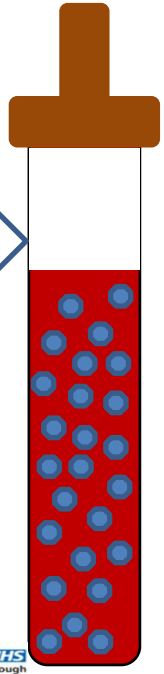
In cold temperatures, this happens much faster.

Transporting samples in insulated boxes protects them from cold outside temperatures.

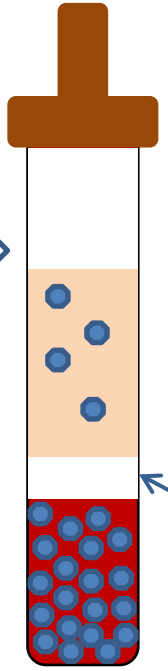


Even a small number of K molecules moving from inside to outside the cell can result in a significant increase in measured potassium.

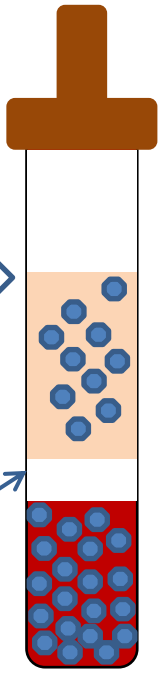
Blood sample before centrifugation



Prompt centrifugation: Effective separation of K from red blood cells



Delayed centrifugation: K leakage from red blood cells increases measured potassium levels



Gel separator – keeps blood cells separate from serum

Top tips for centrifuging

When should I centrifuge blood samples?

- ALWAYS centrifuge brown top samples that won't be sent to the lab today.
- CONSIDER centrifuging all brown top blood samples taken in the morning (they might not reach the lab until late afternoon / evening).
- ALWAYS WAIT at least 30 minutes after blood collection before centrifuging (to allow sample to clot)
- NEVER centrifuge purple or light blue top samples

How do I centrifuge blood samples?

- ALWAYS label samples before placing in the centrifuge.
- ALWAYS stamp / write 'SPUN' on request form
- ALWAYS follow any technical instructions you have been given and balance the centrifuge before starting (equal weight of samples in opposite buckets).
- NEVER open the lid of the centrifuge before it has completely stopped.