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

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

In cold temperatures, this happens much faster.

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

**Time / Cold temperature**

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 red top or green 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.