

# Blood Hemoglobin Assay (Drabkins)

## BLOOD HEMOGLOBIN ASSAY (DRABKINS)

### Drabkins Reagent

1. Dissolve 1.0g  $\text{NaHCO}_3$ , 0.05g KCN and 0.20g  $\text{K}_3\text{Fe}(\text{CN})_6$  in some water.
2. Bring to 1.0L final volume.
3. Store refrigerated.

### Hemoglobin Assay (formation of cyanomethemoglobin)

1. Pipet 5.0mL Drabkins reagent into a test tube.
2. Add 20 $\mu\text{L}$  of red blood cell (RBC) lysate.
3. Mix well and let stand 10min to 1h.
4. Measure absorbance at 540nm.
5. Duplicate samples should be within 0.01 AU of each other, otherwise, repeat.
6. Use 20 $\mu\text{L}$  water instead of RBC lysate as zero blank.

$$E = 0.683 \text{ mL/mg}$$

$$\text{Concentration} = (A_{540} / E) * \text{dilution} = \text{mg/mL}$$

$$\text{Gm/100mL} = \text{gm\%}$$

The 20 $\mu\text{L}$  added to 5 mL makes a 251 dilution, appropriate for whole blood or lysates diluted up to 1/5; dilute further in case needed.

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