

## **Giemsa Staining of Blood Smears and Estimation of Parasitemia**

### **Reagents:**

- Giemsa stain; [LabChem Inc.]
- 100% Methanol
- Bibulous paper; [VWR]
- Microscope with x100 oil immersion lens and 10x10 grid eyepiece
- Microscope Immersion Oil

### **Protocol:**

#### *Giemsa Staining of Blood Smear Slide*

- 1) Fix slides in 100% methanol for ~30" and rinse off in tap water.
- 2) Make up a fresh solution of 10% Giemsa stain in distilled water.
- 3) Stain ~30'.
- 4) Rinse off slide in tap water and dry thoroughly using bibulous paper to dab.

#### *Estimation of Parasitemia*

- 5) View slide under oil immersion with a 100x objective.
- 6) Estimate parasitemia by counting the number of infected cells. A 10x10 grid square in the eyepiece of the microscope facilitates the procedure as an even blood smear yields ~100 red blood cells per 10x10 grid. Thus for example, 8 infected blood cells in a 10x10 grid is ~8% parasitemia. Several fields (~10) should be counted and the average taken to obtain a representative estimate of the total parasitemia.