

Kurling for Kids 2010 – Equipment Proposal

Cellular Analysis System (Cell counter) (\$100,000) Hematology Laboratory

A cell counter used for testing blood samples in the hematology laboratory – it samples the blood, and quantifies, classifies, and describes cell populations using both electrical and optical techniques. Electrical analysis involves passing a dilute solution of the blood through an aperture across which an electrical current is flowing. The passage of cells through the current changes the impedance between the terminals. A lytic reagent is added to the blood solution to selectively lyse the red cells (RBCs), leaving only white cells (WBCs), and platelets intact. Then the solution is passed through a second detector. This allows the counts of RBCs, WBCs, and platelets to be obtained. The platelet count is easily separated from the WBC count by the smaller impedance spikes they produce in the detector due to their lower cell volumes.

The machine counts the red cells, white cells and platelets and will provide increased information regarding the characteristics of each, hence less time required by the technician for manual review. This is an important feature when manpower is very limited

