**Flow Cytometry Calculations.**

Using flow cytometry analysis software, set up gates for beads and trypanosome cells. The proportion of beads acquired over cells acquired for a given sample is equal to the proportion of total beads over the total number of cells.

(beads acquired) = (total beads added)

(cells acquired) (total cells in sample)

Thus the total cells in the sample can be calculated as

(total beads added)x(cells acquired)

(beads acquired)

Similarly the proportion of beads acquired over switchers acquired is equal to the proportion of total beads over the total number of switchers.

(beads acquired) = (total beads added)

(switchers acquired) (total switchers in sample)

Thus the total switchers in a sample can be calculated as

(total beads added)x(switchers acquired)

(beads acquired)

One can add the total number of cells in the flow-through and the total number of cells in the eluted population together to obtain the total number of cells in the sample. To obtain the percent of switchers in the population, one then divides the calculated total number of switchers by the calculated total number of cells in the population (see for example, Table 1).