

Tips: Spiking Cells Into Whole Blood

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Note: There is no particular protocol for spiking. This article provides tips that may improve the accuracy of your spike-ins.

Depending on the lab, some prefer to pick the cells and spike (more accurate).

Others do serial dilution of the cell suspension then spike (less accurate).

Here we use a method that generally gives good precision of the number of cells spiked (in the 100 to 500 range).

1. Make sure the suspension is of single cells and not aggregates. Gently triturate to disperse the cells if necessary.
2. Determine the cell concentration (do a quick pre-count of a diluted cell sample).
3. Make an appropriate dilution so that the concentration is about 5 cells per microliter (100 cells/20 microliters)
4. Use the appropriate volume corresponding to the desired number of cells to be spiked
5. After spiking, recount at least 4 times, each with the same volume that was used to spike
6. Determine the count, standard deviation, etc...

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