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(54) Title: COUNTING PARTICLES USING AN ELECTRICAL DIFFERENTIAL COUNTER

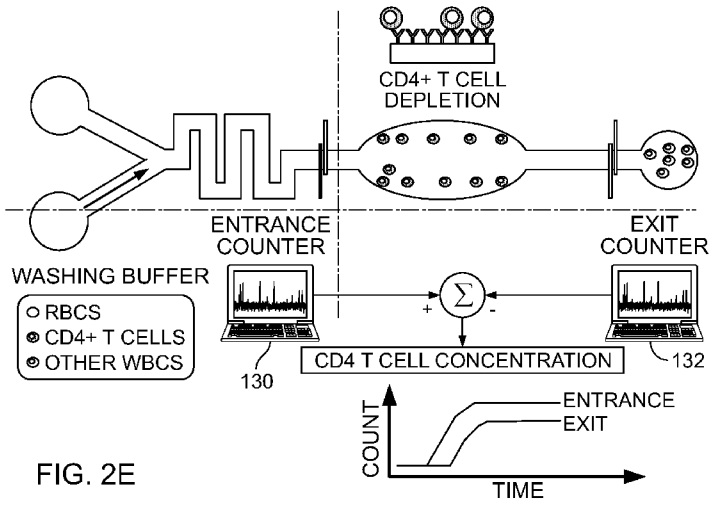


FIG. 2E

(57) Abstract: This disclosure relates to methods and devices to count particles of interest, such as cells. The methods include obtaining a fluid sample that may contain particles of interest; counting all types of particles in a portion of the sample using a first electrical differential counter to generate a first total; removing any particles of interest from the portion of the fluid sample; counting any particles remaining in the portion of the fluid sample using a second electrical differential counter after the particles of interest are removed to generate a second total; and calculating a number of particles of interest originally in the fluid sample by subtracting the second total from the first total, wherein the difference is the number of particles of interest in the sample. These methods and related devices can be used, for example, to produce a robust, inexpensive diagnostic kit for CD4+ T cell counting in whole blood samples.

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