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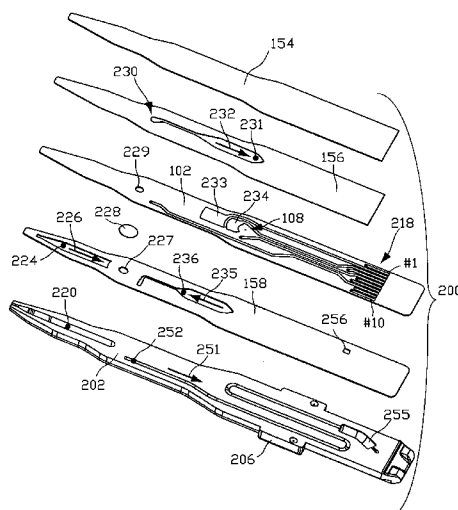
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(54) Title: FLUORESCENCE-BASED PIPETTE INSTRUMENT

FIG. 8



(57) Abstract: An improved pipette tip (276) including an elongate body stretching between a proximal end (277) and a distal end. The body typically includes a plurality of thin film layers (e.g. 154, 156, 102, 158, 202) configured and arranged to provide a fluid path extending from the distal end toward the proximal end (277). The improved pipette tip (276) includes an interrogation zone in which to interrogate fluid flowing along the fluid path. One operable interrogation arrangement, generally (100), includes structure configured to permit detection of radiation resulting from a Stokes-shift. Optionally, a sensor component may include one or more electrode (e.g. 248, 250) that is disposed in the fluid path to contact fluid therein for electrically-based interrogation. A pipette tip (276) may be embodied to: count particles, verify sample integrity (e.g. freedom from bubbles), monitor sample flow rate, and confirm an inspired volume, among other uses.

WO 2009/070246 A1