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[Continued on next page]

(54) Title: OPTICAL SYSTEMS AND METHODS FOR BIOLOGICAL ANALYSIS

(57) Abstract: An instrument for processing and/or measuring a biological process contains a sample processing system, an excitation source, an excitation optical system, an optical sensor, and an emission optical system. The sample processing system is configured to retain a first sample holder and a second sample holder, wherein the number of sample cells is different for each sample holder or a characteristic dimension for the first sample cells is different from that of the second sample holder. The instrument also includes an excitation source temperature controller comprising a temperature sensor that is coupled to the excitation source. The temperature controller is configured to produce a first target temperature when the first sample holder is retained by the instrument and to produce a second target temperature when the second sample holder is retained by the instrument.

	Transmission – Excitation Filters	
Filter No.	Low-pass wavelength	High-pass wavelength
1	460 nm	480 nm
2	510 nm	530 nm
3	540 nm	560 nm
4	570 nm	590 nm
5	630 nm	650 nm
6	652 nm	672 nm

FIG. 3

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