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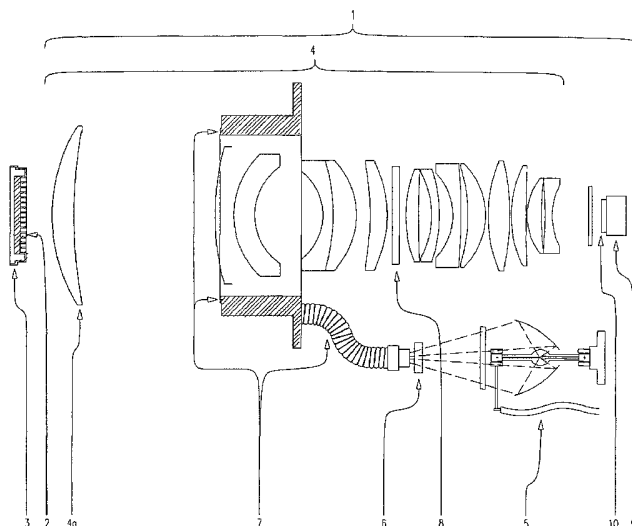
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[Continued on next page]

(54) Title: AN IMAGING FLUOROMETER FOR TIME RESOLVED FLUORESCENCE



(57) Abstract: The present invention relates to an apparatus and method for imaging time resolved fluorescence in biochemical and medical samples. In a primary aspect, the device includes a lens of large aperture, a flash lamp in the illumination path, a fast-acting solid state shutter or a gated detector in the emission path, a device for delivering homogenous monochromatic illumination to a plurality of wells distributed within a microwell plate, a digital camera of high quantum efficiency, and a computer. under computer control, the lamp is pulsed at short intervals. The fast-acting emission shutter or gated detector operates to limit exposure of the camera to a period some microseconds after the extinction of each lamp pulse, during which only delayed fluorescence is transmitted to the camera. The invention achieves simultaneous time resolved imaging of a plurality of samples, with high sensitivity and high throughput.



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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, MEDLINE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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