

Title (en)

LOW LIGHT COLOR IMAGING SYSTEM WITH COOLED INTEGRATING CAMERA

Title (de)

FARBILDAUFNAHMESYSTEM FÜR NIEDRIGE LICHTPEGEL MIT GEKÜHLTER INTEGRIERTER KAMERA

Title (fr)

SYSTEME DE PRISE D'IMAGES COULEUR A FAIBLE NIVEAU DE LUMIERE, UTILISANT UN APPAREIL PHOTOGRAPHIQUE INTEGREUR A REFROIDISSEMENT

Publication

EP 0691064 A1 19960110 (EN)

Application

EP 93917039 A 19930708

Priority

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Abstract (en)

[origin: WO9401968A1] A low light level color imaging system acquires polychromatic images of body cells at low light intensities when markers attached to the cells are illuminated. Particularly in PAP smear screening, specimens may be marked with a variety of fluorescent stains which have different chromatic signatures but which only weakly emit light from very low structural levels of the cells. The invention detects the color intensity of each stain in a specimen image, using an integrating color camera to acquire the image. The signal-to-noise ratio of the integrating color camera is enhanced by electronic cooling (50, etc.) of its imaging element (28). A single scanned image of a specimen acquired by the camera includes polychromatic information which identifies all of the fluorescent stains which mark the specimen. A multi-channel color image analyzer is configured to recognize each of the fluorescent colors produced from the fluorescent dyes and to provide a pixellated representation of the specimen image which includes all of the fluorescent colors at their image locations.

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