

MULTI-COLOR FLUORESCENT EXCITATION AND DETECTION DEVICE AND NUCLEIC ACID ANALYSIS APPARATUS EMPLOYING SAME

ABSTRACT OF THE DISCLOSURE

A multi-color fluorescent excitation and detection device comprises at least one illumination module, a cartridge and at least one detection module. The illumination module provides an illumination light at specified range of wavelengths. The cartridge comprises a detection chip comprising plural detection wells arranged around the peripheral of the detection chip. The detection chip is circular shape. Each of the detection wells is accommodated a corresponding fluorescent dye therein. Each of the detection wells includes a first wall and a second wall. The illumination light transmits through the first wall to illuminate on the fluorescent sample so as to excite a fluorescent signal, and the fluorescent signal generated from the fluorescent sample transmits through the second wall. The detection module receives the fluorescent signal and convert the fluorescent signal to an electrical signal.

Fig. 5