ABSTRACT

The fluorescence measuring device includes a continuous light source 2, an excitation light irradiation unit 3, an excitation light intensity detection unit 4, a photon counting type fluorescence detection unit 5, a rectangular wave modulation circuit 6 of the continuous light source, a timing circuit 7 that generates a rectangular wave pulse to be supplied to the rectangular wave modulation circuit and a gate pulse for signal processing, a gate counter circuit 8 that counts fluorescence photon pulse signals during the gate pulse period, a physical parameter information acquisition unit 9, and a concentration calculator 10. By digitally processing digital signals with this configuration and accurately digitally calculating and subtracting the current background photon count conversion value, it is possible to perform highly sensitive and highly accurate quantification by appropriately removing the influence of the background.

[Figure 2A, Figure 2B and Figure 2C]