

ABSTRACT

There is disclosed a multi-wavelength endoscopic system for imaging an observation site labeled with a plurality of fluorescent materials having different colors. The system includes an imaging unit configured to acquire image data by polarizing incident light reflected from the observation site in a first direction and a second direction perpendicular to the first direction, dividing a spectrum region of the incident light polarized in the first direction and the second direction into a plurality of spectrum channels and measuring the intensity of light for each of the spectrum channel. The system further includes a computing unit configured to store a single fluorescence spectrum extracted from sample image data obtained by single-treating the observation site with each of the fluorescent materials and configured to separate and output the image data obtained in the imaging unit using the single fluorescence spectrum so that each of the fluorescent materials is displayed separately.