

ABSTRACT

A non-invasive detection method, device, system and wearable apparatus for tissue element are provided. The method includes: emitting incident light of multiple predetermined wavelengths to a detected site, respectively; for each predetermined wavelength, obtaining light intensity values emitted from a surface of the detected site based on multiple photosensitive surfaces, wherein multiple photosensitive surfaces are at predetermined distances from a center of the incident light; and determining a concentration of the tissue element to be detected according to light intensity values in multiple predetermined wavelengths. Since the embodiments of the present disclosure may receive a wide range of light intensity values, the light receiving efficiency is improved, and thereby the detection accuracy of the tissue element to be detected is further improved. Moreover, since different light intensity values may be differential operated, common mode information may be eliminated, the detection accuracy of the tissue element to be detected is improved.