Technical measurement of reflectance an object for quantitative colour identification

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Abstrak

<b>ABSTRACT<b>
The color of material can be determined by using the optical system which measures the intensity of reflected light and its incident beam, and based on CIE standard developed by Newton the Quantitative identification can be found.

To carry out this measurement, an optical system was constructed using a polychromatic source light with a certain intensity, and then the light is projected to passed a surface of an object and its reflected light is were then detected using a silicon photodiode.

Before started the experimental , the set - up was tested using a material standard which has been already known its numerical data (chromaticity coordinate, X, Y, 2). In this experiment were used the material standard with numerical data X = 80.56 ; Y = 85.39 ;and Z = 90.82, however by using this set-up measurement the shows that, the chromatic and X, Y, and Z are 80.57, 85.40 and 90.84, respectively.

In this experiment a curve the curve showing relation between the percentage of optical reflectance and the wavelengths was presented. From the laboratory test we got that the experimental set up could be used for color identification purpose.

