

Colour Space Theory

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How to describe colour and reproducibly measure it? Can colour be used as a complimentary tool to assess the process or the product development? Colour spaces is an attempt to reproduce the colours based on our own colour perception. For instance, we recognise that colour can be defined in using lightness, chroma and hue attributes. So why not design a three-dimensional colour space based on these parameters, in which all real surface colours can be represented. A number of colour space systems were developed following the establishment of the CIE XYZ system. For practical day-to-day application, the CIE L*a*b* system has become the accepted method of representing the appearance of surface colours. The examples will be given of how the colour space data can complement a product assessment along with other analyses. L*a*b* data were used to monitor and to assess a colour change in the coated paper samples showing a correlation with degradation data of the chemicals in formulation.