

ABB Analytical - PUV3402 Multiwave process photometer

Color monitoring in refinery applications

Industry: Refining

Introduction

For refineries, the measurement of color in hydrocarbon liquids provides an important quality control parameter. The human eye responds to the visible region of the electromagnetic spectrum (400-700nm). The dispersion of white light through a prism, which results in a “rainbow” of colors as shown in the drawing below, represents a familiar example of visible light.

The observation of color arises from the absorption and emission of light by a sample. The intensity of the absorption of light at a characteristic wavelength is proportional to the intensity of the color. The property normally measured in refineries is the degree of yellowness of oil and gasoline samples. Color measurements can be made on-line with a visible photometer by comparing the intensity of light at a specific wavelength with a color standard.



