

TITLE: L* is a valuable component for color

ABSTRACT: The human eye is very adept at detecting small color differences and matchings. Instrumental color analysis, coupled with advanced plastic article fabrication techniques, provides a potentially useful way of minimizing the occurrence of these differences during the fabrication process. One instrumental color analysis characterizes colors by establishing a standard observer and defining color space into the "XYZ" coordinates. Thus, the CIE 1931 Standard Observer is also known as the CIE 1931 2° Standard Observer. A more modern and valid alternative is the CIE 1964 10° Standard Observer.

CIELAB, or CIE L* a* b*, system contains three axes. The L* axis is a gray scale with values from 0 (black) to 100(white) while a* (red/green) and b* (yellow/blue) axis define the hue scales for plastics colors. The aesthetic value of the L* is often taken for granted because of its achromatic property. The hue impact of the other colors measured in the a* and b* scale more often have a defined market value to the plastic end uses. A review of L* is done with some examples in the plastics market to highlight how a plastic's brightness has marketable merits.

AUTHORS: Susan Green, Sara Hoerrner, Philipp Niedenzu, Len Redkoles

PRESENTER: Philipp Niedenzu