Applications Note

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# AnLab Color Scale

## Background

The Adams-Nickerson or AnLab Color Scale is a Munsell-based color scale. This color scale has 92 units between black and white.

The AnLab Color Scale is normally expressed as $L_A$, $a_A$, and $b_A$. It is an opponent-color system similar to the other Lab systems.

## Conditions for Measurement

**Instrumental:** Most HunterLab color measurement instruments. Availability may depend on the software package.

**Illuminant:** Any

**Standard Observer Function:** 2 or 10 degree

**Transmittance and/or Reflectance:** Either.

## Formulas

$$L_A = 9.2\ V_Y$$

$$a_A = 40\ (V_X - V_Y)$$

$$b_A = 16\ (V_Y - V_Z)$$

where

$V_Y$ is the value function for lightness

$V_X - V_Y$ is the red-green chromaticity

$V_Y - V_Z$ is the yellow-blue chromaticity

V is the Munsell value function for which $X/X_n$, $Y/Y_n$, or $Z/Z_n$ - $1.2219V - 0.2311V^2 + 0.23951V^3 - 0.021009V^4 + 0.0008404V^5$.

## Typical Applications

This color scale is no longer used very often. This color scale may be used for measurement of the color of any object whose color can be measured.

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