BCU – Baking Contrast Units

Measuring BCU lightness of bread tops.

BC or BCU – Baking Contrast Units is defined as:

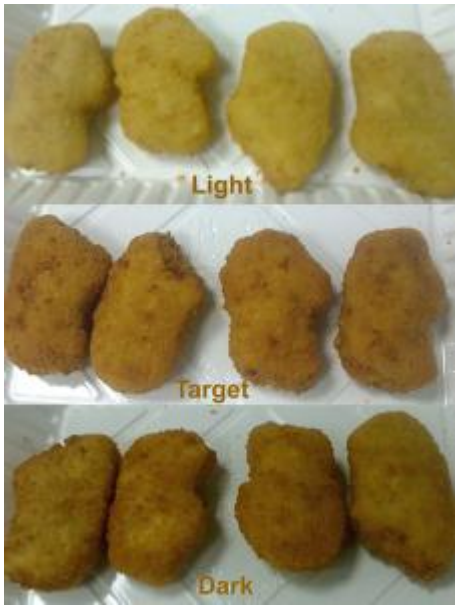
BCU = $\log_2$ (Y/2.5)

where Y = CIE Tristimulus Y brightness value for D65/10 illuminant/observer conditions

The BCU range will be from 0.00 (darkest) – 5.25 (lightest) BCU.

Baking Contrast quantifies lightness of baked crust, crumb and similar applications. Monitoring lot differences in fresh bread and cookies is a typical application but BCU can be applied to any baked product to monitor browning in baked products.

A difference of 0.1 BCU units is estimated to be a visual difference in the product.



Breaded chicken meat nuggets showing Light-Target-Dark grades

Typical acceptable differences are larger and user-defined for a given baked product.

Implementation of BCU in HunterLab Instruments

The portable MiniScan EZ 45/0 LAV and the mini-bench ColorFlex EZ 45/0 LAV are typically used for baking applications with firmware modification to add BCU as a color scale.

- CMR-3115 BCU-Baking Contrast Units for MiniScan EZ 45/0 LAV
- CMR-3116 BCU-Baking Contrast for ColorFlex EZ 45/0 LAV

Provides modified firmware to include the BCU-Baking Contrast Units scale D65/10 used in measuring baked crust, crumb and similar applications.