



Tomato Paste Reference Tile

Certificate of Traceability

The spectral values of this glazed ceramic tile were assigned relative to a transfer standard whose reflectance was referenced to that of pressed polytetrafluoroethylene (PTFE) powder that serves as an absolute standard of reflectance. The 45°/0° Reflectance Factors of pressed (PTFE) are published in NIST Technical Note 1413 (1995). The PTFE was pressed in accordance with ASTM E259-98 (2003).

The transfer measurements for this Tomato Paste Reference Tile were made using a HunterLab ColorFlex® EZ spectrophotometer having a 45° influx / 0° efflux geometry and a 25 mm diameter viewed area. Spectral reflectance data was collected at 10 nm increments from 400 nm to 700 nm.

From the spectral measurement, ASTM E-308 methods were used to calculate HunterLab L, a, b color values for the CIE Illuminant C and 1931 2° Standard Observer. A temperature of 23 °C +/- 1.0 °C was maintained during the assignments.

The expanded uncertainty in this assignment includes calibration uncertainty and transfer uncertainty which were combined using methods described in the NIST TN1297 "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results" expressed at a 95% confidence level with coverage factor k=2.

Tomato Paste Reference Tile L, a,b Values			
Serial Number	L	a	b
HunterLab Units			
Expanded Uncertainty			

Date of Issue:

Date of Expiration:

Calibration Lab Manager
Hunter Associates Laboratory