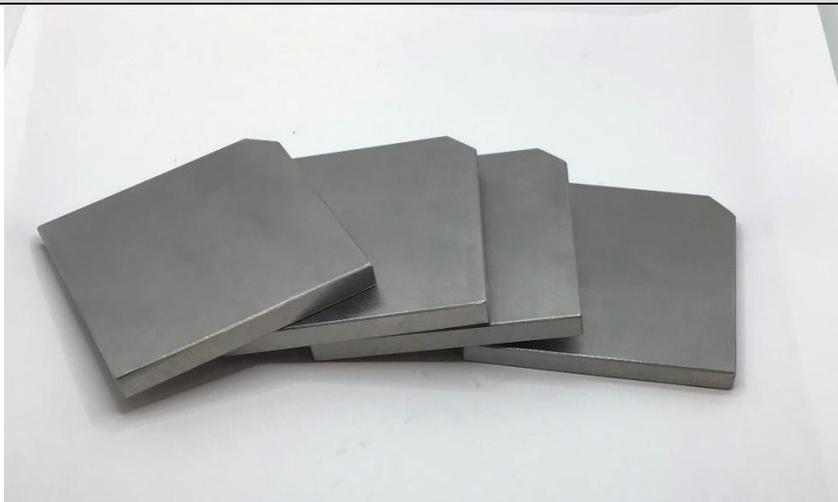


07/14/2025 (Rev 2)

Topic: Grease Color

### Colorimetry Spacer Calibration Update



**Figure 1: Colorimetry Spacers**

#### **Introduction:**

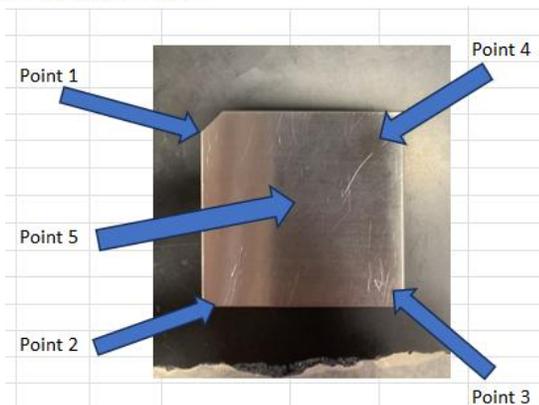
This technical bulletin describes the new method and differences for Colorimetry Spacer Calibration.

#### **Background:**

The Grease Thief Colorimeter combines a color scanner and an arbor press to prepare a grease sample to a controlled thickness for a path length-specific optical measurement. The Colorimetry spacers create these defined spacings, making them a crucial part of the testing. Historically, MRG Laboratories has calibrated all of the spacers together in one piece with calipers. The new calibration method will be to measure each spacer at five points with a micrometer, as seen in Fig. 2.

#### **The Concern:**

MRG Laboratories has become concerned with the old calibration method since it does not account for individual spacers being out of calibration. In this scenario, the calibration could pass while two spacers could be failing. MRG Laboratories has determined that using this new method with a micrometer and a 5-point measuring system and  $\pm .0005$ " tolerances is best to determine whether the spacer is consistent over the surface area of its faces. The consistency over the entire face is important to having accurate readings which the previous method using calipers was unable to do. The older sets are made from tool steel, which has the potential to wear which change dimensions. The new sets will be made from stainless steel and are less prone to wear.



**Figure 3:** Measured data of 5 points

Spacer	Machined Thickness	Tolerance
Spacer A	0.2500	+or- 0.0005
Spacer B	0.2450	+or- 0.0005
Spacer C	0.2400	+or- 0.0005
Spacer D	0.2150	+or- 0.0005
total	0.9500	

**Figure 2:** measurement values per spacer

**What does this mean to you:**

As of March 30, 2025, MRG Laboratories has started using this method to validate all spacer sets in the interest of providing more consistent and trendable data. With the newer sets being made of stainless steel, they are more resistant to wear and dimensional changes.

**Recommendations:**

It is recommended that customers measure each of their spacers on a yearly bases to verify calibration and evaluate whether they are still sufficient for testing or need to be replaced. MRG Laboratories can assist customers in checking the calibration of the spacers if they are sent to the laboratory. Upon passing, a certificate of conformance will be issued.

**Questions or requests for more information may be directed to:**

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**Keywords**

*Color change  
 Grease Colorimetry*