

LINEARITY GUIDE

Matrix Alignment:
Good

Linearity:
Good

Exposure:
Good

After opening your calibration slide image in the ChromaCal Image Calibration software, achieve a Matrix Alignment = "Good" before relying on the Linearity result.

The Linearity result has one of three possibilities:

Linearity Result	Guidance on Linearity Result
<p>"Good"</p> <p>You can proceed with color-calibrating your specimen images.</p>	<p>For the microscopy session in which you captured the calibration slide image, your imaging system has been assessed as linear. As a result, you can proceed with color-calibrating your specimen images</p>
<p>"Within Tolerance"</p> <p>Although your imaging system is not capturing linear images, it is within an acceptable tolerance.</p>	<p>For the microscopy session in which you captured the calibration slide image, your imaging system is not capturing linear images. <i>However, the linearity result is within an acceptable range</i>, and therefore you can proceed with color-calibrating your specimen images.</p> <p>Note: Your linearity result may be due to the settings or capability of your camera, or how well-aligned the grid squares are within your color circles in the matrix. If further alignment does not improve the result, then the issue is likely with your camera and camera settings.</p>
<p>"Poor"</p> <p>You cannot color-calibrate images if your linearity result is poor.</p>	<p>For the microscopy session in which you captured the calibration slide image, your imaging system is not capturing linear images. <i>Further, the linearity result is outside an acceptable range</i>, and therefore you cannot proceed with color-calibrating your specimen images.</p> <p><i>Guidance on correcting for non-linearity:</i> Your linearity result may be due to the settings or capability of your camera, or how well-aligned the grid squares are within your color circles in the matrix. If further matrix re-alignment does not improve the result, then the issue is likely with your camera and camera settings.</p> <p>As a first step in troubleshooting, look for a gamma setting in your camera acquisition software and be sure it is set to a gamma of 1 (one). Also, the contrast settings in your acquisition software should be set to "high" or "linear".</p>

To see a graphical representation of the Linearity result, access **Tools / Show Linearity Plot** from the Main Menu Bar.

