

Chromatic Aberrations

The most common type of chromatic aberration (also known as “Purple fringing”) in digital cameras is a purple glow that appears on the edges of high contrast areas of the image. This is especially true if the subject is backlit (the light comes from behind).

Aberrations can appear in other colors as well, such as the cyan/green and red fringing. These aberrations occur most often in consumer and prosumer digital compact cameras, but even the higher end Digital SLRs cameras can suffer from them as well.

Hue and Saturation

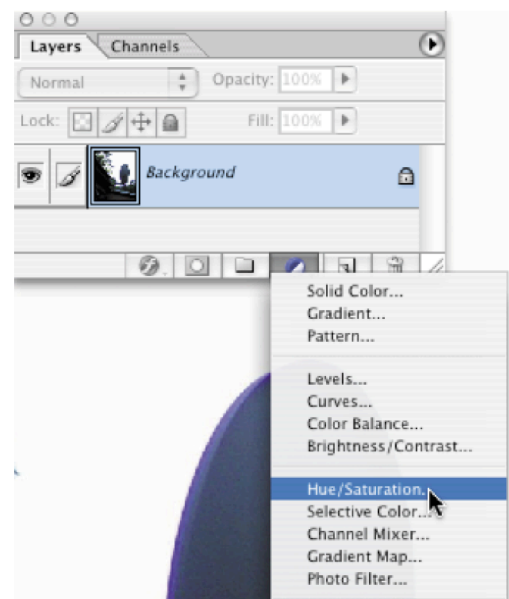
This technique replaces the chromatic aberration color with a lighter or darker shade of gray. While it does not completely fix the problem, it can do a very good job at making it less visible. And if your image has a mixture of color aberrations you may be able to remove them all at once.



This first example will affect all sampled colors throughout the image. Not just the areas sampled. So you will want to go over the offending areas carefully.

1. Open the file.
2. So you can see the chromatic aberration clearly, zoom the image to 100% by double clicking on the magnifying glass tool.
3. Add a Hue and Saturation Layer from the Layers window.

The Hue/Saturation dialog box will appear.

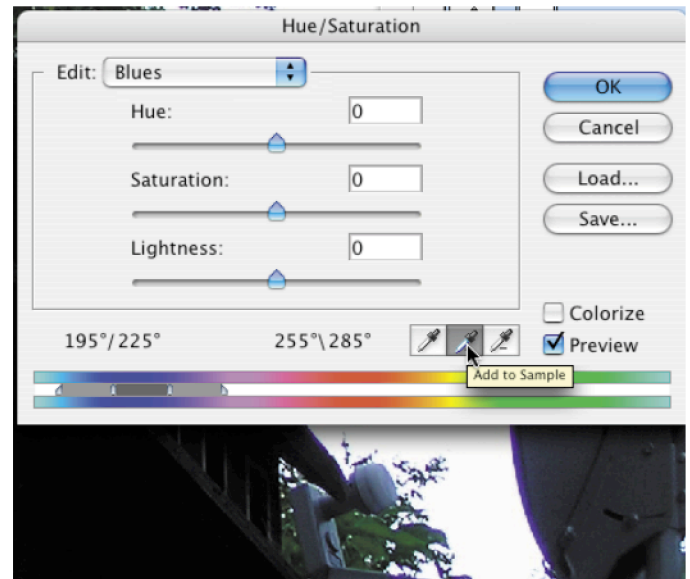
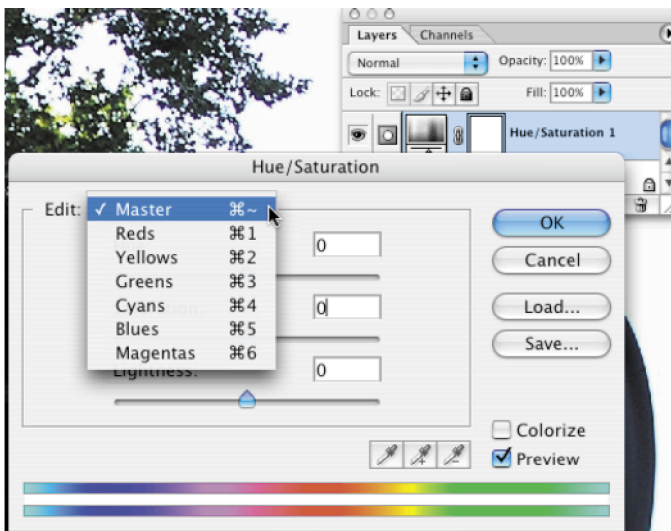


Chromatic Aberrations - Hue and Saturation

4. Click the Master Color down arrow to reveal the other colors. Choose the fringe color that appears in your image. In this example I chose blue, which is really what we would call purple.

5. Select the Eyedropper tool with the plus sign on it. Click and drag over the color fringe areas.

Notice how the Rainbow color range indicator at the bottom of the dialog box expands too included a wider range of colors as you sample the fringe. The blue color has changed from pure blue to include magentas. You can drag the sliders yourself to enlarge the color spectrum yourself, but be sure to stay in the offending color range.



6. Slowly move the Saturation slider to a negative number and the Lightness slider to a negative or plus number, depending on whether or not you want to darken or lighten the selected pixels.

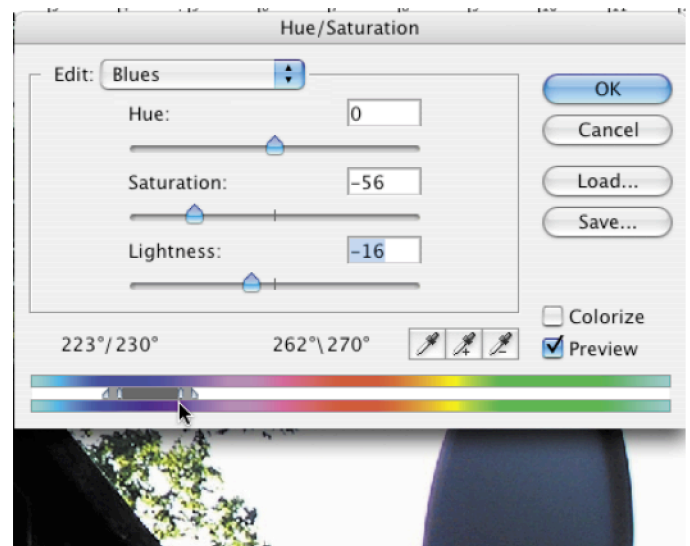
7. Move the image around the screen to make sure all the chromatic aberration is eliminated from the whole image.

Click the preview button on and off while over each area to see what effect your changes have on the surrounding areas of the image.

The goal is to remove or reduce the aberrations without affecting (or limiting the effect) the colors in other areas of the image.

8. Once you see that the chromatic aberration has been removed, click OK.

9. Save the image.



Chromatic Aberrations - Color Range

Another way to do this which gives you a lot more control is to use the Color Range option. When using Color Range you will select the areas of offending color to be adjusted.

Once the offending areas have been selected, a Hue & Saturation layer is added and adjusted as needed. The adjustments you make will be limited to just the selected areas, not the entire image.

1. Open the file

2. So you can see the chromatic aberration clearly, zoom the image to 100% by double clicking on the magnifying glass tool.

3. In the Select Menu, Choose Color Range
The Color Range window appears.

4. In the Select option, Choose Sample Colors

Set the Fuzziness setting to about 5, and click the Selection Button. Selection Preview should be none.

Note: The higher the Fuzziness setting the more colors are selected. It's kind of like the Tolerance setting for the Magic Wand.

5. Select the Eyedropper with the plus sign.

