IMAGE MANIPULATION

Remove yellow from certificates using GIMP – Technical approach

I'm going to show one of several ways to remove yellow from certificates using GIMP, the *most robust* FREE image editing software that I've found. I am going to assume you are scanning certificates, but the following technique works equally well with camera images.

Open an image with a lot of yellow now. (Always keep a copy of the original for awhile in case the result is not want you want.)
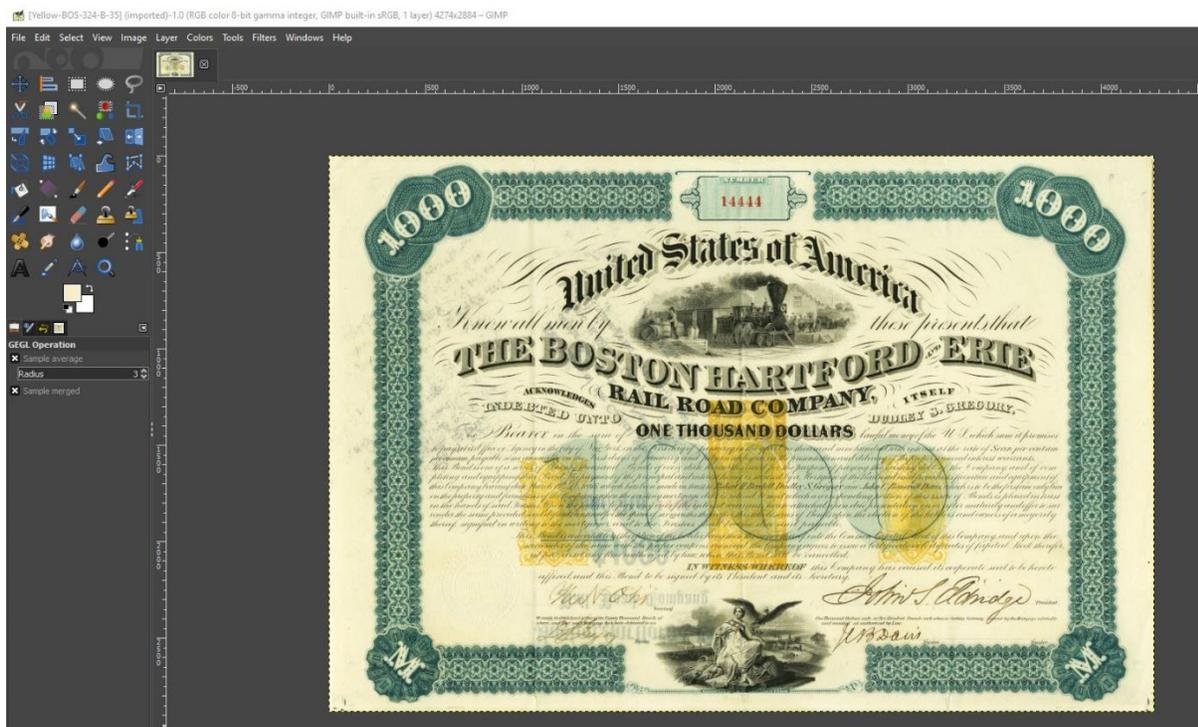
Select **Tools > Color Picker** In the top menubar.
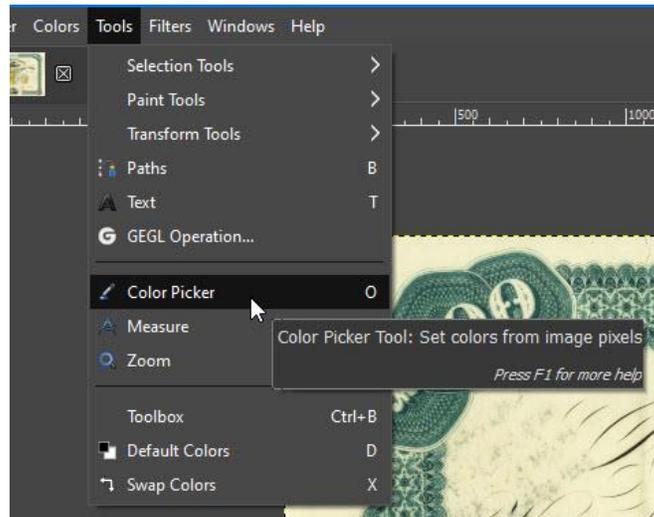
As soon as you click on Color Picker, a new box will open in the left panel. Click **Sample average**. Click **Pick only**. Click **Use info window**. Click the "up" arrow in the "Radius" box and increase the number to about 10.
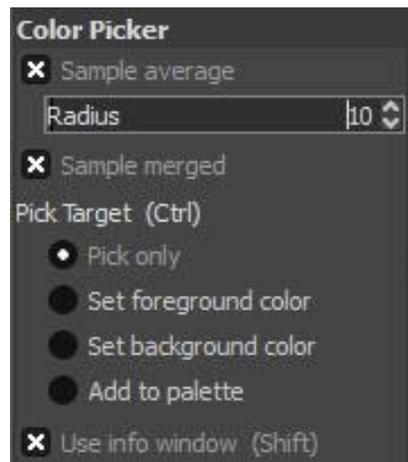
Now find a blank area of your certificate that displays a large patch of yellow paper and click to sample.

A Color Picker info box will open and will resemble the one shown below. In this example, note the values on the right side indicates that the average of red in the area selected was 95.3% and green and blue were lower.
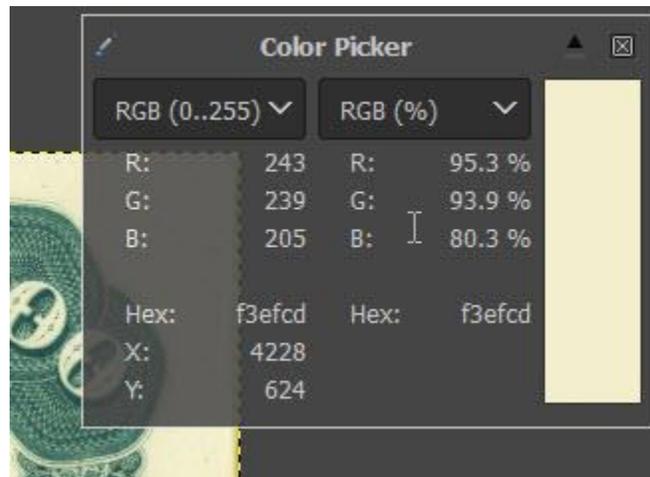
Without going back to the Big Bang to explain a lot about color theory, calculate the DIFFERENCE between red and green and between red and blue.

- Green is 1.4% lower than red (95.3% - 93.9%)
- Blue is 15.0% lower than red (95.3% - 80.3%)

With specific percentages, we can make the paper look much whiter by:

- increasing the amount of green in the image by 1.4%, and
- increasing the amount of blue in the image by 15%

That's all the math we need.

Select **Colors > Color Balance…** in the top menubar.
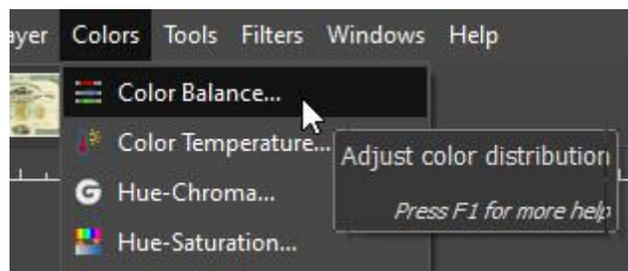
…and the Color Balance dialog box will open. Click on **Highlights**, unclick **Preserve luminosity** and unclick **Blending Options**.
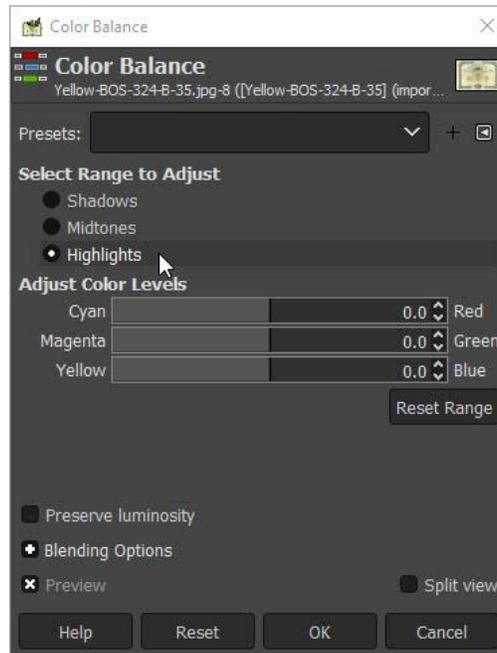
Notice three sliders in the middle of the panel. All their values should be set to 0.0.

Move the sliders to the right using the calculations from above:

- increase the amount of green by 1.4%, and
- increase the amount of blue by 15%
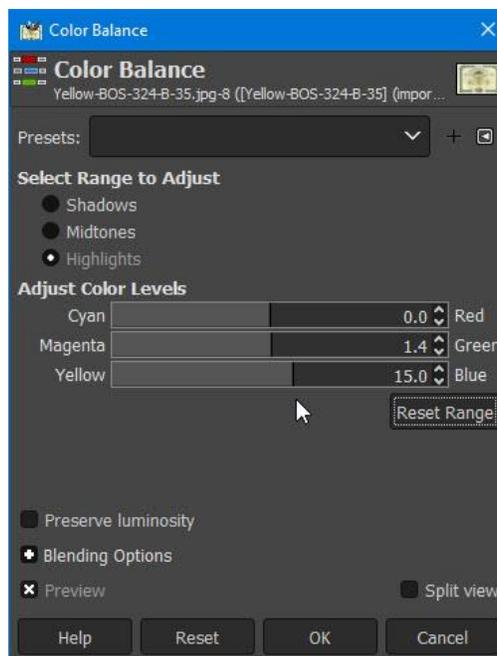
GIMP likes to work in whole units, which is okay. But if you want to work in decimal units like shown above, just double-click the numerical values in the sliders and insert your own.

DO NOT CLOSE YOUR COLOR BALANCE BOX YET. At this point, the paper is unnaturally white.

You will need to restore some yellowish paper color to make the certificate look more natural. To restore some of the certificate's natural appearance, move the sliders back about halfway.
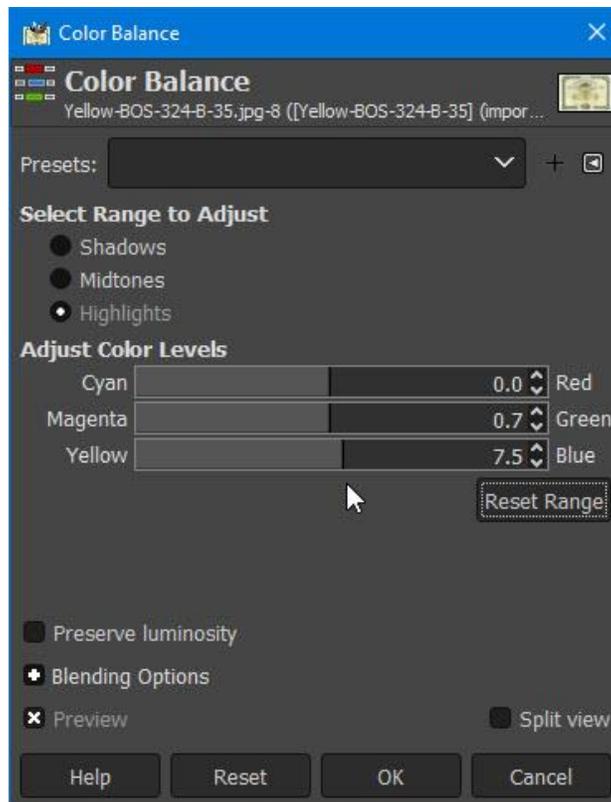
When finished, click "**OK**." The certificate color will now look more realistic and some of the yellow will be gone.

Of course, feel free to increase or decrease yellow to match your certificate better.