Using CMYK to fix Skin tones

When I do my edits in Photoshop most of the time I tend to judge colours by eye, but if the background contains a strong colour this can 'trick' your brain and as a result your skintones can be way out.

Here's an example: this is the image of Kelly I used on Wednesday for this demo. The strong green foliage can confuse the brain and make getting the skintones correct difficult. Skin often appears too red/magenta.

Fortunately, there is a scientific way of checking these values.

Data has been collected for the differing CMY and K values of skin to produce a range of values depending on their ethnicity.

Table 1

SKIN COLOR PERCENTAGE CHART		
WHITE: CYAN: 7-10%	• MAGENTA: 20-27% - YELLOW: 30-45% - BLACK: 0%	
BLACK/AFRICAN: CYAN: 28-34%	• MAGENTA: 70-78% - YELLOW: 75-83% - BLACK: 22-26%	
ASIAN/HISPANIC: CYAN: 10-15%	• MAGENTA: 30-36% - YELLOW: 40-46% - BLACK: 0%	
WHITE BABY: CYAN: 0%	• MAGENTA: 16-35% • YELLOW: 18-38% • BLACK: 0%	
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So how do we go about using this table?

Open your image and choose the eyedropper tool (just above the spot healing brush).

Shift+click on a 'diffuse highlight' – an area of the skin not too bright, nor in shade. Avoid foreheads and the bridge of the nose. I selected a point on the arm. This sets down a reference point.



The info dialogue box opens and now we want to change the RGB values to CMYK using the little dropdown arrow beside the #1 eyedropper.

Open a curves adjustment layer. Select the Green curve as we are going to start by modifying the Magenta (the opposite of green). Cntl+click on the reference point – this should set a point on the curve. Use the arrow keys to get the value within the range set out in the table.



Next we will sort the Cyan by opening the Red curve and Cntl+clicking on the reference point on the image. Use the arrow keys to get the value within range.

Do the same for the Yellow value using the Blue channel. The amount of yellow in the skin can fall within a very broad range so use a value you think looks natural.



Now, if any of the colours are now out with the range we can go back into that curve and re-adjust it. NB – do not Cntl+click on the reference point again as it will make a second point on the curve, which we don't want! Just click on the little square on the curve to make it active and use the arrow keys to get it back within range.

I have found that choosing the right part of the skin is critical – if the area is quite light then the curves adjustments will not only fix the skintones, but also brighten the whole image.

NB. To get rid of the original reference point, reselect the eye dropper tool and shift+drag the point off of the image.

Advanced Finishing Touches - Now the skintones are correct the background may need to be altered to look more natural. Here I made a Stamp layer which combines all the layers into one new layer on top by holding down Alt and clicking Merge Visible from the dropdown on the layers palette.

I then made a selection using Select>Color Range and chose Skintones from the dropdown menu. We want the background selected so Select> Inverse and I then did a Hue/Saturation/Lightness adjustment moving the master Hue slider to the left to warm the background. I also chose the greens and moved the Hue to the left a bit, too.

I thought the resulting skintones looked a little too cool so I disabled the stamp layer and reduced the opacity of the curves layer to add back a little bit of warmth. This could also be done using the Photo filter adjustment layer.



Done!