

Description

When you open Photoshop, you are prompted to choose between RBG and CMYK. At first glance, these may seem like options you can ignore- arbitrary and without impact. However, they are not. Each represents a different approach to color in terms of how it is created and displayed. Journals are meticulous about figures. For example, the *Biophysical Journal* requires all submissions to be in the RBG format. The journal previously required images to be submitted in RBG, converted to CMYK, and then converted again to RBG for online publications. However, this resulted in a loss of image quality, prompting the journal to change its submission requirements. What are RBG and CMYK anyway, and why should they matter?

Different Types of Figures Used in Journal Articles

RBG stands for red, green, and blue and is a light-based color combination. These are the basic colors that are added together to create new ones (for examples, red + blue = magenta). When red, blue, and green are combined to their fullest amounts, you get white because RBG is a light-additive color model. There are 256 levels of brightness in the RBG spectrum. Setting each color to “0” generates black while setting each color to “255” generates white.

CMYK is more complicated. CMYK stands for cyan, magenta, yellow, and black, which are used as filters for white light. It is a subtractive model, meaning you have to reduce the amounts of each to get a lighter color. Combining all colors at 100% will result in black.

RBG is used most often in online program, while CMYK is used in printing. Therefore, images displayed on computer monitors may not the match prints, unless RBG is converted to CMYK. This is why journals are so picky about which spectrum to use because the images lose certain qualities when converted (especially black, because RBG doesn’t have a black channel). Journals are strict about image formats for submission.

So, Which One is Better?

There is no hard and fast rule to choose between RBG and CMYK, although RBG is claimed to be superior because of our digital world. Steps are being taken to address the problem of conversion. Images in RBG format are also required by the *Journal of Cell Biology*, which has decided to make

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electronic versions as the standard instead of print. RBG also has the widest range of available colors, and even Elsevier has made it its standard. However, journals that print their publications will still use CMYK because it looks better in print. Thus, the answer depends on the purpose.

Tips for Figures

- Make sure that the format you are using is according to the journal's specifications. Keep in mind that journals have different requirements.
- If you're using Photoshop or Adobe, it's better to use the RBG spectrum, even if traditional conventions dictate the use of CMYK.
- Once your images are rendered, it is best to arrange them in a chronological order in your manuscript. Add labels or footnotes under each image to describe your image.
- Journal guidelines will specify where images should be placed: either within the text or after the references.

The choice between RBG and CMYK is guided by the journal requirements. Images in both print and digital journal articles play an important role to represent research findings. If you have more tips to share, write in the below comment section!

Category

1. Figures & Tables
2. Reporting Research

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