

# Re: RGB conversion to 8 bit gray scale

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*Source:* <http://sci.tech-archive.net/Archive/sci.image.processing/2005-09/msg00121.html>

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- *From:* "toby" <[toby@xxxxxxxxxxxxxxxxxxxxxx](mailto:toby@xxxxxxxxxxxxxxxxxxxxxx)>
  - *Date:* 23 Sep 2005 21:27:57 -0700
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sean\_incali wrote:

- > IMAGEJ doc's says...
- >
- > RGB images are converted to grayscale using the formula
- >  $\text{gray} = 0.299\text{red} + 0.587\text{green} + 0.114\text{blue}$  or the formula
- >  $\text{gray} = (\text{red} + \text{green} + \text{blue}) / 3$
- > if "Unweighted RGB to Grayscale Conversion" is checked in
- > Edit/Options/Conversions (ImageJ 1.32g or later).
- >
- >
- > I think This isn't limited to IMAGEJ but to imagin processing in
- > gfeneral? what is the reason for the weighted vs unweighted conversion?
- >
- >
- >
- > When is an appropriate time to use the unweighted conversion method?
- > (or for that matter when is appropriate to ue the weighted conversion?)

Those commonly used weights correspond to NTSC TV, and don't necessarily correspond to a perceptual or other tristimulus models.

See:

[http://www.poynton.com/notes/colour\\_and\\_gamma/ColorFAQ.html#RTFToC9](http://www.poynton.com/notes/colour_and_gamma/ColorFAQ.html#RTFToC9)

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- >
- > ...
- >
- > sean

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- *References:*
  - ◆ [RGB conversion to 8 bit gray scale](#)
  - ◇ *From:* sean\_incali

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