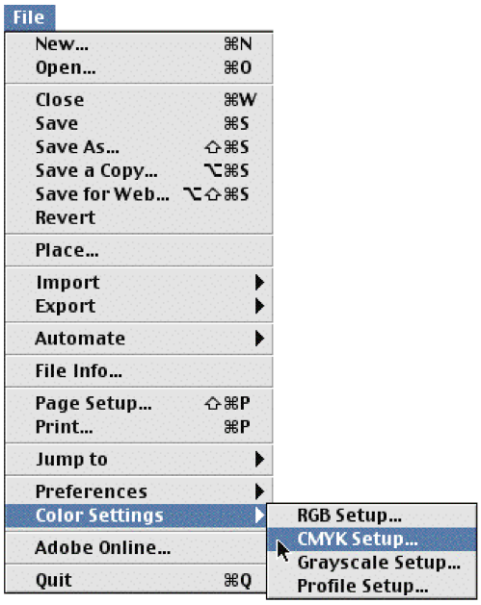
Convert to CMYK TIFF File

3/3/05

Application: Adobe Photoshop 4.0 or higher is recommended. Version 5.5 was used for this document.

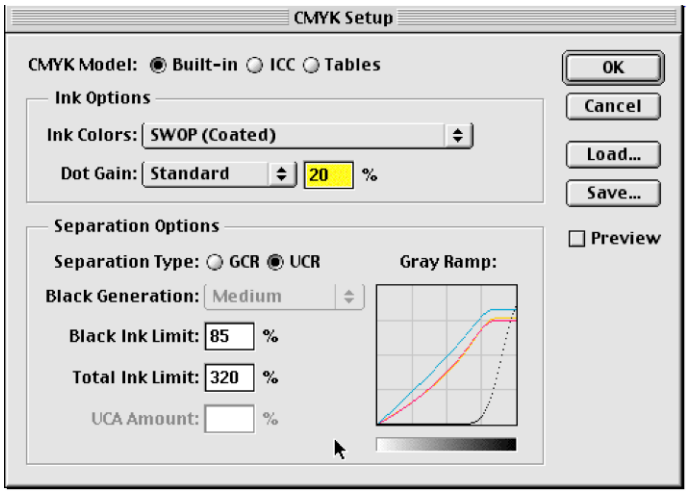
1. Launch the Adobe Photoshop application.
2. Select File > Open from the menu bar and establish path to the desired file(s).

Step 1: Select CMYK Setup



1. From the Photoshop File menu:
   Select: Color Settings > CMYK Setup . . .

Step 2: Edit/Confirm CMYK Settings



1. Choose Built-in for CMYK Model
2. Choose SWOP(Coated) for Ink Colors
3. Choose Standard 20% for Dot Gain
4. Choose UCR for Separation Type
5. Set Black Ink Limit to 85%
6. Set Total Ink Limit to 320%.
7. Click OK

Step 3: Enable the gamut Warning Option

1. In the Photoshop View Menu:
   Select: Gamut Warning

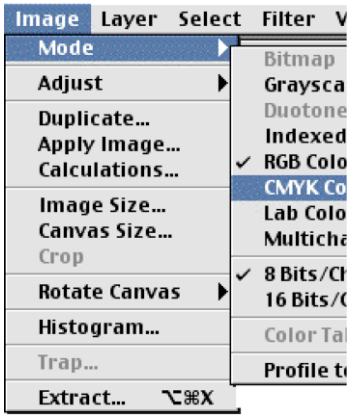
The Gamut Warning option allows you to see which colors will be difficult to reproduce when the image is converted to CMYK.

Potential problem colors will be identified in two places:

1. In the color Picker when you create a new color
2. Colors in the actual image will be indicated with a specific color (you can edit this color in the Transparency & Gamut preferences panel).

If your image has any color that will be reproduce poorly, be sure to edit the image by adjusting the color curves or changing the saturation, contrast, or brightness, before converting to CMYK.

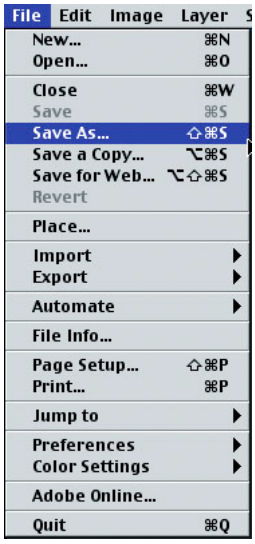
Step 4: Convert the image to CMYK



5. In the Photoshop Image Menu:
   Select: Mode > CMYK

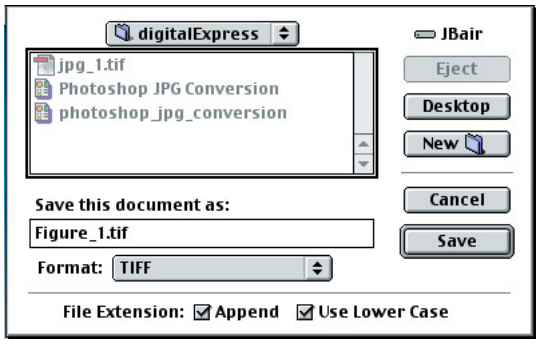
If any of the colors in the image were outside the gamut of CMYK colors you will see a shift in saturation of those colors. Make sure that these areas of color still clearly show your scientific data. You may have to edit the image by adjusting the curves or changing the saturation, contrast, or brightness.

Step 5: Save the File as a TIFF



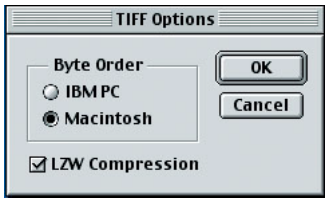
1. From the Photoshop File menu:
   Select: Save As . . .

Step 6: The "Save As" Dialog Window



1. Set the file path
2. From the Format menu: select: TIFF
3. Click the Save button

Step 7: Set TIFF Options



1. Select Macintosh Byte Order
2. Select LZW Compression
3. Click the OK button