

# IFT Scientific Journals: Graphics Guide

Updated February 1, 2013

In order for us to make accurate and informative use of the graphics you include in your research paper, certain guidelines must be followed in their preparation and transmission.

Our intention is to move your paper through production and publication as swiftly as possible. The procedures mentioned below will help us to do this, and maintain the quality of your images as well. We will size your graphics large enough to be legible for the reader, but small enough to be economical.

# **Graphic and Editorial Style**

## Line thickness

Be sure that line-weight used in graphics is thick enough to be seen and understood when the entire graphic is reduced to publishing size, which is usually about 3.5-in wide. The final line thickness should be at least .5-point, and preferably 1-point. A rough way to test this is to print a copy of your graphic, reduce it on a photocopier to a size shown below, and see whether lines and text are readable.

## Color

The vast majority of figures used in IFT's scientific journals appear in black and white. This usually keeps graphics simple and easy to comprehend. It also keeps graphics files smaller, making them faster to upload and open *(see Technical Specifications section).* By default, we will publish figures submitted with color, in color online but grayscale in print, except where color is necessary for readers to interpret the figure. If there is a need to differenti–

ate bars in a bar chart, use solids and crosshatching as much as possible, and shades of color that will easily be distinguishable in grayscale where necessary. Use color in photographs, but keep in mind that increased publishing and reprinting charges will apply if color is necessary in the print edition.

## Wording style

All labels, call-outs, and so on should reflect the CSE style mentioned in each journal's Author Guidelines.

#### Lettering style and size

Use a sans-serif typeface such as "Helvetica," "Swiss," "Arial," or "Univers," whenever possible, making axis labels bold, upperand-lower-case, and axis units non-bold. Avoid system- or dot-matrix-type fonts. For special characters, use "Symbol" or "Mathematical PI" only. Lettering should be no smaller that 6 points (1/16-in or 1.6-mm) in final, printed size. On axis labels, keys/legends, and call-outs, use all lower-case letters with the first letter capitalized and no period (full stop). Units should have a single space between the number and the unit, and follow SI nomenclature. No comma separator should be used in thousands.

#### Legends/Keys

Place legends and keys inside the perimeter of graph whenever it does not obscure data. This will allow the graphic itself to be used as large as possible within the column widths of the printed page. If not able to be placed within the graph, please place the key/legend across the bottom of the figure, below the bottom axis



Figure 1–Changes in total anthocyanins, total acids, and total stilbenoids during storage at 8, 21, and 30  $^{\circ}$ C

Figure 1–Changes in total anthocyanins (a), total acids (b), and total stilbenoids (c) during storage at 8, 21, and 30  $^{\circ}$ C

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label. List and define symbols and line characteristics in the key/ legend *instead* of in the figure caption itself, because our typography may not accurately duplicate symbols used within graphics.

# **Technical Specifications**

Though there are many graphic production software products, they produce only two types of graphic-file formats. One is "ras-ter" or "bitmap" images and the other is "vector" images.

Raster/bitmap images (such as .TIFF and .JPEG) are made of dots or pixels, and are good for photographs and other grayscale images. However, they are sensitive to scaling and can "pixellate" or develop stepped or jaggy qualities when enlarged too much.

Vector-format files (such as Postscript, .EPS, and .PDF) actually describe the lines/text embodied in the image, and thus can be edited and sized at will. Resolution is not an issue.

# Resolution

In general, we need a minimum of 300 dpi (dots per inch) in *final* size for bitmap/raster images. However, if the figure contains text, it should be 600 dpi, and if it contains fine print or lines it should be 600 dpi when it appears in final size.

A simple formula to help determine dpi during reduction or enlargement: DPI refers to the *density* of pixels in an image. If your image has to be enlarged to 200% of its original size, the dpi will be 50% of its original amount. And, conversely, if we use your image at 50% of its original size, your original dpi will be doubled.

Vector files (.PS, .EPS, .PDF) do not require exact resolution.

# Size (final)

Sizing can be estimated by looking at any current issue of our scientific journals for examples of graphics similar to yours. Generally, figures with less detail will be reproduced smaller than those with more detail. The online edition of the journal uses pop-out windows for readers to see enlarged figure images on screen; the downloadable PDFs and the print edition size all graphics to fit into one or two columns.

#### File format

If you create your graphics in Canvas, DeltaGraph, Tex/La-

# Standard figure widths (heights will vary)

20 picas, 7.5 points (3.438 in, or 87.3 mm) *-for most graphics*  TeX, ChemDraw, or SigmaPlot, please convert these to .TIF or .EPS formats, using the "save as," "export," or "print to file" function. Do this *before* embedding them in a word–processing document or save them as separate graphic files.

If the graphic is created in a spreadsheet program, we prefer that you either (1) copy and paste the graphic into a drawing or painting program, then save as a high-resolution TIFF, or (2) print to a PDF, then send/upload it as a separate file. We can also use separate Microsoft Excel<sup>®</sup> files.

# Embedding

Upon acceptance you will need to provide IFT with final, publishable files. The graphic elements in these files should be provided one of only two ways: (1) All embedded in the text file, or, (2) All in individual files, separate from the text file.

## Grouping

If you choose to embed the graphics in your text file, please follow these instructions: (1) if the graphic is created in the word– processing program itself, please "group" all the elements of each graphic together to aid in extracting it from the file. (2) If the graphic is created in another program, please either "export to," "save as," or "print to file" as a high–resolution TIFF, or a Post– Script file, then insert it in the text file.

## Naming files

When uploading individual graphics files, please name each file beginning with the 8-digit manuscript number, followed by an identifier such as "-fig1" or "-eq1". Be sure also to leave the extension on the file name (.TIF, .EPS, .PDF, and so forth). This should result in a name such as this: "2013-0123-fig4.tif".

## Equations

If you have equations that can be represented using typed text, please do so instead of using any equation editing function of software. If equations are too complex to be typed, use an equation editor and use the same typeface as the body type.

# **Queries?**

Any further questions should be sent to the editorial office at jfs@ift.org.

42 picas (7 in, or 177.8 mm) *—for large, complex, or multipanel figures*