

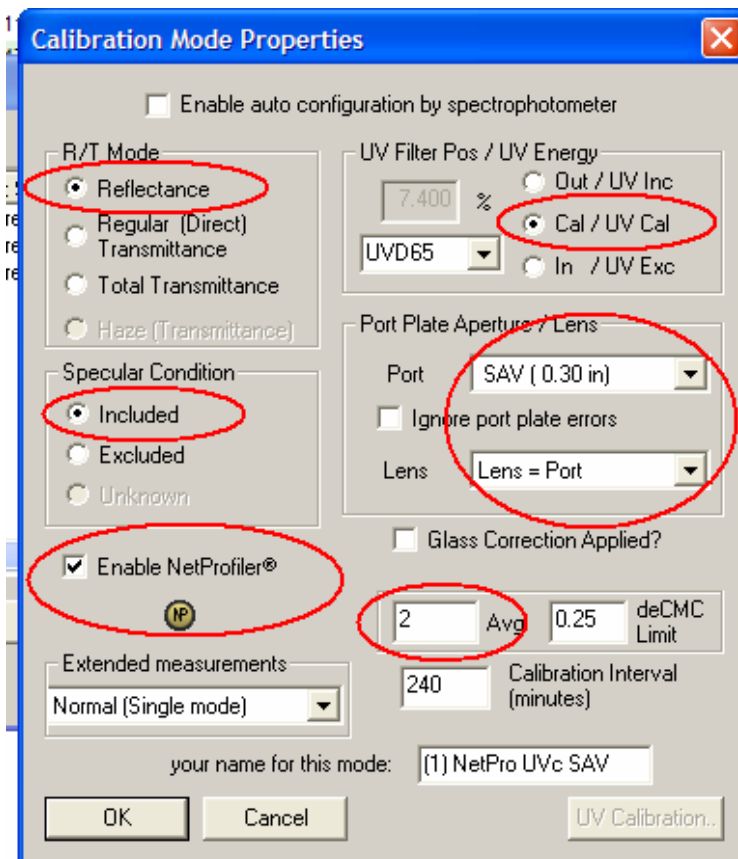
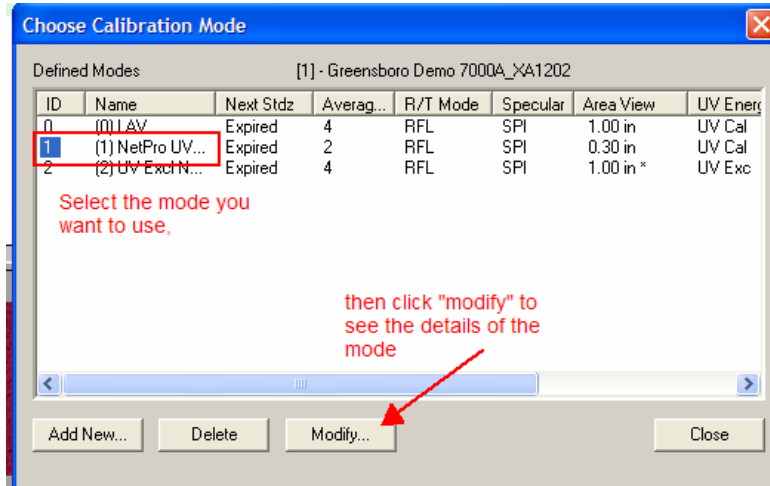
## ***How can I use using Best Practices with my GretagMacbeth iQC / iMatch system?***

“Best Practices” refers to a system of defining, documenting, and complying with agreed-upon procedures which are shown to support rigorous data and assessment tools. For color measurement, establishing Best Practices requires you to consider several factors:

- Standardizing bodies whose methods and standards can guide you in best practices for your industry. Whenever possible, you will want to refer to existing standards, instead of writing your own. This leverages the strengths of known, published methods, and improves the ability of your partners to comply with your Best Practices.
  - ASTM (American Society for Testing and Materials) <http://astm.org>
  - AATCC (<http://www.aatcc.org/> )
  - SAE (Society of Automotive Engineers) <http://automobile.sae.org/>
  - SPE/CAD (Society of Plastic Engineers, Color and Appearance Division) <http://www.specad.org/>
  - ISO (International Organization for Standardization) [www.iso.org](http://www.iso.org)
  - and others.
- Instrumental measurement parameters will need to be defined for your applications.
  - Sensor geometry (45/0, sphere, or other)
  - Aperture size
  - Specular reflectance included or excluded
  - UV energy included, excluded, or calibrated (calibrated is preferred for many industries)
  - NetProfiler Certified within 30 days
  - Color i7, CE7000A, and Color i5 are frequently selected as part of Best Practices programs.
- Sample presentation parameters also need to be defined, including:
  - Sample thickness or number of layers
  - Backing material if samples are not opaque
  - Temperature and humidity of sample and ambient conditions
- Color measurement system parameters can also affect your results, and need to be defined. Colorimetric values will be calculated from spectral measurements using consistent:
  - Illuminant (D65, TL84, U3000, F02, etc) and observer (2 or 10 degree)
  - Color space (CIELAB or other)
  - Color difference equation (DE\*, DEcmc, CIEDE2000, etc)
  - All of these are supported by Color iQC and Color iMatch.

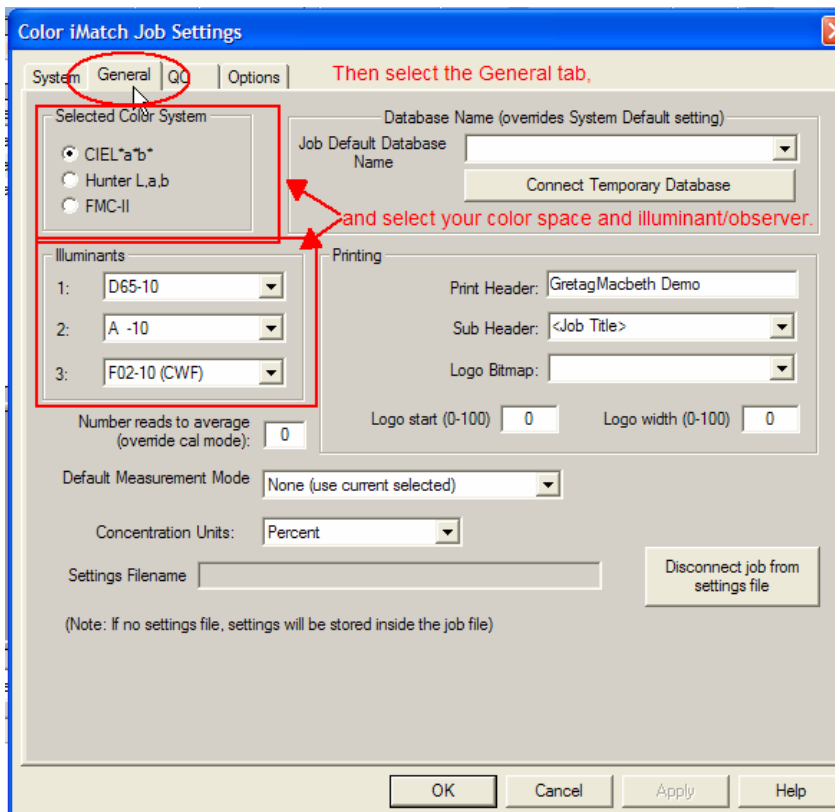
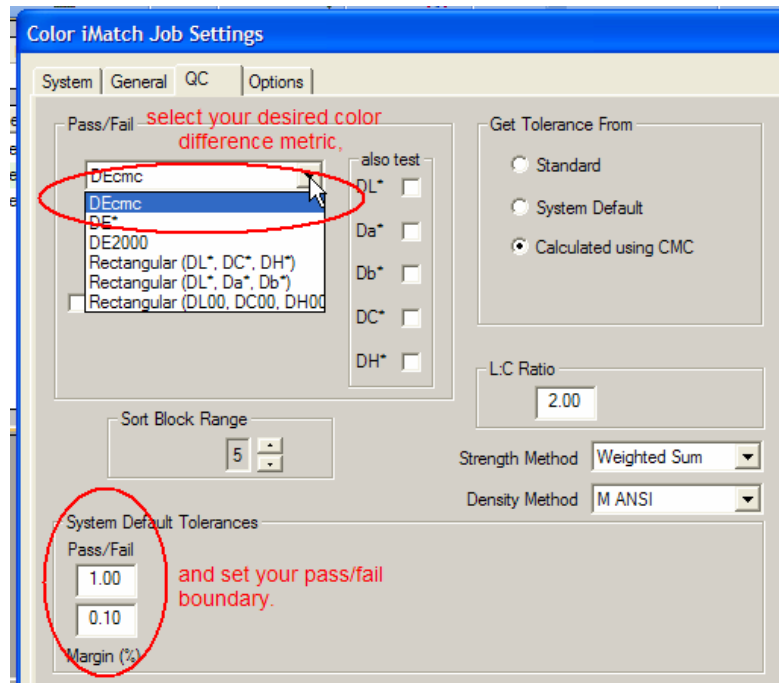
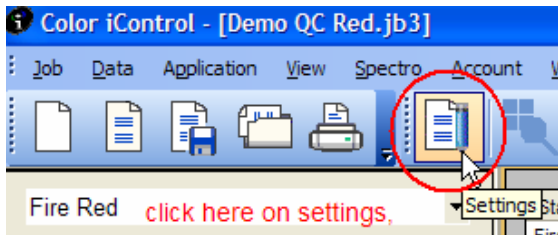
**Whew -- that's a lot to keep up with! How do I keep it all straight, especially if I have customers with differing requirements?**

Actually, Color iQC and iMatch make it easy. Here's what you do.

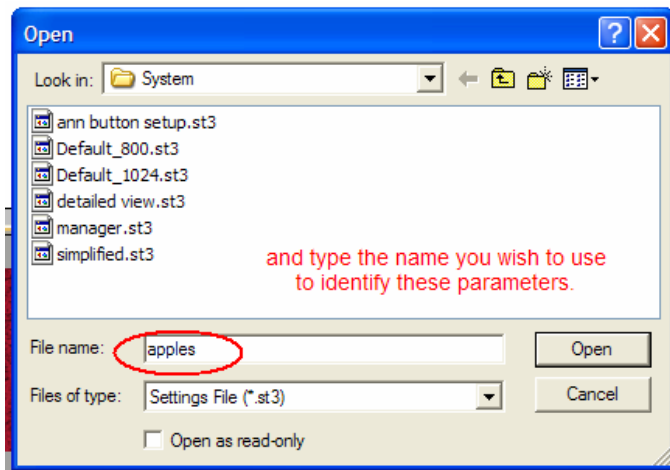
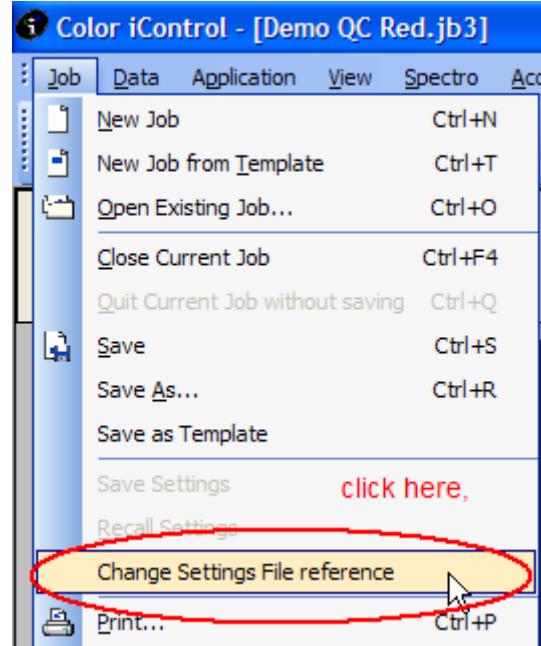
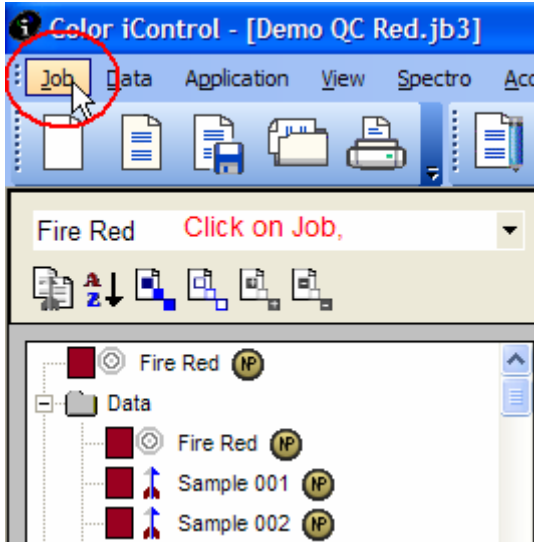


This screen is filled with items you will need to define for Best Practice for your application

Now, let's set up the colorimetric parameters:



Once you set up a job in conformance to your Best Practice for a specific application, you can save the settings to a file for future work. For example, we'll save these settings as "Apples".



From now on, any jobs that point to the Apples settings file will have the parameters and setting you have defined.

Now, let's say you need to create a different set of Best Practice parameters for another application. We'll call it Oranges.

The screenshot shows the Color iControl software interface. On the left, a tree view shows 'Fire Red' and its samples (001-008). Below it, a dCI Lab/CMC plot is shown with a red box around 'dCI Lab/CMC: TL84-10' and a red arrow pointing to the plot with the text 'Different illuminant'. The main window displays a table of color data for 'Fire Red' and a 'Color iMatch Job Settings' dialog. In the dialog, the 'Pass/Fail' dropdown is set to 'Rectangular (DL\*, Da\*, Db\*)' and is circled in red. A red arrow points from this dropdown to the 'System Default Tolerances' section, where the 'Pass/Fail' value is 0.50. The dialog also shows 'Get Tolerance From' set to 'Calculated using CMC' and 'Strength Method' set to 'Weighted Sum'.

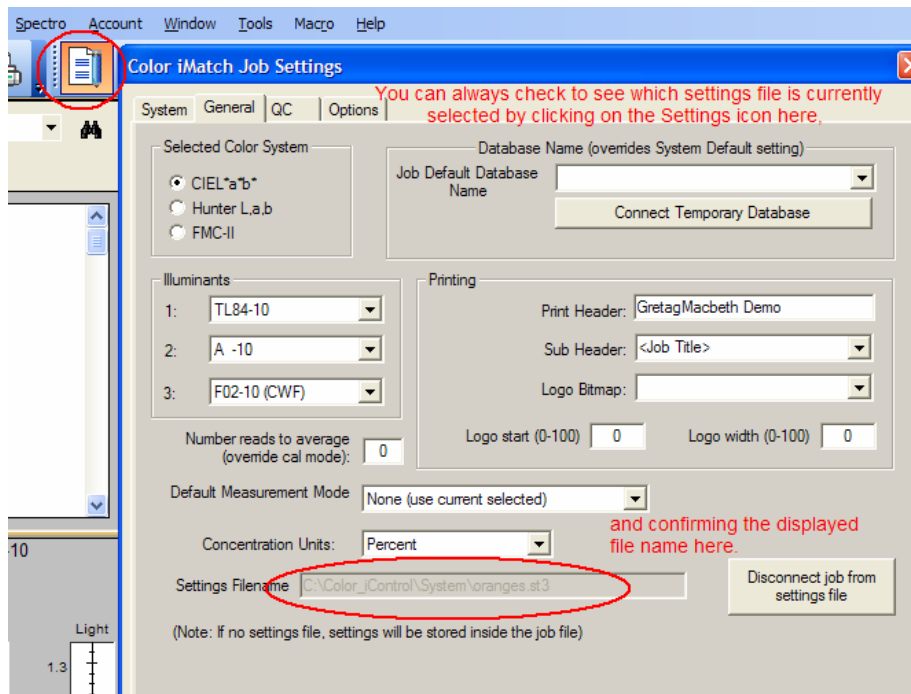
Standard Name	L*	a*	b*	C*	h°
Fire Red	32.55	42.58	31.03	52.69	36.09

Trial Name	DL*	Da*	Db*	DC*	DH*
Sample 001	-0.19 D	-0.25 G	-0.59 B	-0.55 D	-0.34 R
Sample 002	-0.54 D	-0.66 G	-1.36 B	-1.33 D	-0.72 R
Sample 003	-0.03 D	0.22 R	-0.03 B	0.16 B	-0.16 R

The screenshot shows the 'File' menu in the software. The 'Save Settings' option is highlighted with a red box and a red arrow pointing to it. A red text annotation says 'click here to save a new settings file.' Below the menu, a yellow box contains the text 'Change Settings File reference' with a mouse cursor pointing to it.

The screenshot shows an 'Open' dialog box. The 'Look in:' field is set to 'System'. The file list includes 'ann button setup.st3', 'apples.st3', 'Default\_800.st3', 'Default\_1024.st3', 'detailed view.st3', 'manager.st3', 'oranges.st3', and 'simplified.st3'. The 'File name:' field is set to 'oranges.st3' and is circled in red. A red text annotation says 'and type the name here.' The 'Files of type:' dropdown is set to 'Settings File (\*.st3)'. The 'Open' button is highlighted.

Now, you can easily assess color measurement results in compliance with your two defined Best Practices for two difference applications, simply by using the appropriate settings file.



You now have the tools you need to establish and maintain a program of Best Practice color measurement. And, you've made it easy for others in your organization to understand the relevant parameters of your Best Practice, and conform to your requirements.