
Datacolor

TOOLS v2

Quick Start Guide

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Getting Started with Datacolor Tools v2 Logging in *Instrument Configuration and Calibration*

There are two login options for Datacolor Tools:

1. **Pigment** users will use the user name user and password cc3.
2. **Textile** users will login with the dci user and no password.

After inputting user information press the OK button.

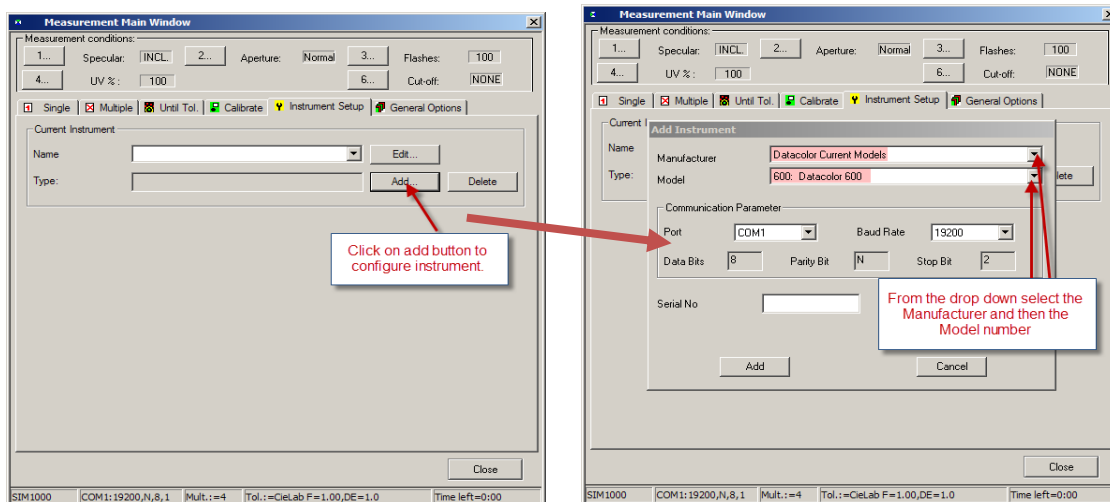


Pigment Users

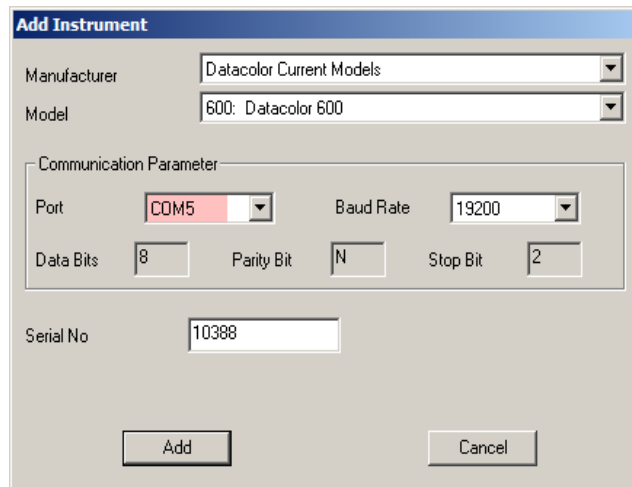


Textile Users

If you have not configured your instrument in Datacolor Tools v2 the screen below will be displayed as you enter to the programs. (Note: if this screen is not displayed, you may access it from the 'Instrument' tab then select 'Setup')



3. Click on 'Add'. Then select 'Manufacturer' and 'Model'
4. Next select the com port of your instrument. If you are using a serial connection it will most likely be com 1 or 2. If your instrument is plugged in with a USB cable you will have to look at the settings in Device Manager on your computer. Step 5 will illustrate how to do this for both Windows 7 and Windows XP. If you already know your com port skip to step 6



Add Instrument

Manufacturer: Datacolor Current Models

Model: 600: Datacolor 600

Communication Parameter

Port: COM5 Baud Rate: 19200

Data Bits: 8 Parity Bit: N Stop Bit: 2

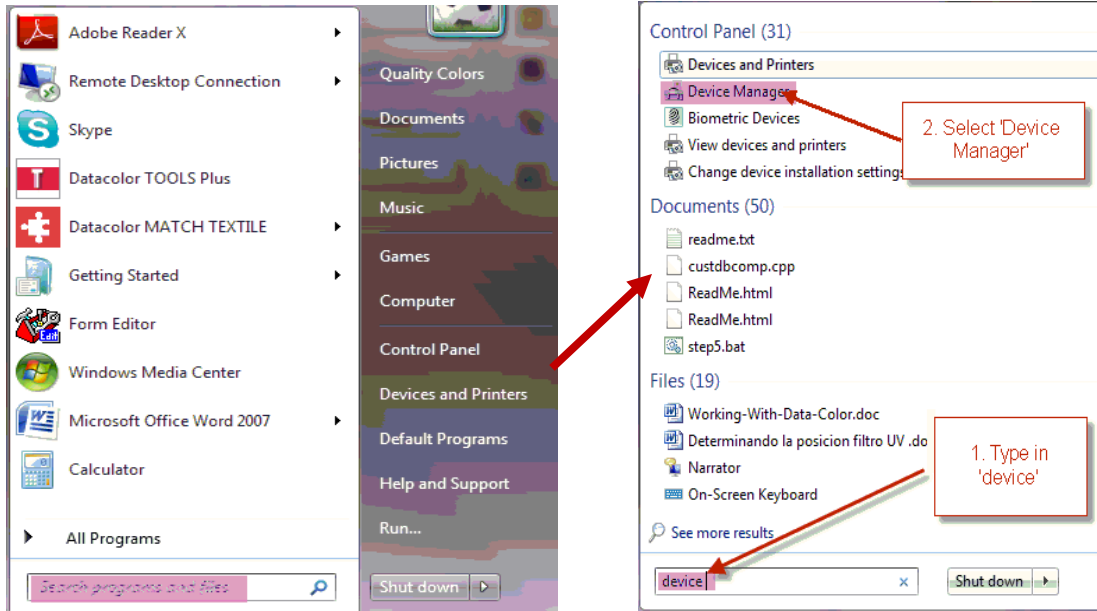
Serial No: 10388

Add Cancel

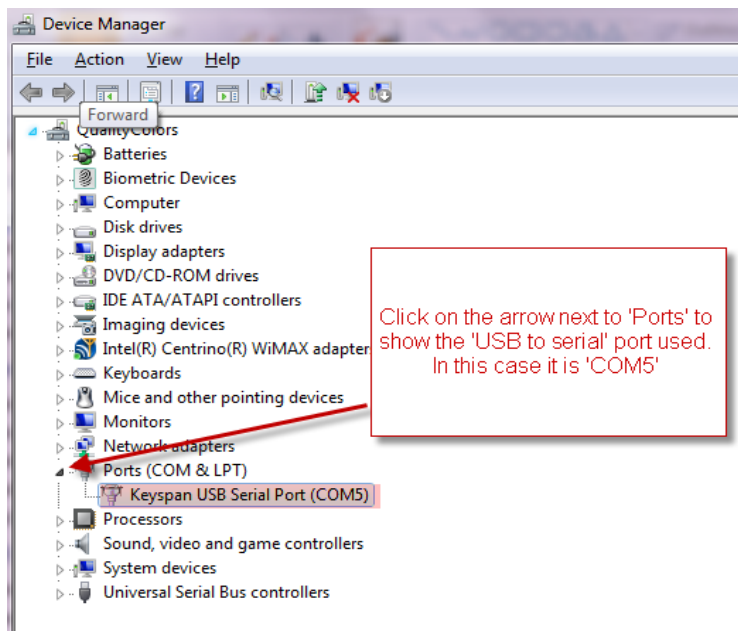
5. Finding the correct Com port in Windows 7 and Windows XP. On the Windows taskbar click the 'Start' button.

Windows 7

- a. Type in 'device' in the 'search programs and files' box and then select 'Device Manager'

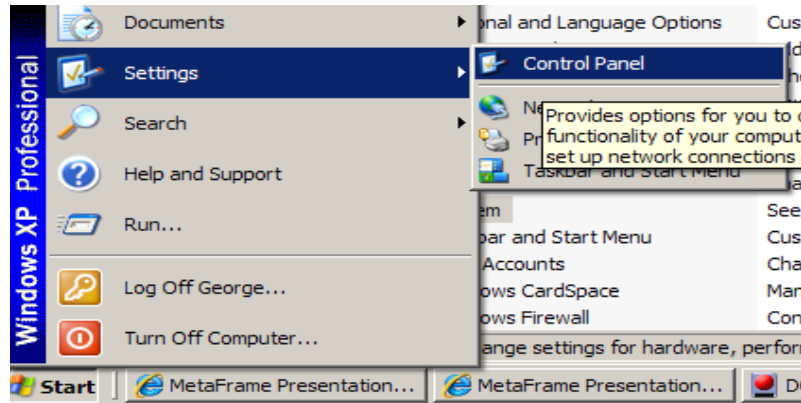


- b. Note the Com port used by the 'USB to Serial' connection. This is the com port designation of your spectrophotometer.



Windows XP

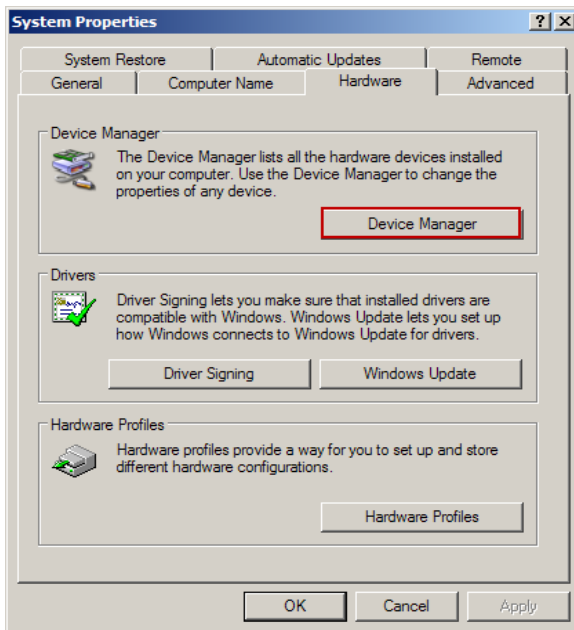
- a. Select 'Start', 'Settings' then 'Control Panel'



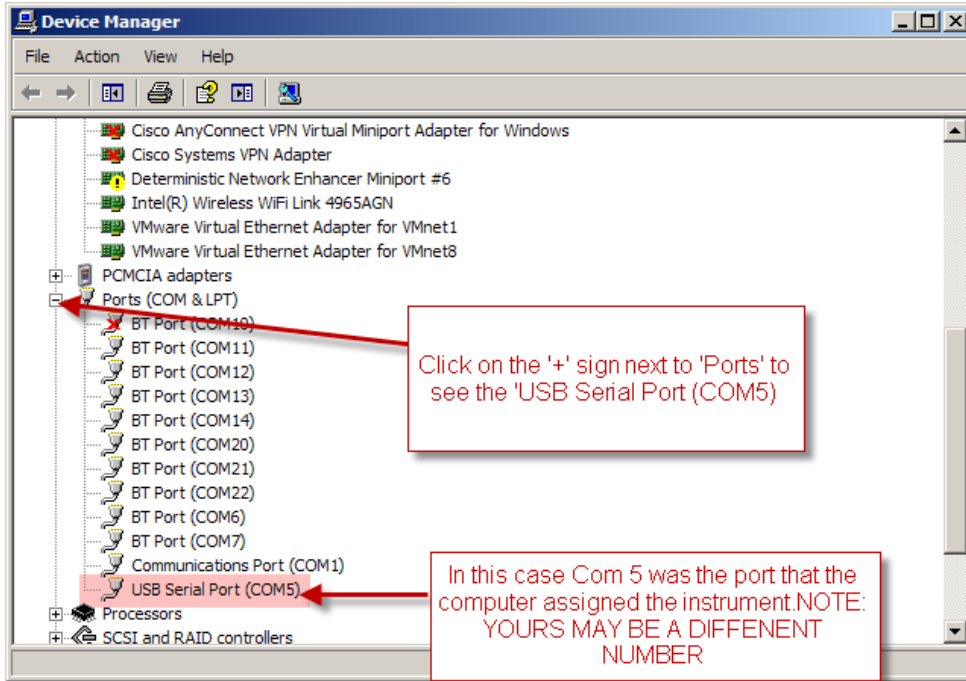
- b. Then select the option 'System'.



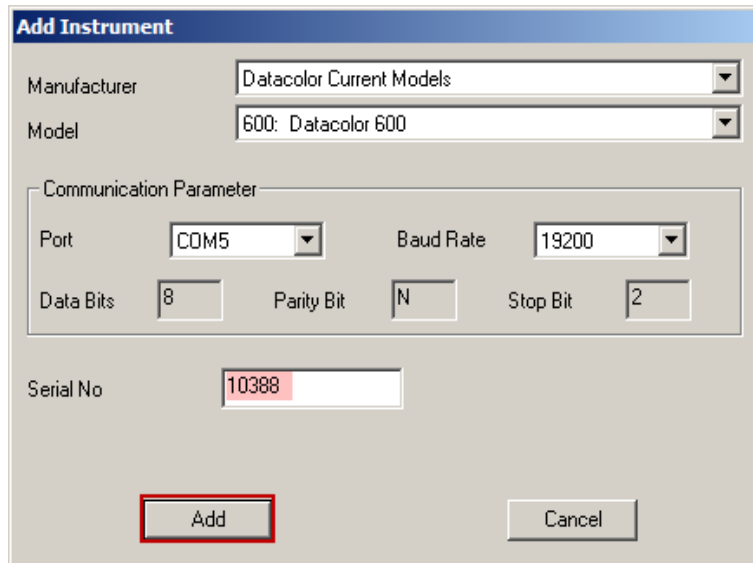
- c. From the 'Hardware' tab choose 'Device Manager'



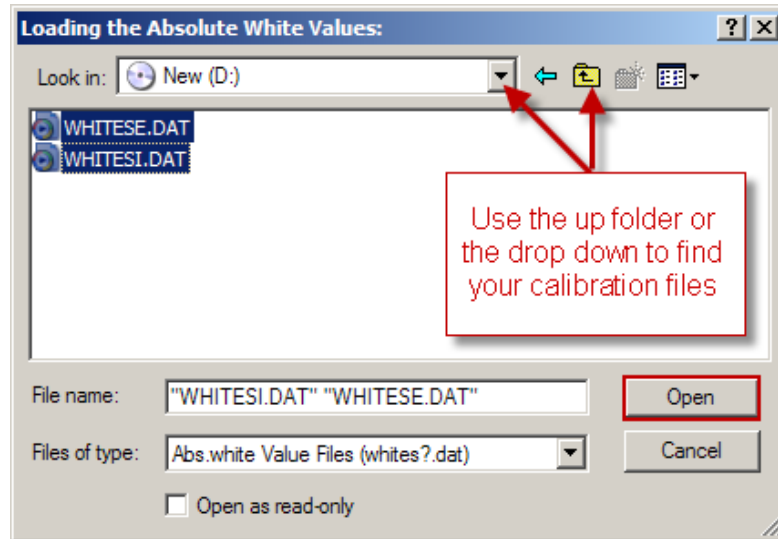
- d. In device manager click on 'Ports' to see which port the spectrophotometer was assigned



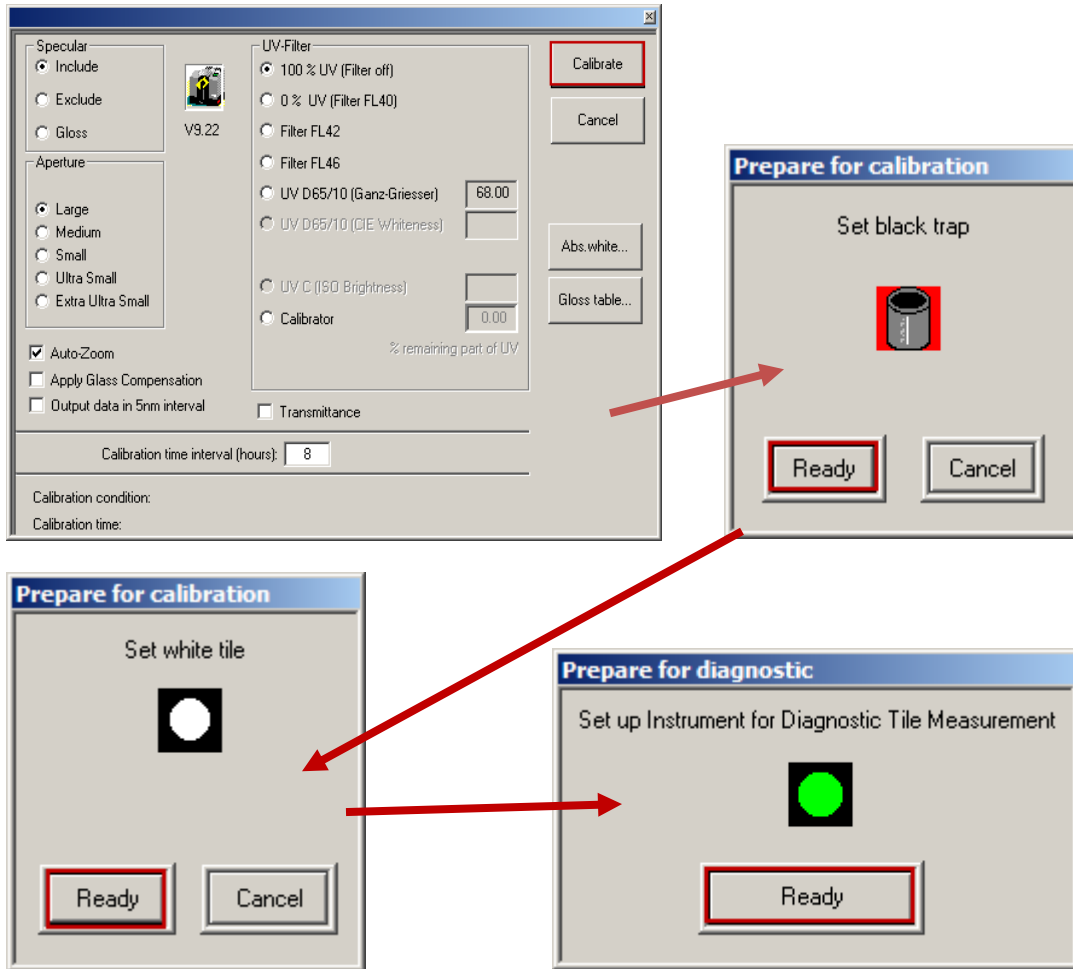
- 6. Enter the Serial number and click on 'Add'.



7. The software will then ask for the white tile data. Make sure you have your calibration cd in the drive. Highlight the files 'WHITESE' and 'WHITESI'.dat and click 'Open'

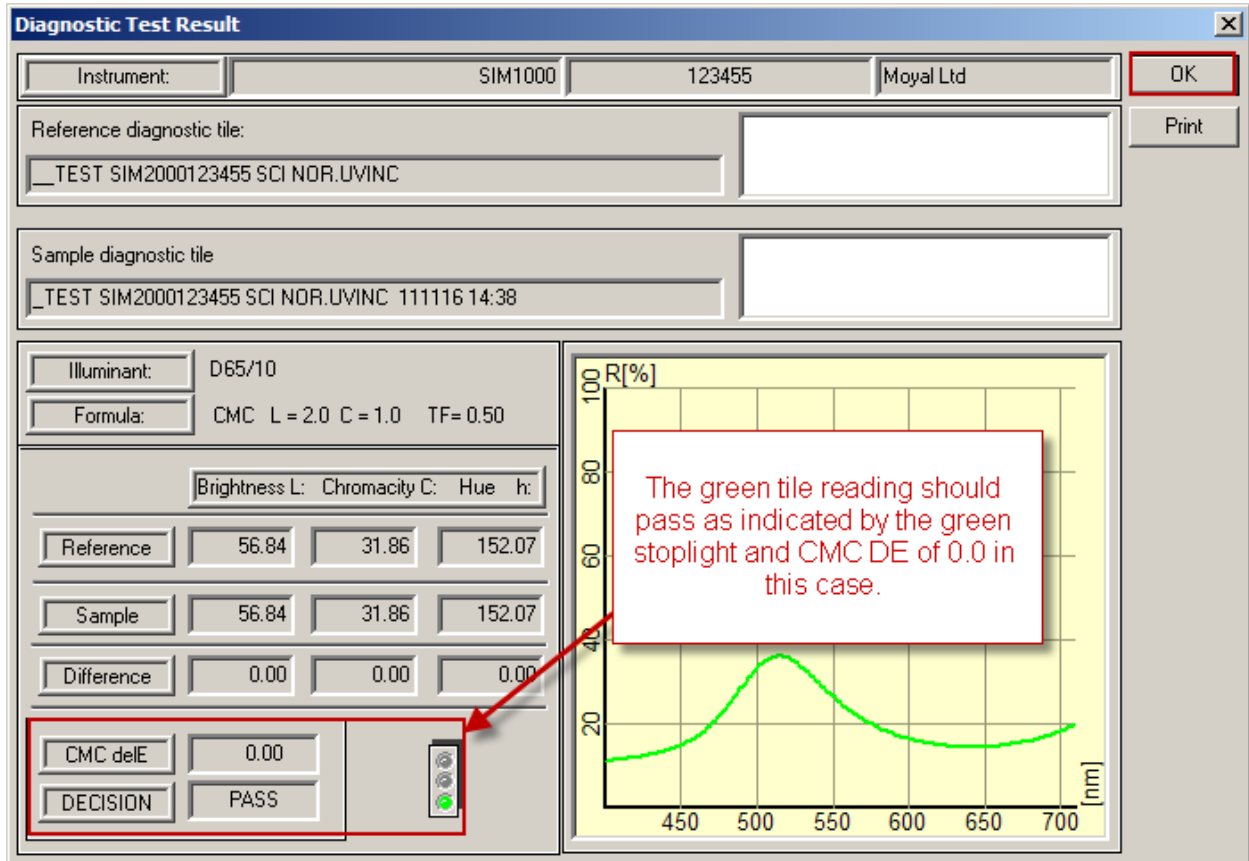


8. The calibrate screen will appear as below. Select your calibration settings and click on 'Calibrate'



9. The software will prompt you for the 'black trap' then the 'white tile' and finally the 'Diagnostic' or 'Green' tile measurement.

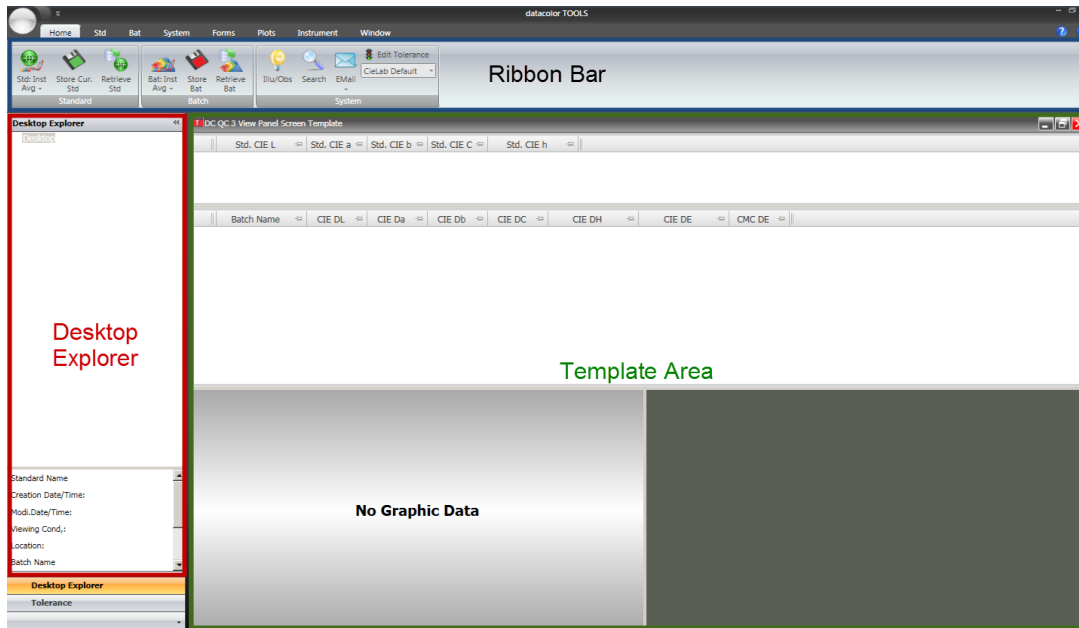
10. An example of the output of the diagnostic tile measurement is listed below



Entering the Program

Overview of Datacolor Tools v2

Datacolor TOOLS employs the use of a desktop environment and offers immediate visibility to manage and view desktop data from one place, as well as access most QC operations for Standards and Batches. When Datacolor Tools v2 program opens, the screen contains 3 main areas: The ribbon bar, the desktop explorer and the template area.

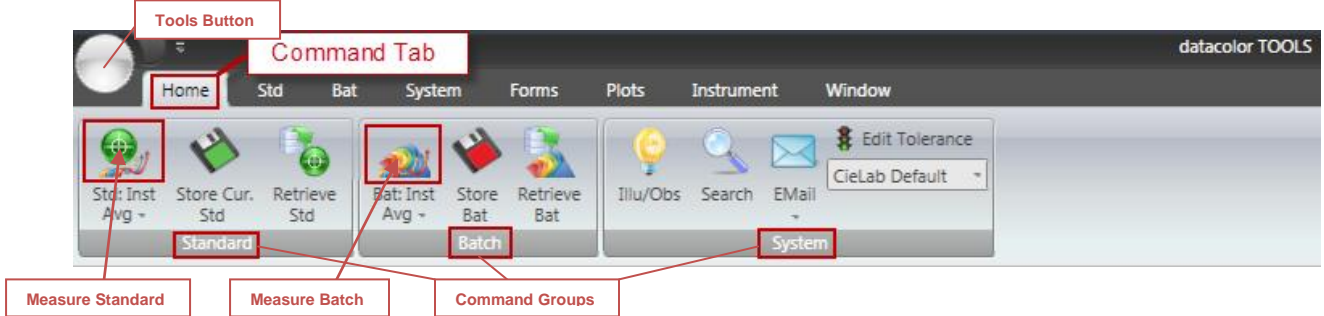


Ribbon Bar- Clicking on command tabs opens up different pre-defined command groups on the ribbon bar. The software opens to the “Home” command tab.


1. When we open Tools for daily use, the first step will be to calibrate the instrument. The calibrate button is located on the “Instrument” command tab. Click on the “Instrument” command tab and then click on the “Calib” button to calibrate the instrument.

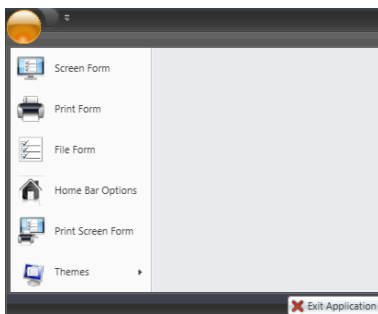


2. After instrument calibration, return to the “Home” tab by clicking on it.




The ribbon bar on the “Home” tab has three command groups: standard, batch, and system. It also contains most of the buttons needed to perform QC operation i.e. Measure Standard/Batch, Store and Retrieve Standard/Batches as well as buttons for the illuminant, search, e-mail, and tolerances. (NOTE: The measure standard and measure batch button read once by default. To change the reading method so they are an average of a number of reads refer to the section “Changing the Input Method for your Samples”.

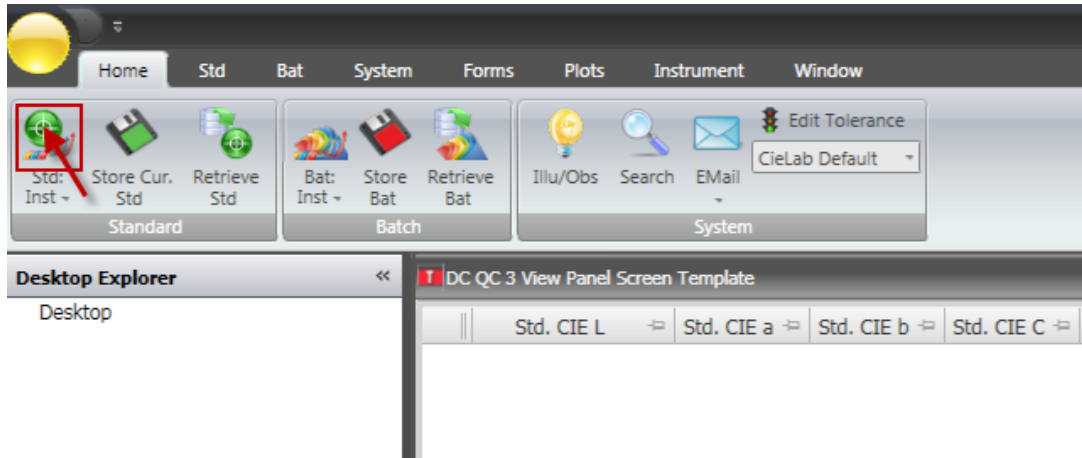
The Tools Button  which is always available on the ribbon bar, provides access to screen, print and file forms as well a “Home Bar Options” which allows users to edit the “Home” ribbon bar. For detailed instructions on editing the “Home” ribbon bar refer to the section “Adding a Button to the Home Ribbon Bar”



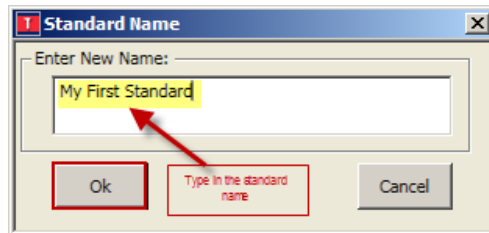
Data Input

Desktop Explorer

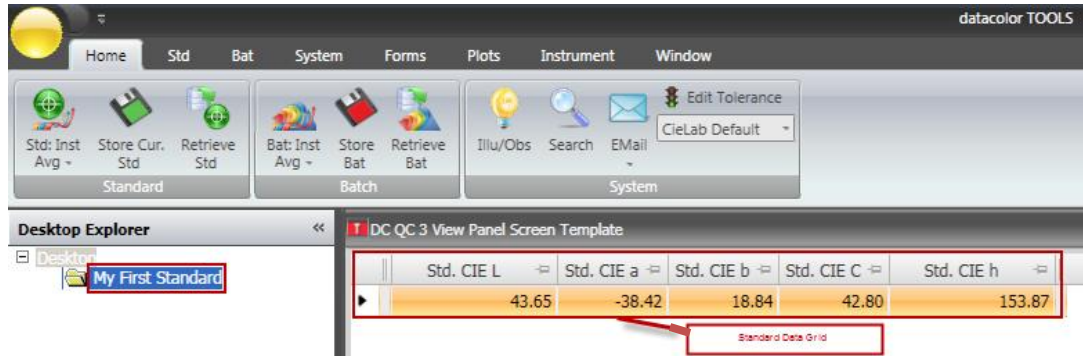
1. To measure the standard, place the sample in your instrument and click on the top half of the Std:Inst button 



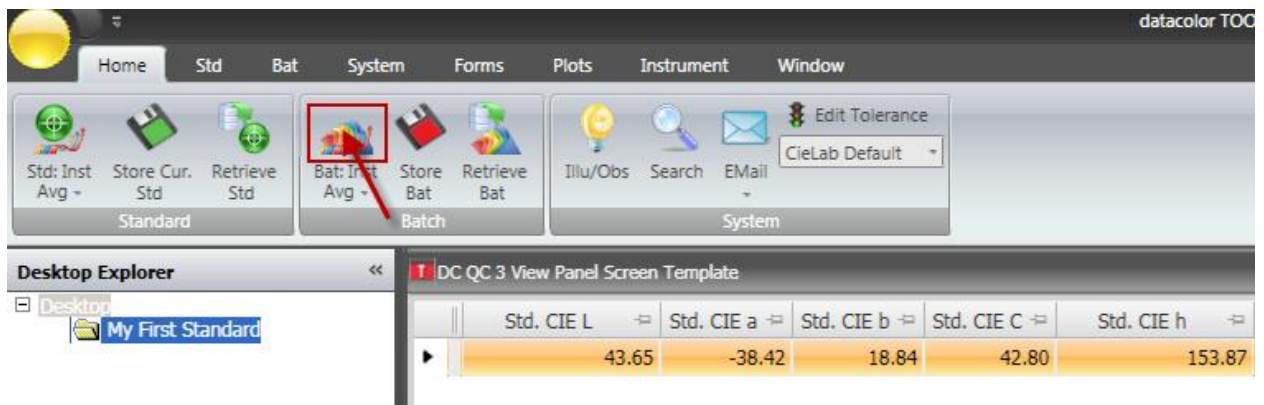
2. You will receive a dialogue box to input the standard name. Input the name and press OK.



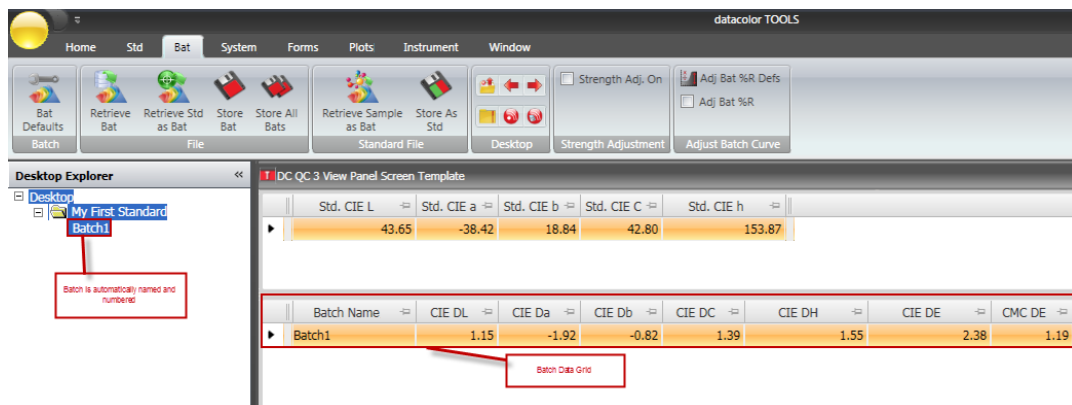
- The instrument then measures the standard and places it on the desktop explorer. The standard is highlighted and the standard data is now shown in the data grid.



- To measure a batch, place the batch in the instrument port and press the top half of the Bat:Inst button



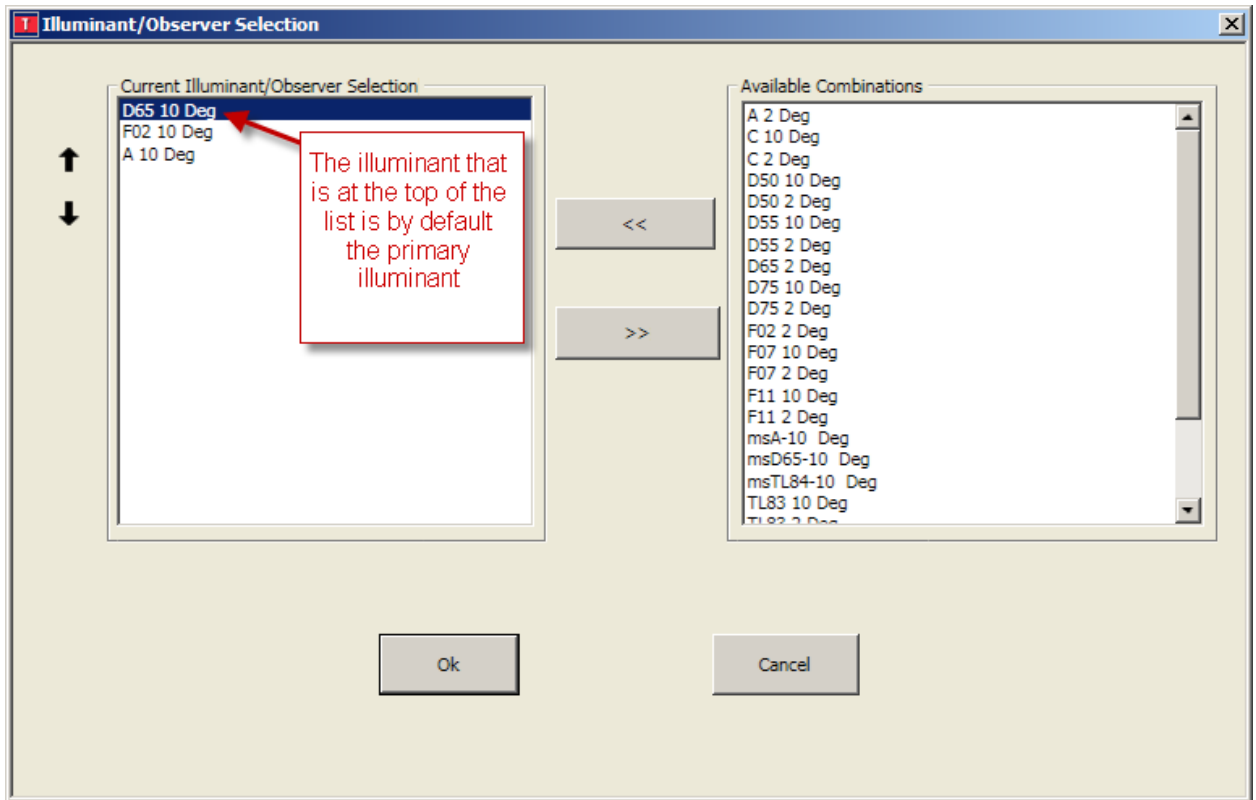
- By default, the system is set up to auto name and auto number the batch so it will not ask for a batch name. Data is now being displayed for the batch measured



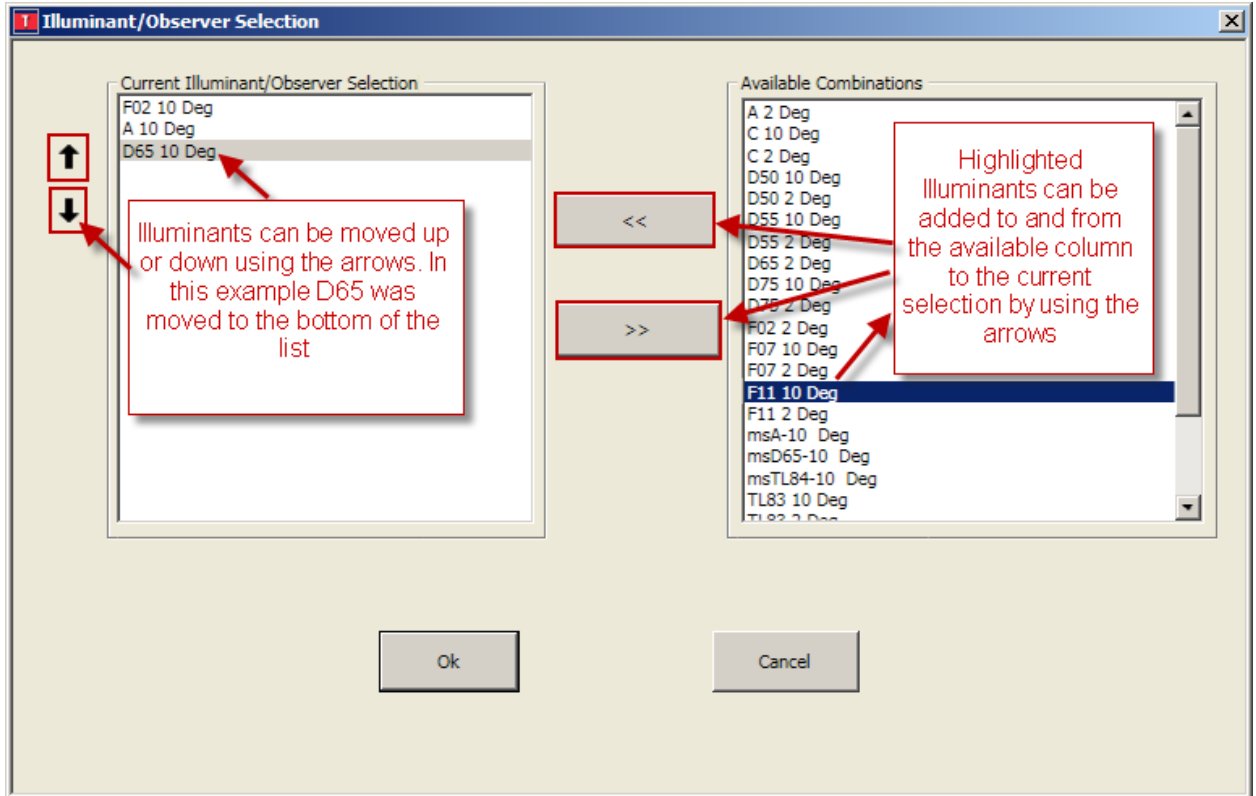
NOTE: To turn off autaname and autonumber go to the “Bat” command tab and click on the Batch Defaults button and uncheck “Auto Number”. The system will then prompt you for a name for your batch. For a detailed description on this and how to change your measurement method refer to the section on “Changing the input method for your samples”

Selecting Illuminants in Datacolor Tools v2

1. To change or manage illuminants/observers select the Home tab and click on the ill/obs button.



- On the Illuminant/Observer Selection page, the selected illuminants can be put in the order by highlighting the illuminant on the left and using up and down the arrows to put them in the desired order. Available illuminants can be added by bringing them from the list on the right, using the arrows, to the list on the left.



- On the default template the primary illuminant is shown in the standard and batch grid. The graph has tabs for each of the illuminants in the list.

The standard data and batch data by default use the primary illuminant

Batch Name	CIE DL	CIE Da	CIE Db	CIE DC	CIE DH	CIE DE	CMC DE
BAT 11	1.15	1.00	7.33	7.35	0.88	7.49	2.52
BAT 12	2.12	-1.09	3.07	2.71	1.82	3.89	1.69
BAT 13	0.16	-0.41	1.41	1.26	0.75	1.48	0.65
BAT 14	0.60	-0.87	1.55	1.28	1.23	1.88	0.94
BAT 15	0.12	0.49	2.35	2.39	0.13	2.40	0.79
BAT 16	0.46	-0.67	2.42	2.18	1.25	2.55	1.10
BAT 17	-0.65	-0.76	-0.16	-0.34	0.69	1.01	0.53
BAT 18	1.60	0.42	2.71	2.73	0.29	3.17	1.10
BAT 19	0.40	-0.24	1.38	1.27	0.59	1.45	0.59

The illuminants are also shown in order by the tabs on the graph

- To display the data for more than one illuminant right click on the batch section of the grid and choose 'Grid Configuration'

Choose 3 illuminants to display

Repeat on Illuminant: 3 Illuminants

Grid Configuration

- Current Batch
- Reset Grid
- Print
- Switch
- Save as template

Label	Description
Batch Name	Batch Name
Current Illuminant Name	Current Illuminant Name
CIE DL	CIE DL
CIE Da	CIE Da
CIE Db	CIE Db
CIE DC	CIE DC
CIE DH	CIE DH
CIE DE	CIE DE
CMC DE	CMC DE

5. Select '3 illuminants' from the drop down. Then click on 'Ok'

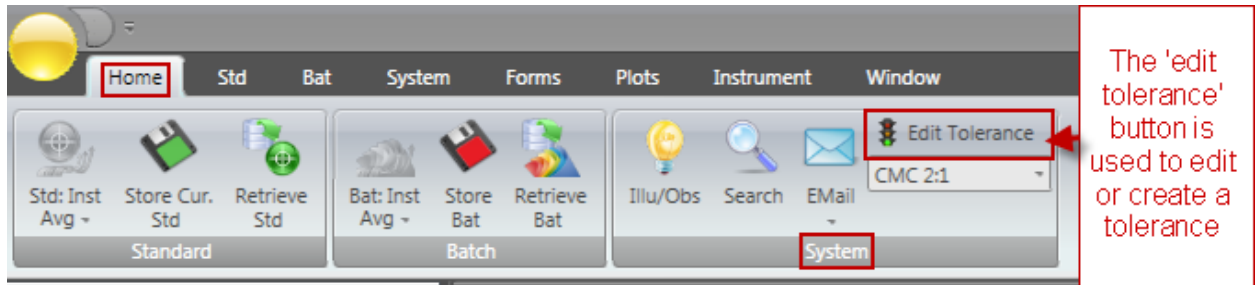
The template will show all 3 illuminants on the batch grid.

The screenshot displays the Datacolor Tools software interface. The main window shows a 'Batch Grid' with columns for Batch Name, Current Illuminant, CIE DL, CIE Da, CIE Db, CIE DC, CIE DH, CIE DE, and CMC DE. The 'Current Illuminant' column is highlighted with a red box, showing 'F02 10 Deg', 'A 10 Deg', and 'D65 10 Deg' for various batches. Below the grid is a 'Delta E Lab' plot showing a scatter plot of data points with labels for 'Stronger', 'Weaker', 'Too Green', and 'Too Red'. The plot axes are labeled with Δb^* and ΔL^* .

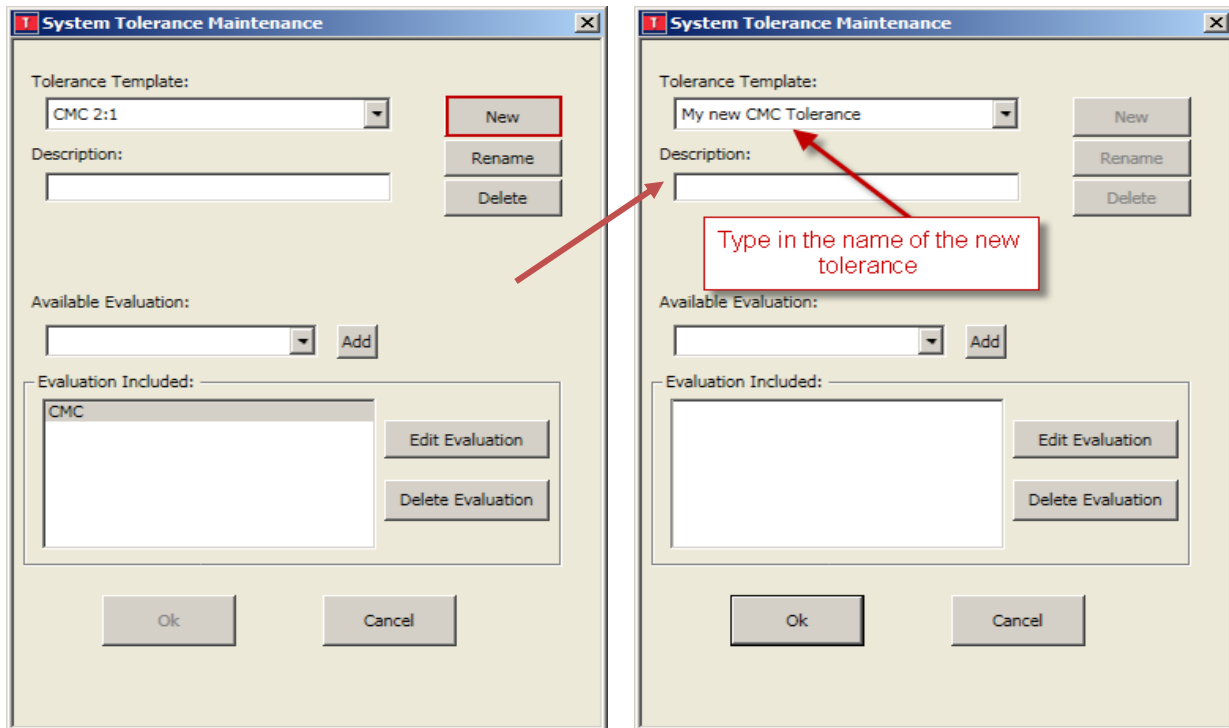
Batch Name	Current Illuminant	CIE DL	CIE Da	CIE Db	CIE DC	CIE DH	CIE DE	CMC DE
BAT 1	F02 10 Deg	1.52	1.06	2.66	2.84	-0.34	3.24	1.12
BAT 10	F02 10 Deg	0.47	-3.85	-0.64	-1.52	3.60	3.94	2.43
BAT 11	F02 10 Deg	1.15	1.00	7.33	7.35	0.88	7.49	2.52
BAT 12	F02 10 Deg	0.63	1.16	5.35	5.39	0.94	5.51	1.87
BAT 13	F02 10 Deg	0.21	2.69	5.15	5.80	-0.36	5.81	1.97
BAT 14	F02 10 Deg	7.12	-1.00	3.07	7.71	1.82	3.80	1.60

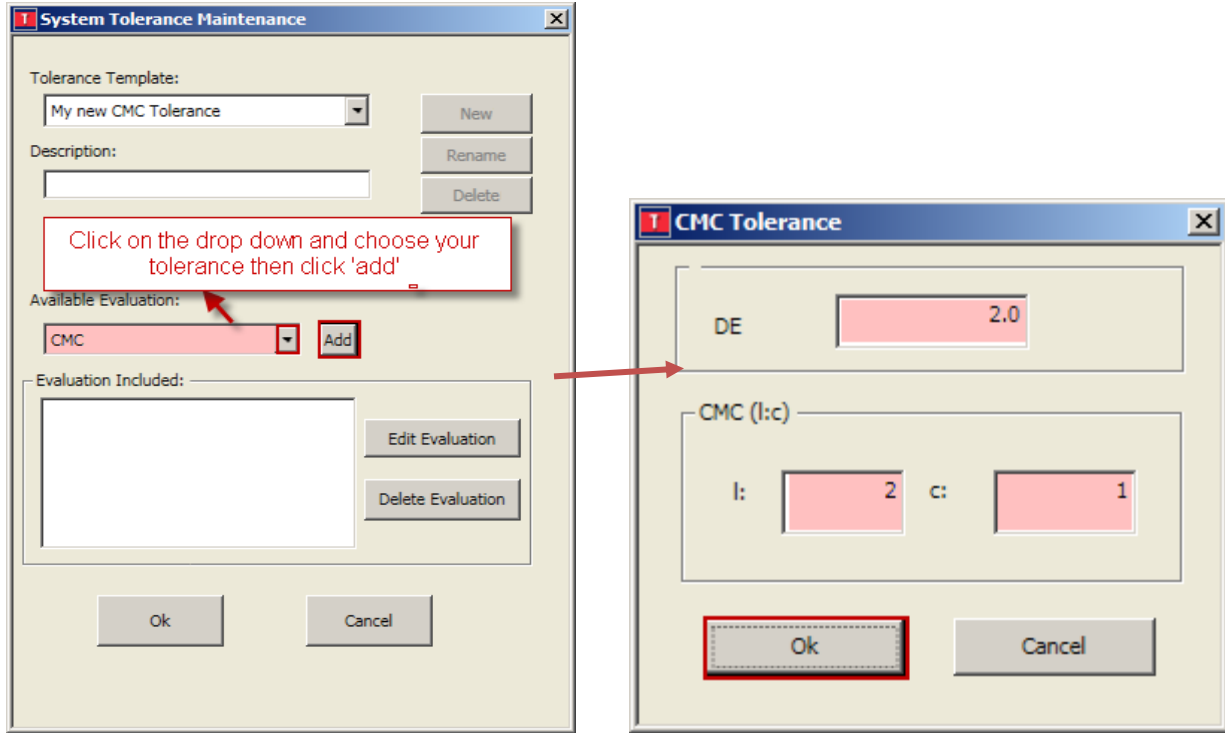
Creating/Editing a System Tolerance

1. Tolerances are accessed on the home bar under the system group. Click on the 'Edit Tolerance' button. This button is used to create and edit a tolerance.

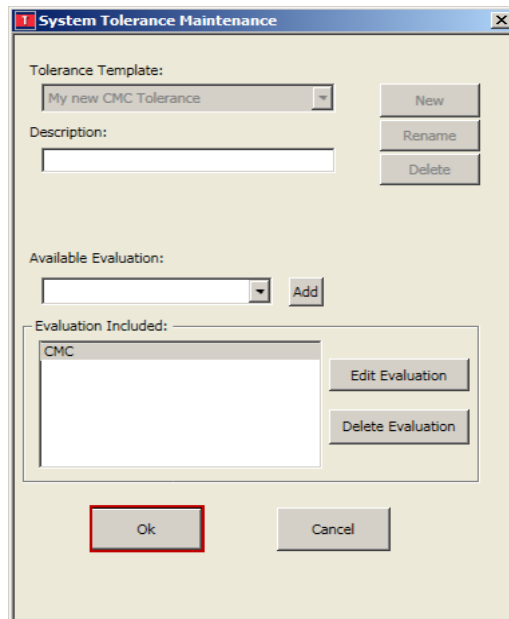


2. A dialogue box that opens up. Click on 'new' to create a new tolerance. Type in the name of the new tolerance. In this example 'My new CMC tolerance'

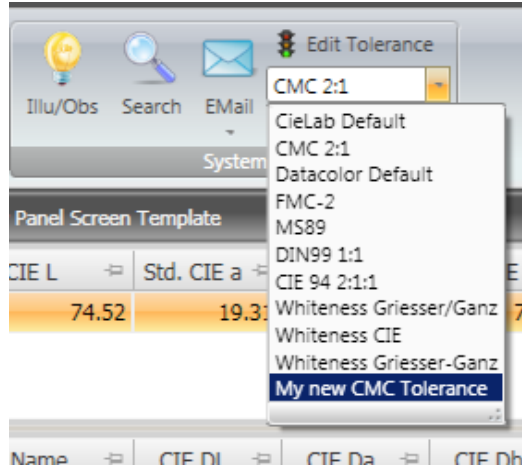




3. Click 'Add' to display the CMC tolerance. Type in the CMC DE tolerance and the I:c ratio. In our example 2.0 for CMC DE and I:c ratio 2:1 respectively. Then click 'Ok'



4. The new tolerance will be created. Click 'Ok' to add to the list.



5. To use this new system tolerance, click on the drop down below the 'Edit Tolerance' button and highlight your new tolerance 'My new CMC Tolerance'. On the template you can see the tolerance area is adjusted on the graph and if you click the tolerance option bar below desktop explorer the tolerance can be seen

Tolerance

Tolerar	Para	Value	P/F
CMC	CMC DE	2.00	Pass
	CMC I	2.00	
	CMC c	1.00	

DC QC 3 View Panel Screen Template

	Std. CIE L	Std. CIE a	Std. CIE b	Std. CIE c	Std. CIE h
	74.52	19.31	72.28	74.82	75.04

Batch Name	CIE DL	CIE Da	CIE Db	CIE Dc	CIE Dh	CIE DE	CMC DE
BAT 10	0.47	-3.85	-0.64	-1.52	3.60	3.94	2.43
BAT 17	-0.65	-0.76	-0.16	-0.34	0.69	1.01	0.53
BAT 19	0.40	-0.24	1.38	1.27	0.59	1.45	0.59
BAT 13	0.16	-0.41	1.41	1.26	0.75	1.48	0.65
BAT 14	0.60	-0.87	1.55	1.28	1.23	1.88	0.94
BAT 15	0.12	0.49	2.35	2.39	0.13	2.40	0.79
BAT 16	0.46	-0.67	2.42	2.18	1.25	2.55	1.10
BAT 1	1.52	1.06	2.66	2.84	-0.34	3.24	1.12
BAT 18	1.60	0.42	2.71	2.73	0.29	3.17	1.10
BAT 17	2.12	-1.00	3.07	2.71	1.87	3.80	1.60

Delta CMC

	F02 / 10	A / 10	D65 / 10	F11 / 10

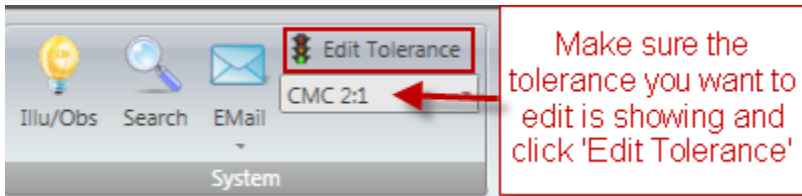
Desktop Explorer

- Tolerance

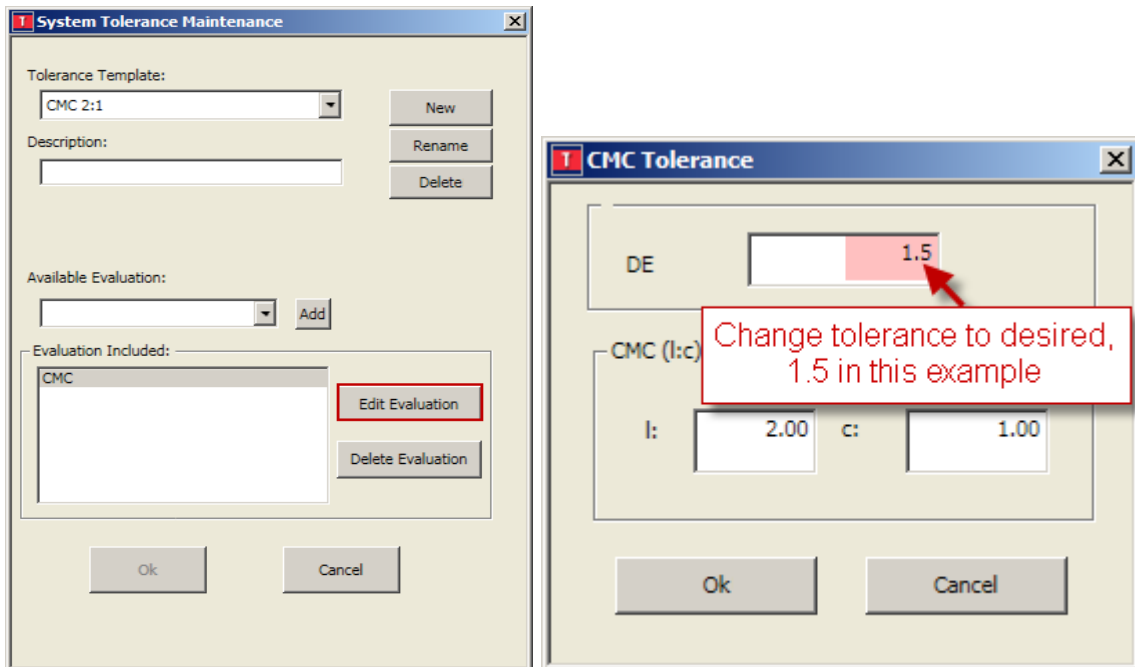
Callout 1: If you click below desktop explorer and choose 'tolerance' you will see your tolerance as well

Callout 2: Your new tolerance area is displayed on the graph as green

- If you wish to edit an existing tolerance make sure you have the tolerance that you wish to edit showing and click 'Edit Tolerance'



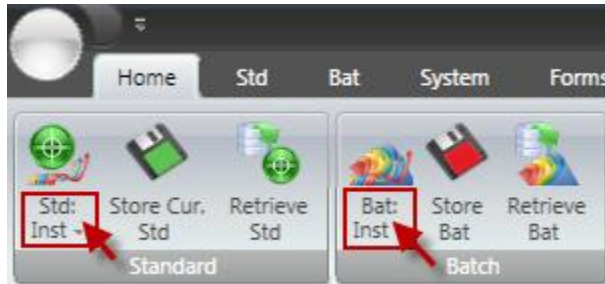
- From the dialogue box click on the button 'Edit Evaluation'



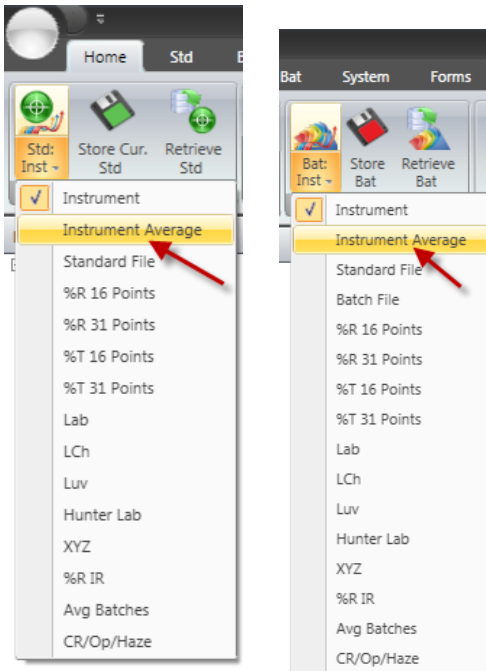
- In this case the tolerance is CMC. Change the DE to the tolerance needed, in this example 1.5. Click 'Ok' then 'Ok' on the next screen. The default tolerance for the tolerance template(CMC 2:1) will be changed to 1.5. (Note this tolerance must be showing under the 'Edit Tolerance' button to be active)

Changing the Input Method for your Samples

By default the input method for measuring standards and batches is a single measurement: “Std: Inst” and “Bat:Inst” respectively on the ribbon bar of the home tab. Datacolor recommends multiple readings per measurement to get an average.



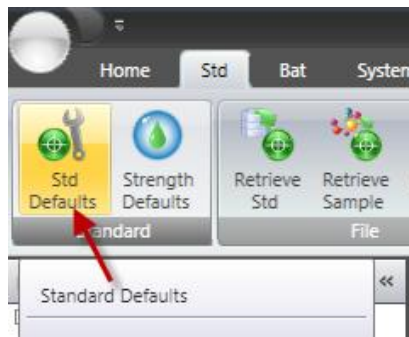
1. To change the measurement method click on the bottom half of the Std: Inst and Bat:Inst button to change the input type.



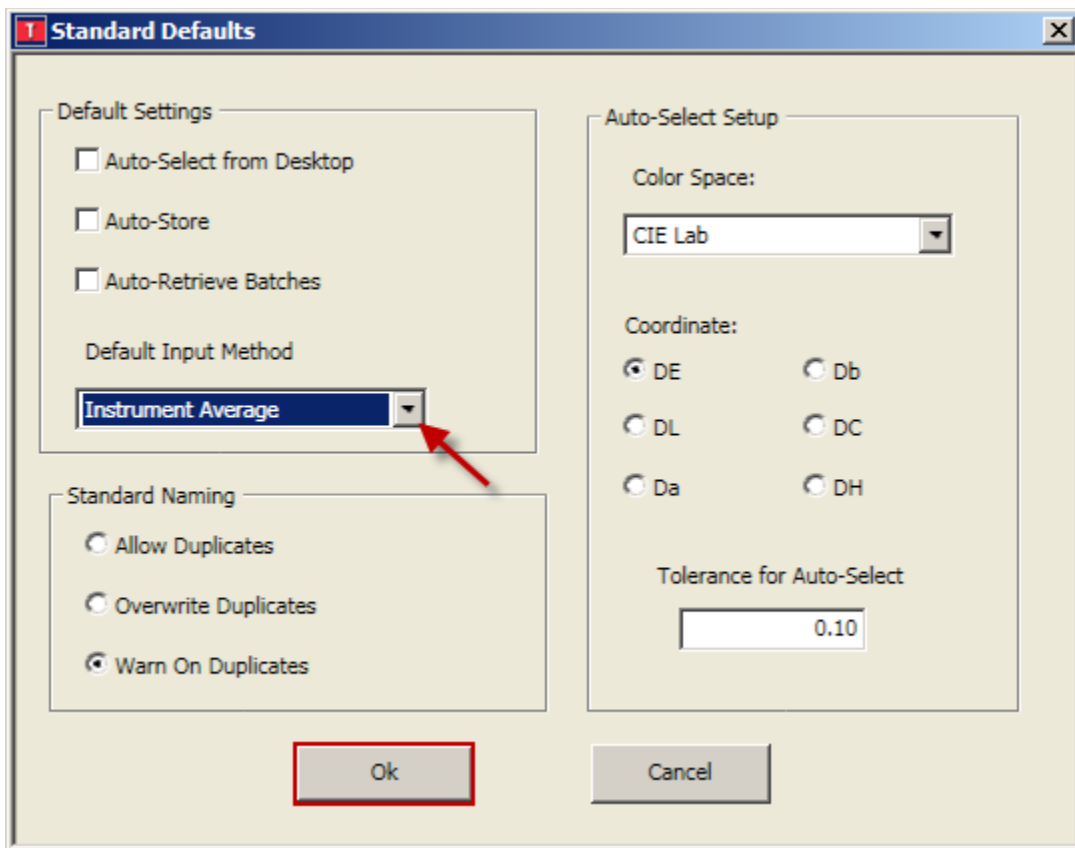
- Click on “Instrument Average” for both the standard and batch to change the input type to Instrument averaging. You also have many other options in the drop down as well if desired. After selecting “Instrument Average” the button will change to “Std: Inst Avg” and “Bat:Inst Avg” respectively.



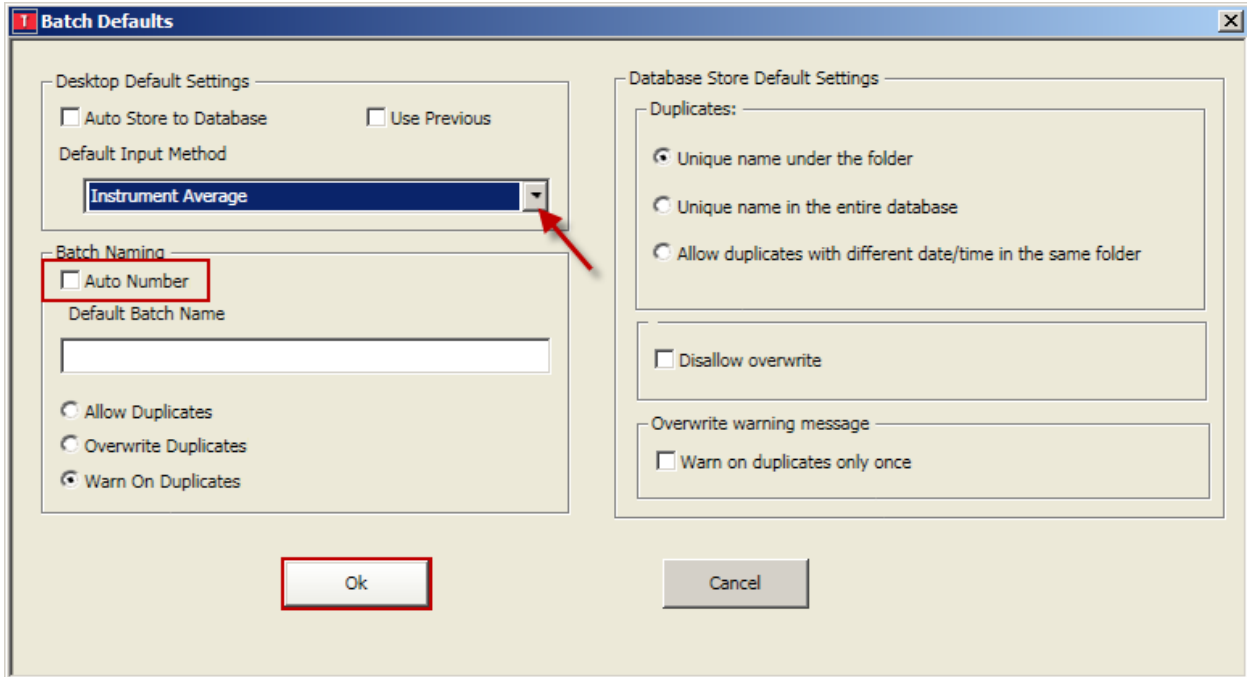
- To change the default measurement type so that Instrument averaging is set permanently you need to click on the “Std” tab and select the “Std Defaults” option.



4. On the Standard Defaults screen click on the “Default Input Method” drop down and choose “Instrument Average” then click “Ok”



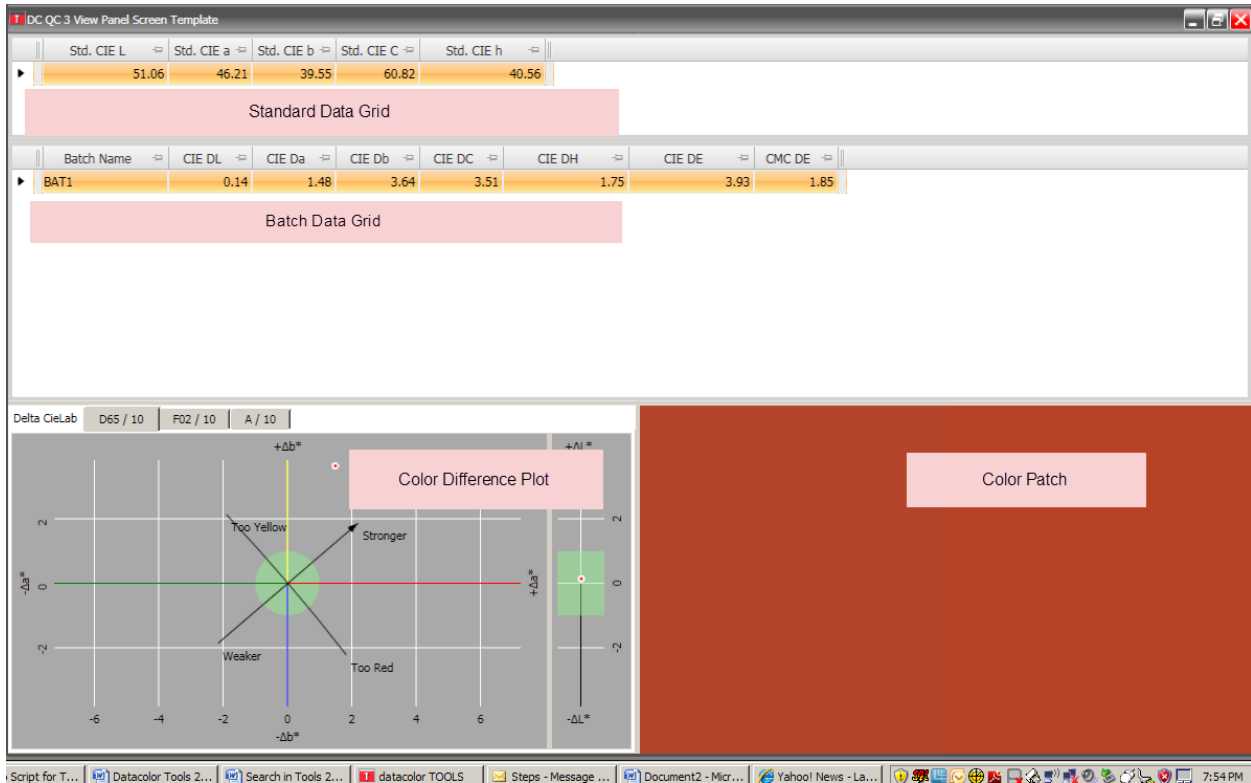
5. Repeat the same process for the batch. On the “Bat” tab click on “Bat Defaults”



6. On the Batch Defaults screen click on the “Default Input Method” drop down and choose “Instrument Average”. Also if you wish to input a name for each batch, uncheck “Auto Number” and the program will ask you for a name when reading each batch. If this is left checked the program will name the batch “Batch1...100”. Click “Ok” and these defaults will be saved.

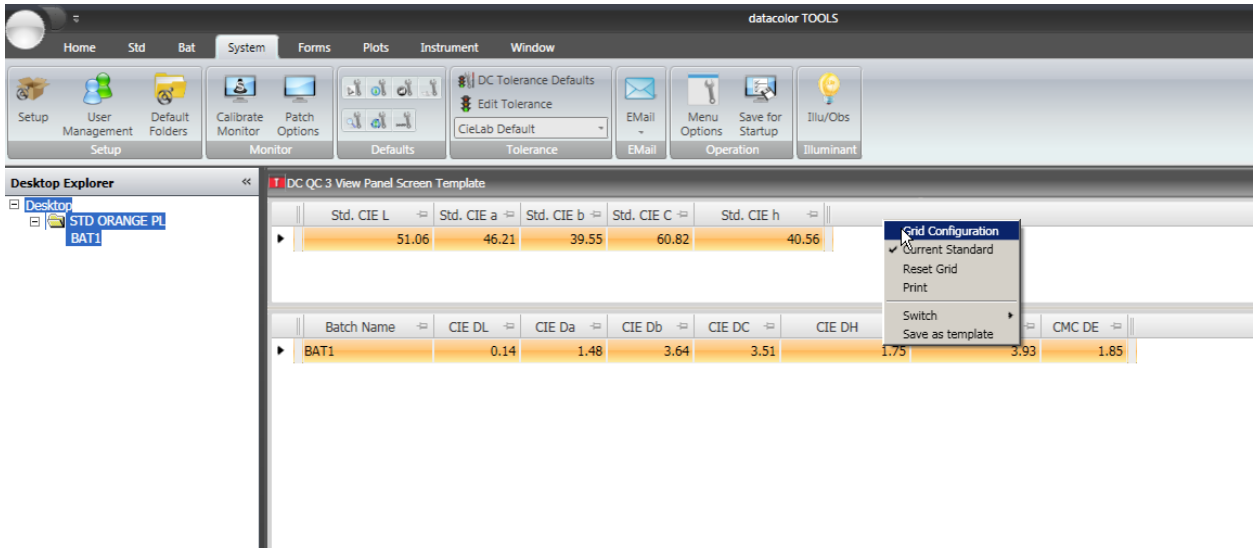
How to Create or Modify Templates

Templates are preset panes (like window panes). The template below “DC QC 3 View Panel Screen Template” is the default template for Datacolor Tools v2. The template shows three distinct areas: standard and batch data grid, a color difference plot, and a color patch.



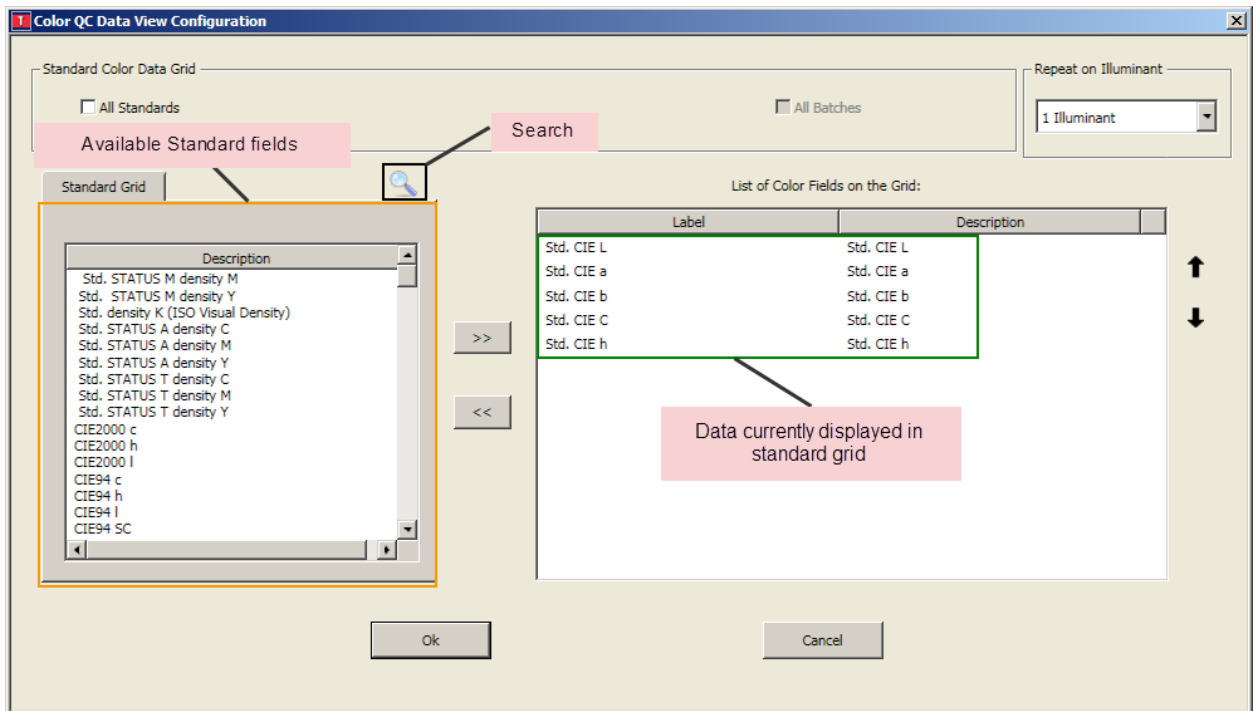
The data displayed within a pane is configurable. Data fields can be modified for any pane.

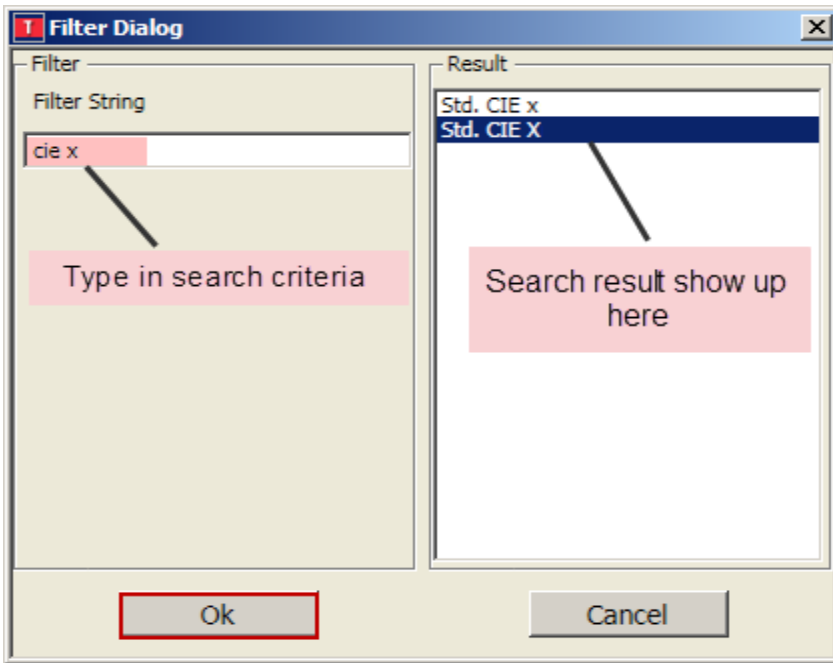
1. If you right click within a data grid, as is shown on the standard data grid below, and choose 'Grid Configuration' the 'Data View Configuration' screen is displayed.



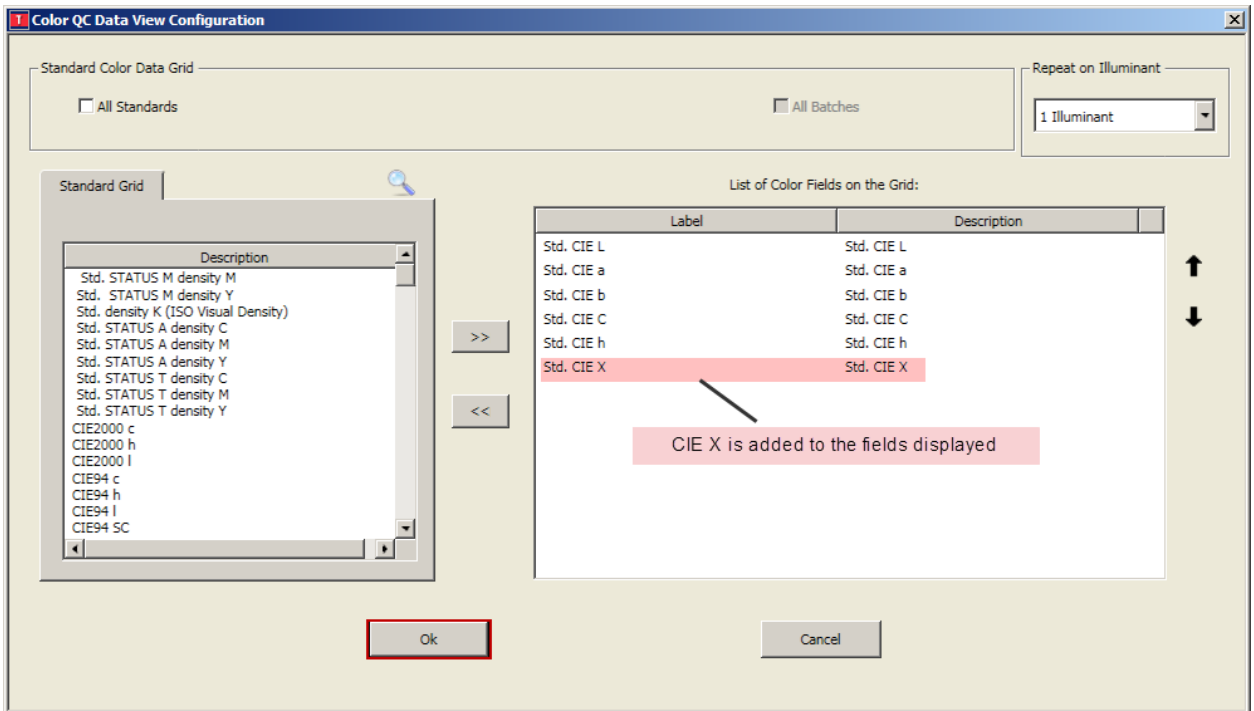
The list of available fields is on the left hand side. On the right hand side are the fields displayed in the grid.

2. To find fields on the left hand side more easily click on the search icon .

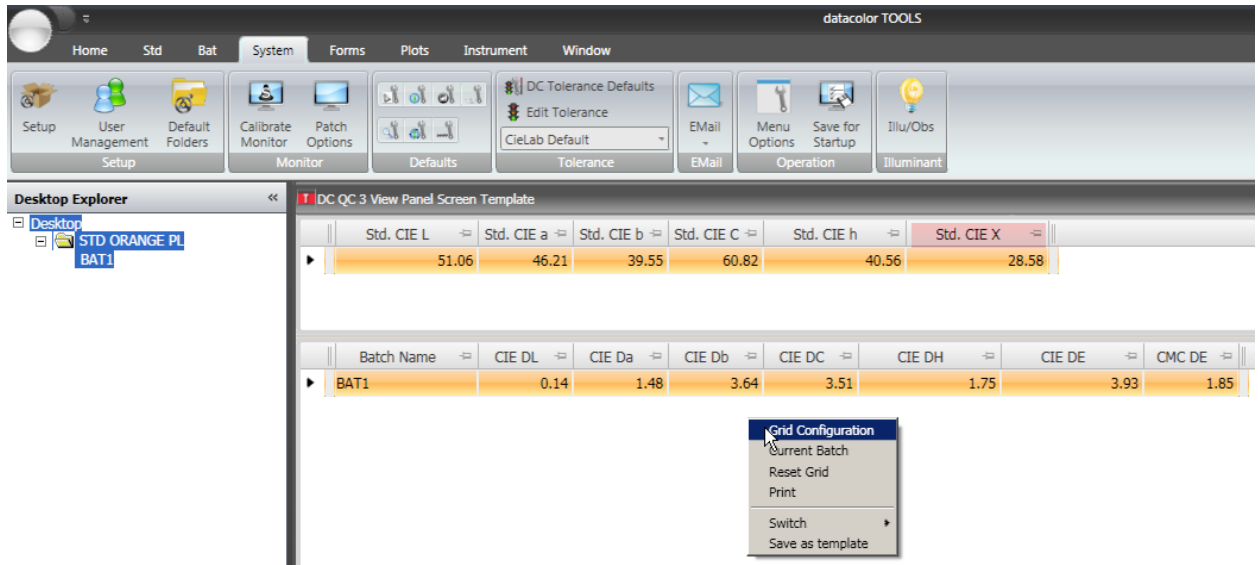




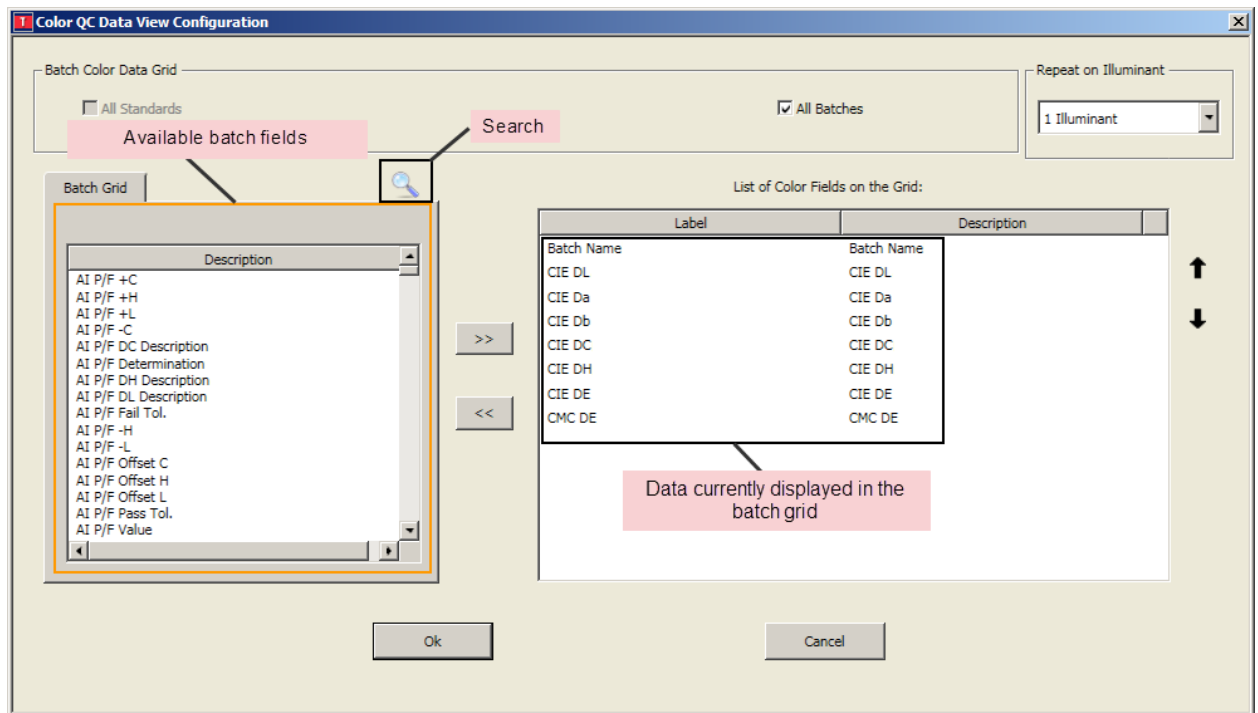
3. Type in what you are searching for. In this case we type “cie x” and on the right hand side the result “Std. CIE X” come up. Highlight it and click “OK”



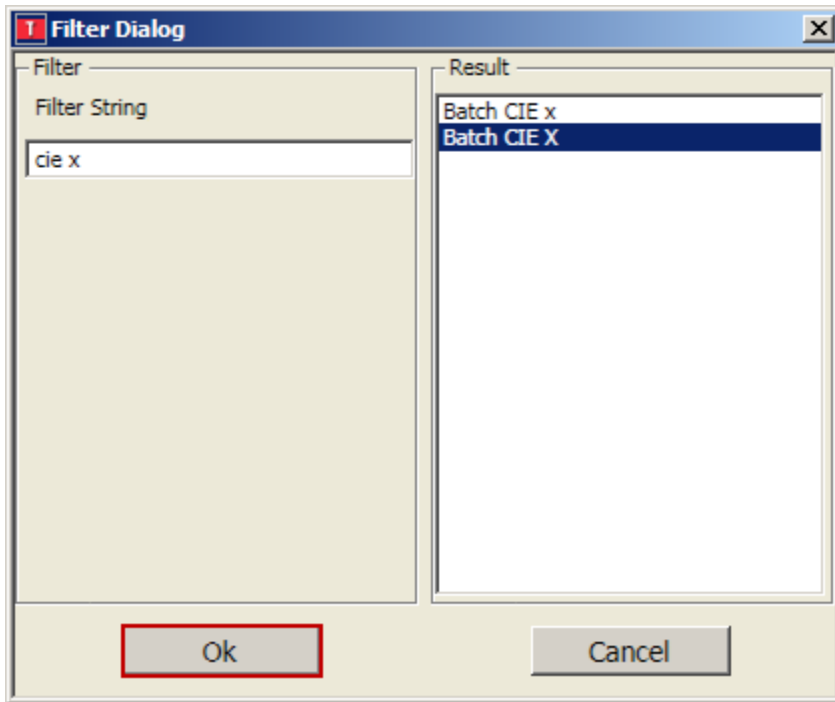
4. Click “Ok” and the field will be added to the Standard Data Grid



5. Right click in the Batch Data Grid and choose “Grid Configuration” to access the available fields for the batch

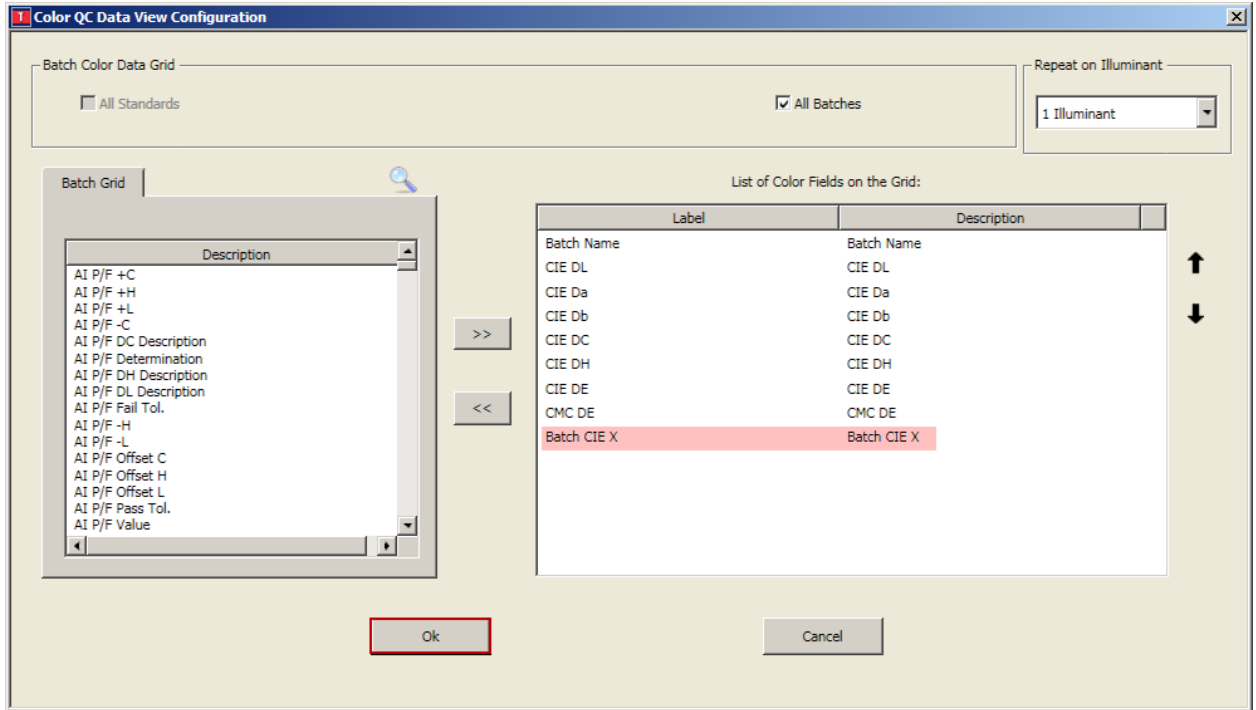


6. Click on the Search icon 

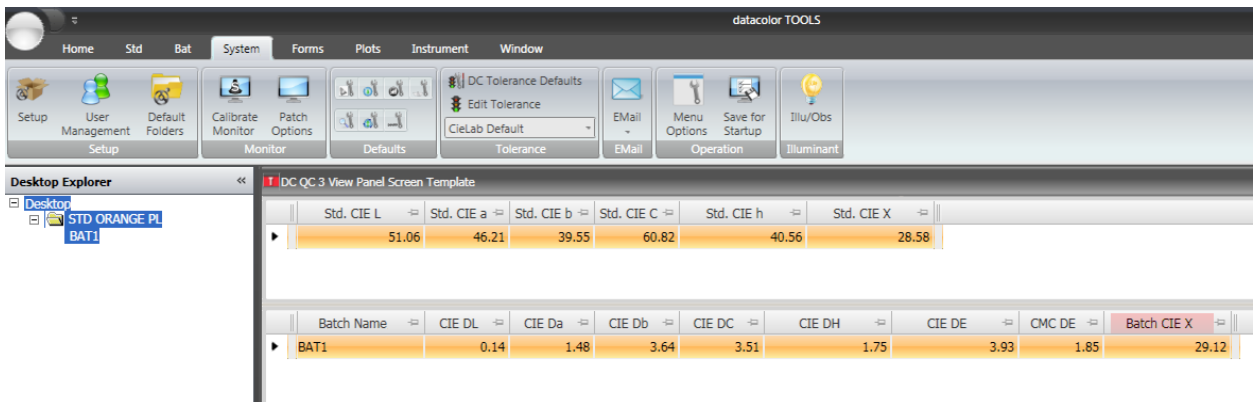


7. Type in what you are searching for. In this case we type “cie x” and on the right hand side the result “Batch CIE X” come up. Highlight it and click “OK”

- The 'Batch CIE X' will be added to the 'Configuration' page. At this point you may change the label of the field if you wish.



- Click "Ok" and the field "Batch CIE X" will be added to the Batch Data Grid.



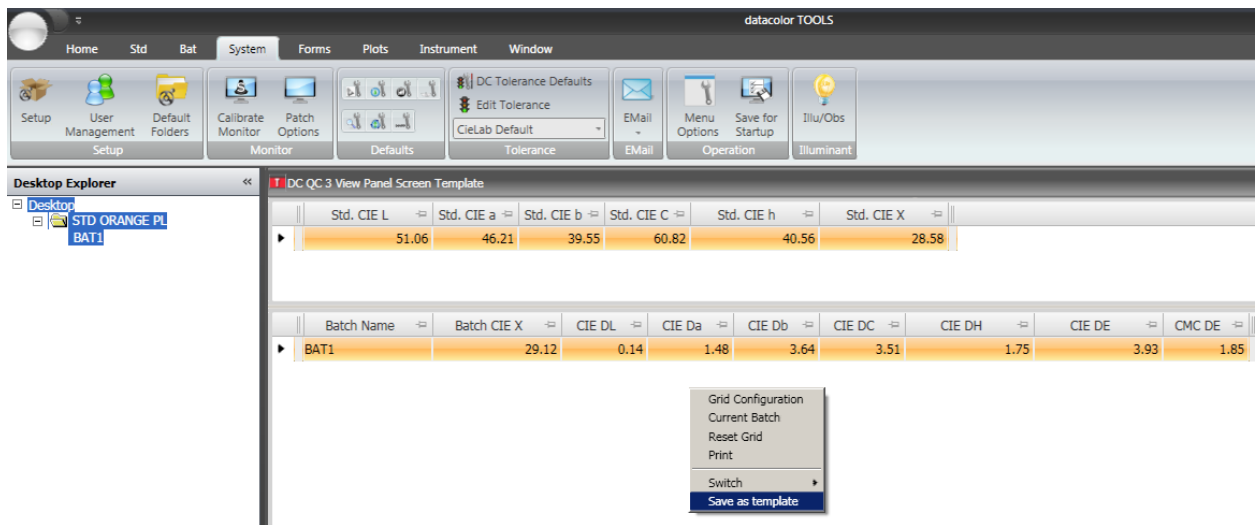
10. If desired you can click and drag the headers to different positions.

The screenshot shows the Datacolor Tools software interface. The top menu bar includes Home, Std, Bat, System, Forms, Plots, Instrument, and Window. Below the menu is a toolbar with various icons for Setup, User Management, Default Folders, Calibrate Monitor, Patch Options, Defaults, DC Tolerance Defaults, Edit Tolerance, CieLab Default, EMail, Menu Options, Save for Startup, and Illuminant. The main window displays a grid of data for a 'DC QC 3 View Panel Screen Template'. The grid has two rows of data. The first row has columns for Std. CIE L, Std. CIE a, Std. CIE b, Std. CIE C, Std. CIE h, and Std. CIE X. The second row has columns for Batch Name, Batch CIE X, CIE DL, CIE Da, CIE Db, CIE DC, CIE DH, CIE DE, and CMC DE. A red arrow points from the 'Batch CIE X' header to the 'CIE DL' header, indicating a move operation. A callout box with a pink background contains the text: 'You can move any of the grid headers as we did by dragging "Batch CIE X" into this position'.

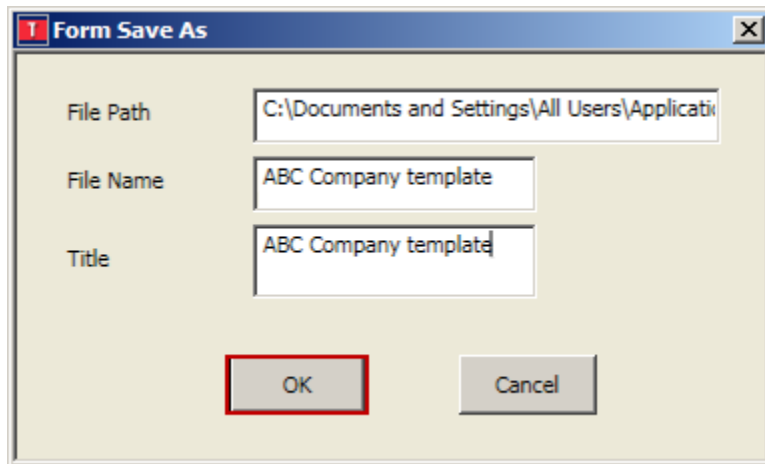
Std. CIE L	Std. CIE a	Std. CIE b	Std. CIE C	Std. CIE h	Std. CIE X
51.06	46.21	39.55	60.82	40.56	28.58

Batch Name	Batch CIE X	CIE DL	CIE Da	CIE Db	CIE DC	CIE DH	CIE DE	CMC DE
BAT1	29.12	0.14	1.48	3.64	3.51	1.75	3.93	1.85

11. Once you have the template with the data you desire shown and in the proper position right click in the template and choose “Save as template”

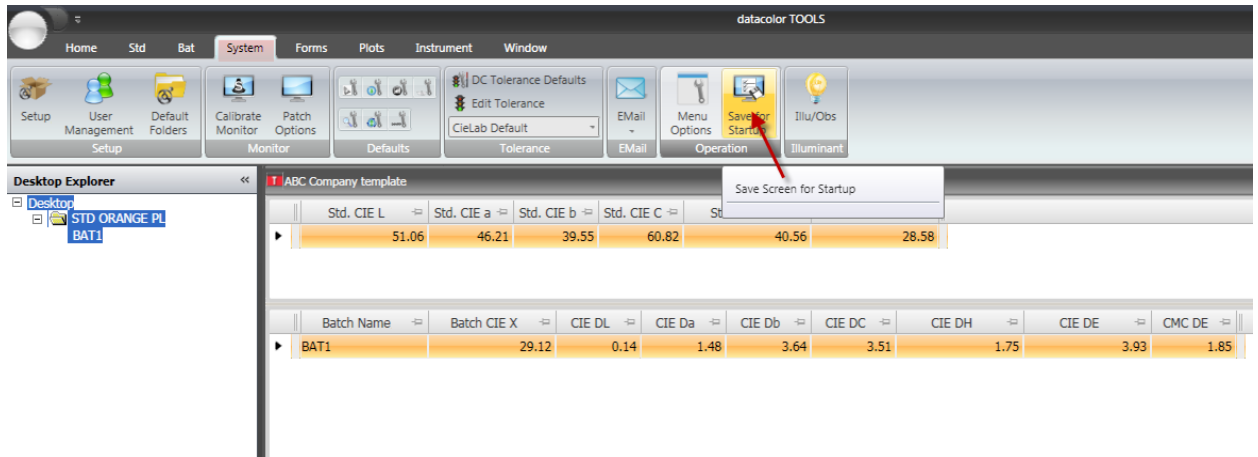


12. The “Form Save as” box comes up. You must give the form a unique file name and title. In this case we used the name “ABC Company template” for both the file name and the title. In your case you may consider using your company name if you have not created a template by this name before. Then click “Ok”



13. The new template with the file name “ABC Company template” will be created.

14. To save this as the template you would like to start on each time you start Datacolor Tools. Click on the “System Tab” and then choose the option “Save Screen for startup”.



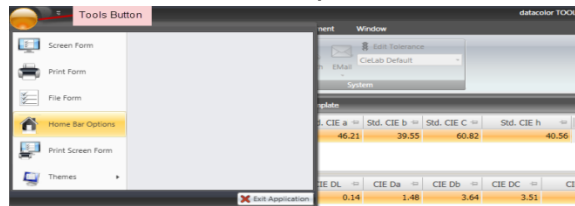
Adding a Button to the Home Ribbon Bar


In Datacolor Tools v2, the 'home' tab on the ribbon bar is configurable. You may add buttons within the appropriate command groups

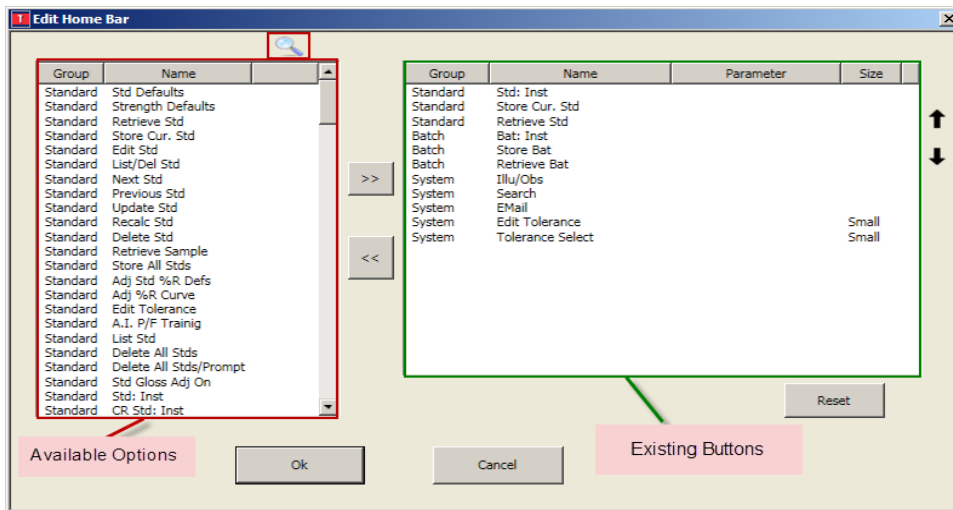


We will add the 'Calibrate' button to the home ribbon bar.

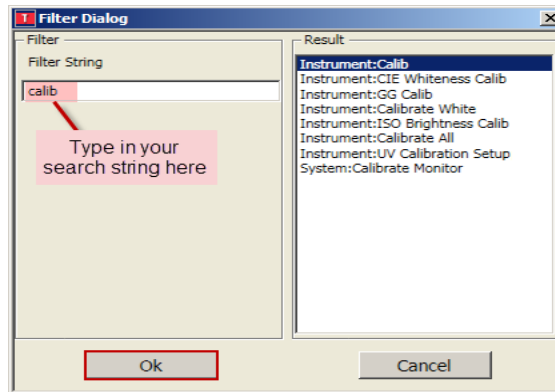
1. Click on the Tools button and from the drop down choose "Home Bar Options"



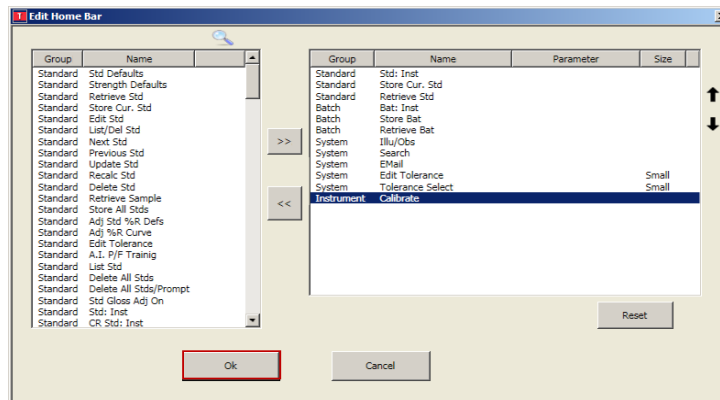
2. The "Edit Home Bar" dialogue box appears. Within the box are two windows. The one to the left shows available options. The one to the right shows existing groups and buttons. Click on the magnifying glass  to search the available buttons.



- In the filter dialog box type in the search string you are looking for. In this case we type “calib”. On the result section on the right hand side highlight “Instrument:Calib” and click “ok”



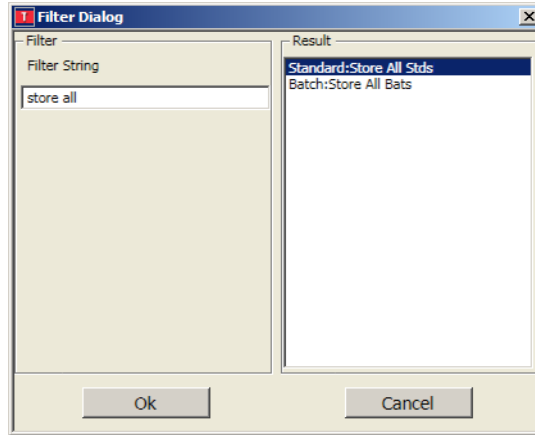
- The “Add Command” dialogue box appears. You may edit the button title. The command group is assigned and you may choose the button size. Click “Ok”



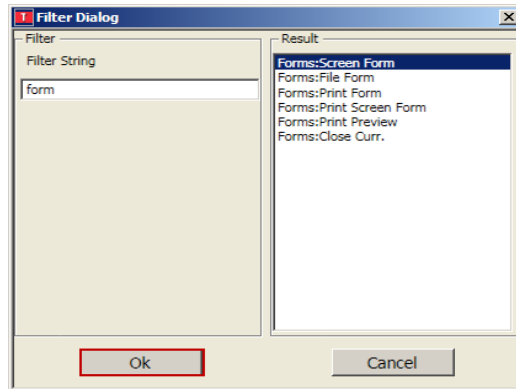
- The button “Calibrate” will be added along with a new command group “Instrument” to the ribbon bar. Click “Ok” to add this button to the ribbon bar.

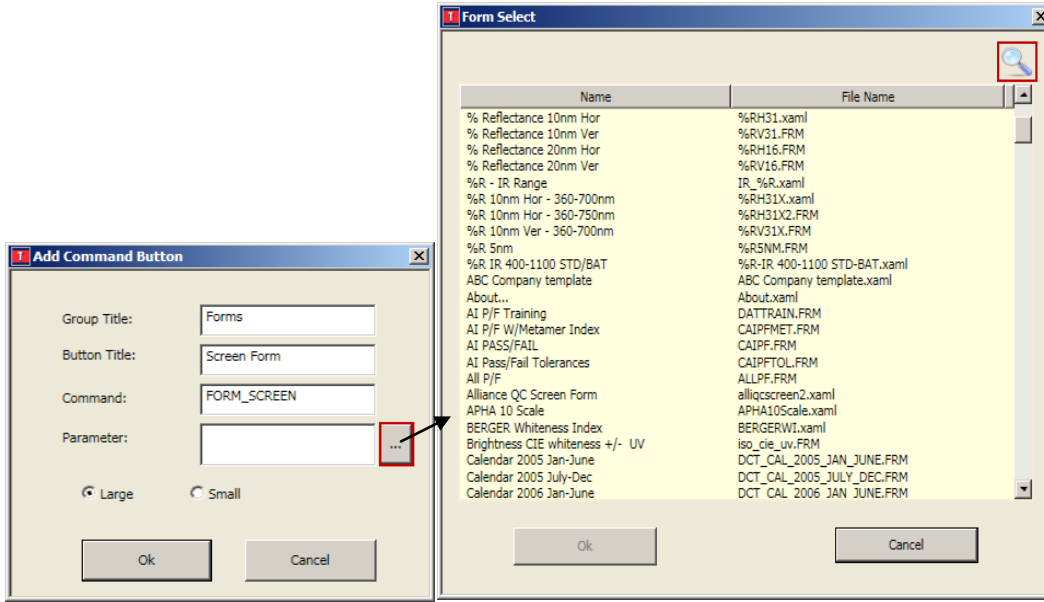




- 6. Other common buttons that may be added to the button bar are “Store all standards” or “Store all batches” which can be found by typing in the proper filter into the filter dialog box.

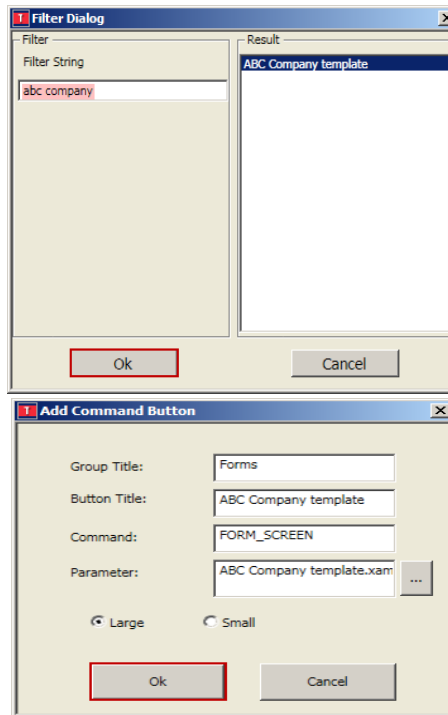


- 7. If you are adding screen/templates or printer forms to the ribbon bar you must also select the template or form you wish to add. Once you click “Ok” below you will be prompted browse for your form/template.

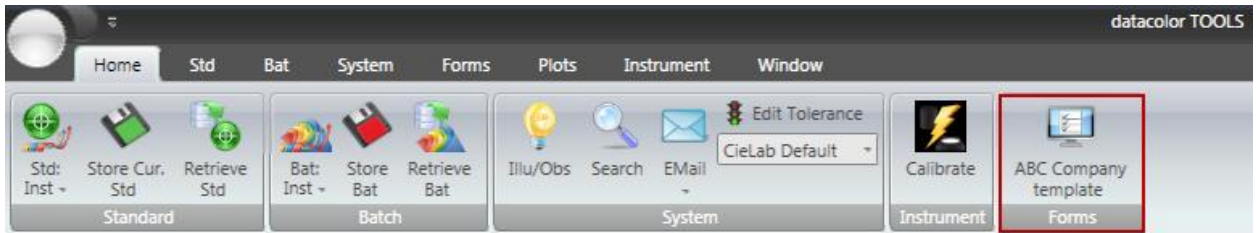
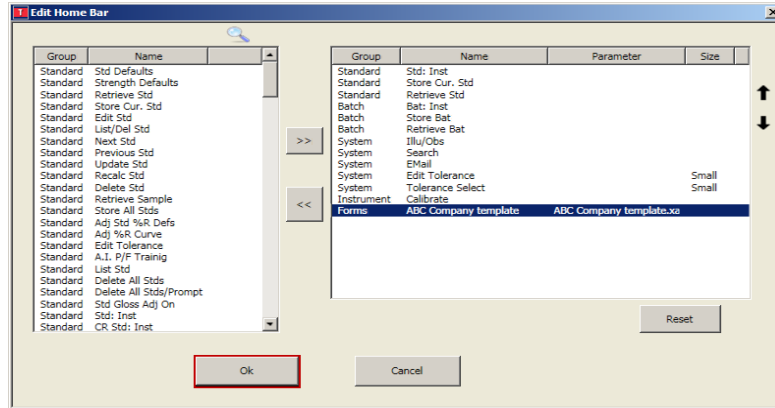




8. Click on the browse button  above to display the list of available forms. Click on the magnifying glass  to search for the form you wish to put on the ribbon bar. In this case we type “abc company” to find the “ABC Company template”. Highlight it and click “Ok”



- The “ABC Company template” is added to the existing buttons on the right. Click “Ok” to add this to the home ribbon bar in the “forms” command group.



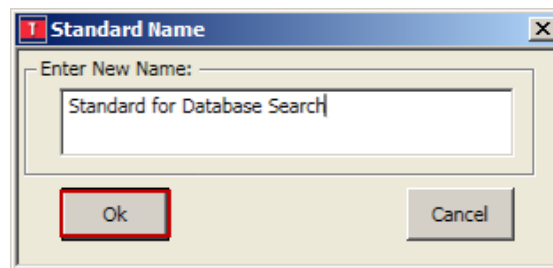
Search

Finding the closest sample to your desktop standard

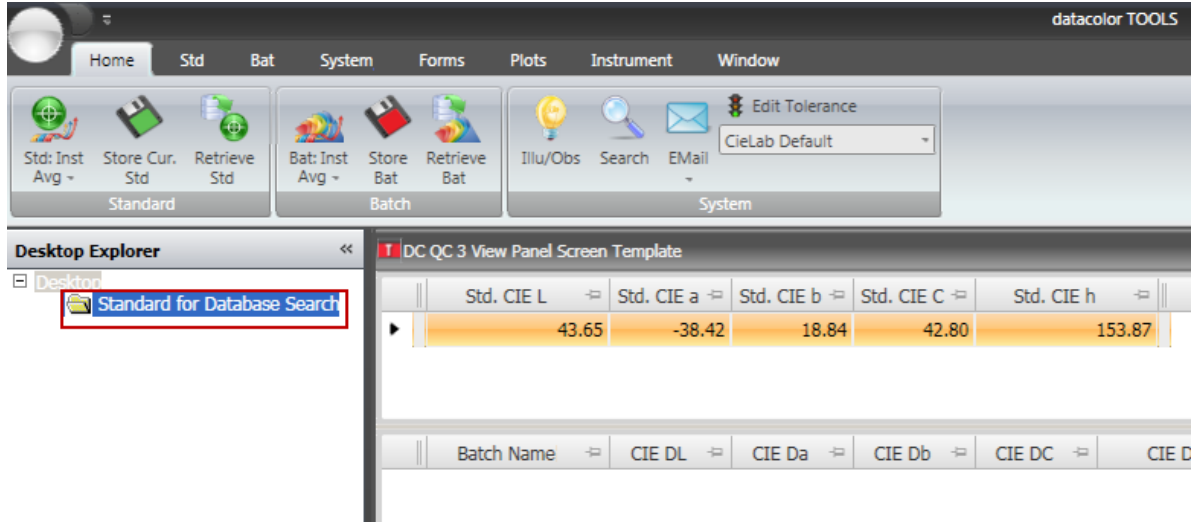
You will measure the sample you wish to search by clicking on the top half of the “Std: Inst Avg” button from the “Home” tab ribbon bar. Place your sample against your instrument and click on the “Std: Inst Avg” button.



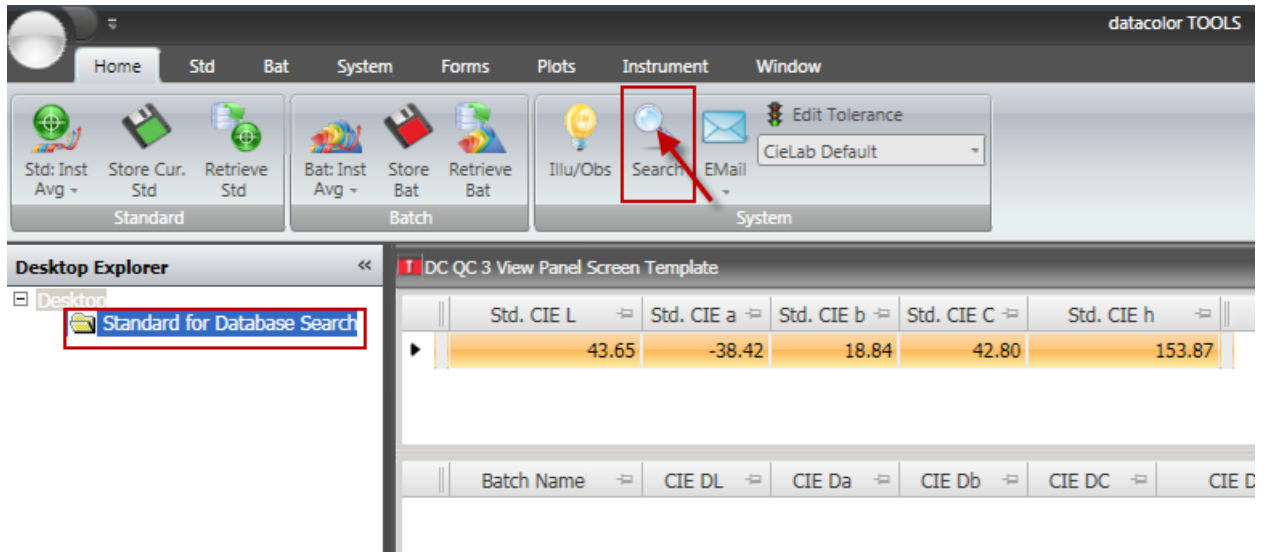
1. You will receive a dialogue box to input the standard name. Input the name and click the “Ok” button. In our example we used “Standard for Database Search” for the name.



- The instrument will take the measurement and place the sample on the desktop explorer.



- To perform a search you will make sure the standard you wish to search for is selected/highlighted in desktop explorer then select the “Search” button from the “Home” tab ribbon bar. The “Search” button will be in “System” group on the ribbon bar.



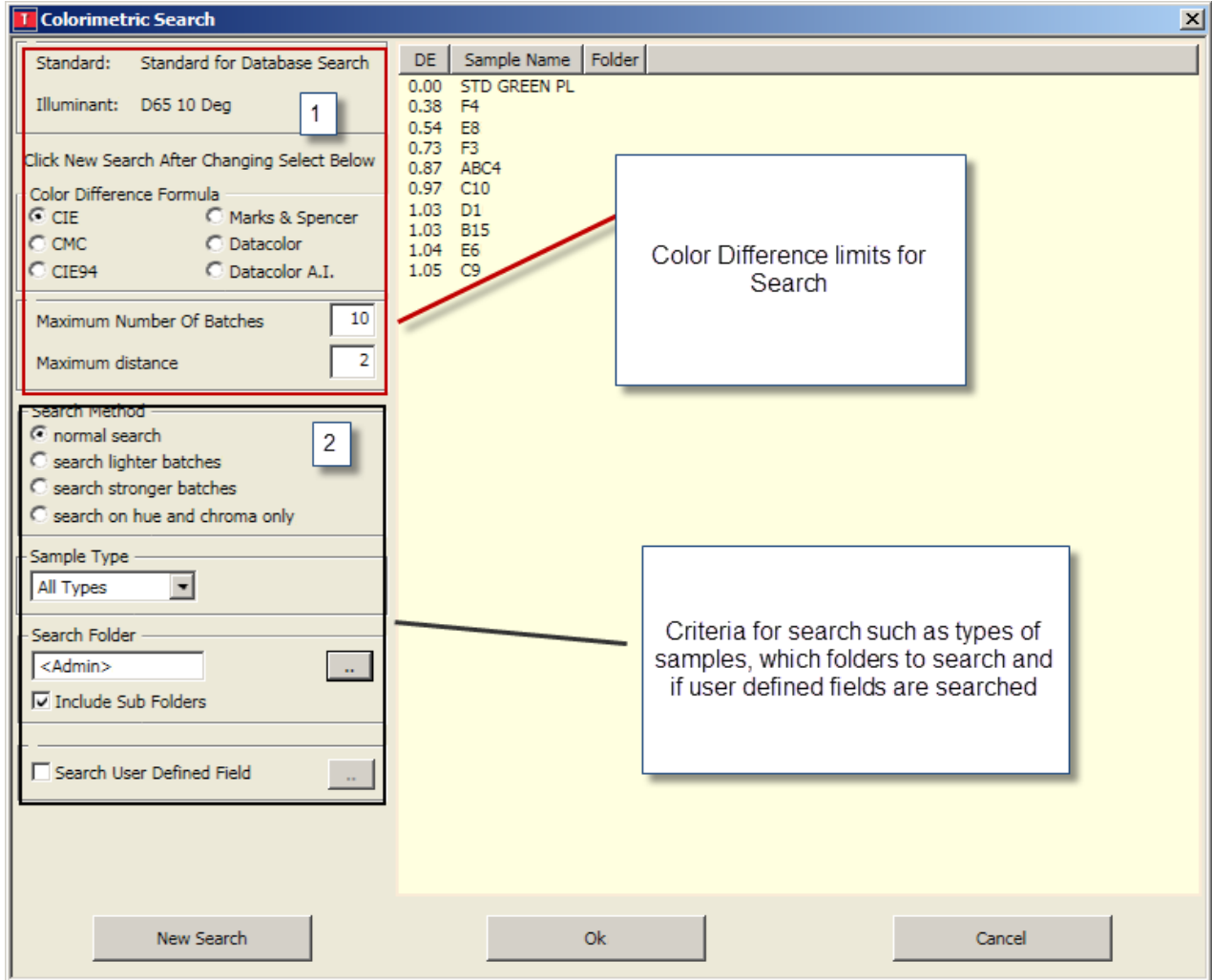
- The results of your search will be displayed as shown below. The table on the right will list all the samples found in the database that meet all the criteria for the search on the left.

The screenshot shows the 'Colorimetric Search' dialog box. On the left, search criteria are defined: Standard is 'Standard for Database Search', Illuminant is 'D65 10 Deg', Color Difference Formula is 'CIE', Maximum Number Of Batches is '10', Maximum distance is '2', Search Method is 'normal search', Sample Type is 'All Types', Search Folder is '<Admin>', and 'Include Sub Folders' is checked. On the right, a table displays the search results:

DE	Sample Name	Folder
0.00	STD GREEN PL	
0.38	F4	
0.54	E8	
0.73	F3	
0.87	ABC4	
0.97	C10	
1.03	D1	
1.03	B15	
1.04	E6	
1.05	C9	

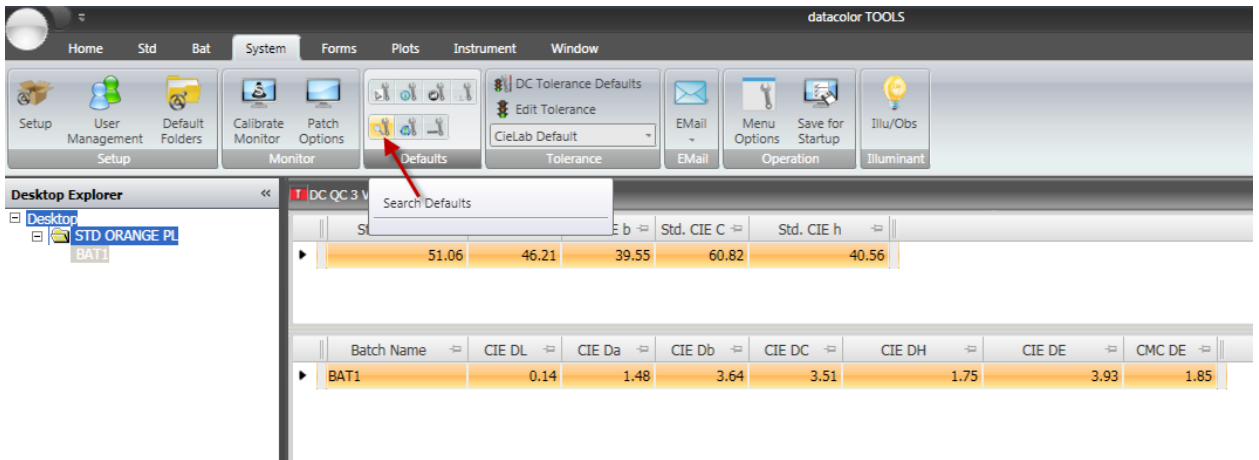
At the bottom of the dialog box are three buttons: 'New Search', 'Ok', and 'Cancel'.

5. Criteria listed below 1 (in red) include color difference formula, Number of batches and the maximum DE difference for samples found. 2 Criteria such as types of lightness and chroma, what type of samples to search, the folder to search and whether to search user defined fields.



6. You may change any of the criteria and choose the “New Search” button to change the output results.

- If you want to permanently change the default criteria for the search go to the “System” tab and choose the option “Search Defaults”



- Search defaults can be edited on the “System Search Default” screen below.

