

*FCS*  
*Express*  
Cytometry

# ***FCS EXPRESS*** ***QUICK GUIDE:***

**10**

Easy Steps  
For Getting  
Started.



Turning Cytometry Data Into Results™

With **FCS Express**, you can eliminate the busywork of creating replicate plots and pages for every sample.

**FOLLOW THE STEPS**  
in this **QUICK GUIDE**

...to set up your **LAYOUT** up as a **TEMPLATE**, through which your samples will be **ITERATED**. With a single **CLICK**, the **BATCH PROCESS** will export the results from the rest of your samples to PPT™/PDF/Excel™.

**FCS Express**  
Cytometry



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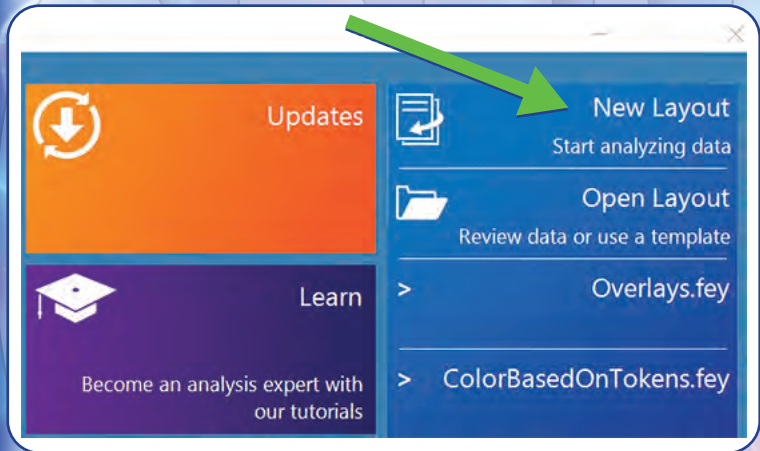
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## OPEN A NEW LAYOUT

*From “Startup Screen”  
click “New Layout”*



## LOAD DATA FILES INTO LAYOUT

1

**Define the list of data files to work with, from your experiment.**

The screenshot shows a software interface with a menu bar (Home, Insert, Design, Gating, Batch, Format, Text, Data, Tools, Quality) and a ribbon with various icons. Two 'Data List' windows are open, each displaying a table with columns 'Iteration' and 'File Name'. The second window has a blue selection bar on the first row and a green arrow pointing to it from a plus sign icon. The text 'drag files here or use the +' is overlaid on the image.

Iteration	File Name
1	Sample 1.fcs
2	Sample 2.fcs
3	Sample 3.fcs
4	Sample 4.fcs

## LOAD DATA FILES INTO LAYOUT

# 2

**Insert a 2D-plot of one of your data files.**

**Data List**

Iteration	File Name
1	Sample 1.fcs
2	Sample 2.fcs
3	Sample 3.fcs
4	Sample 4.fcs

drag & drop to layout

A.

**Plot Selection**

Open Paths for:

Sample 1.fcs

Choose Plot Type(s) to open:

- Contour
- Color Dot
- Histogram
- Kinetics
- Multi-View-View
- Prefiltration
- Data Grid
- Scatter
- Scatter with regression
- Bar
- Pie

choose one

B.

- A.) Drag and drop the first filename in the **DATA LIST** to an empty spot on your layout, and B.) choose **DENSITY, COLOR DOT** or **CONTOUR** plot type. We'll use screenshots of each throughout this guide.
- 

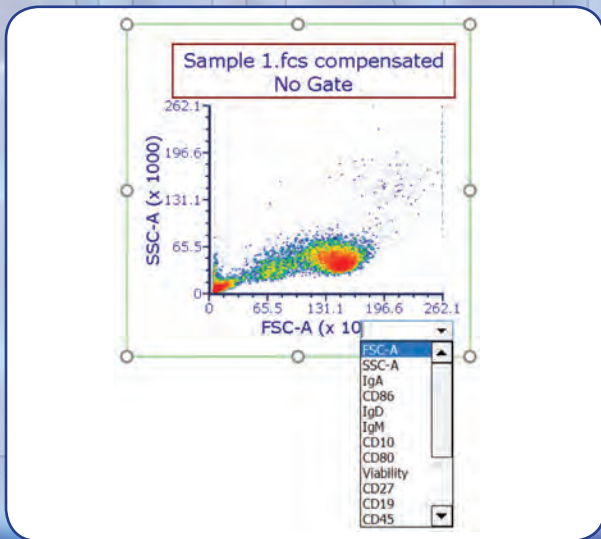
- Changed your mind about what plot type you want? **SEE TIP**  #1
- 

- Need to add overlays for positive or isotype controls, etc.? **SEE TIP**  #2

## GATE YOUR DATA

3

**Click on plot axes to change axis parameters**  
(e.g., to SSC vs. FSC)

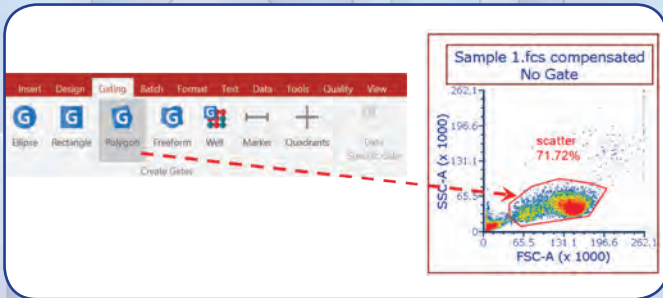




## GATE YOUR DATA

# 4

## Draw a Gate on your Plot

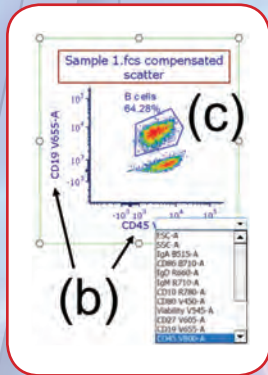
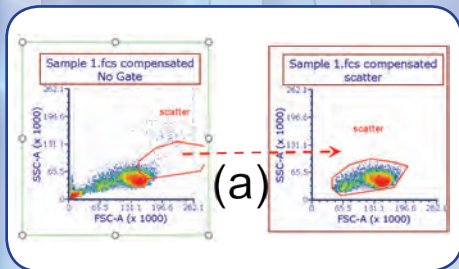


- Choose POLYGON from the Gating Tab, and click where you want each vertex to appear.
- To close the gate, click on the original vertex or press SPACE on your keyboard.
- Name the gate, e.g., "SCATTER".

## GATE YOUR DATA

5

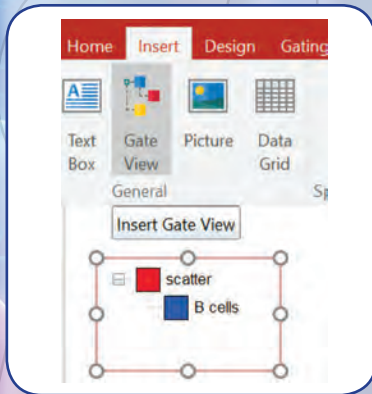
Drag and drop the gate out of the plot to open a new plot displaying this gated population (a), change the plot axes to new parameters (b), and draw a new gate on the plot (c).



- Want to create Quadrants instead of, or in addition to Gates on this new plot? **SEE TIP #3**

## GATE YOUR DATA

### 6 *View an interactive legend of your gates.*

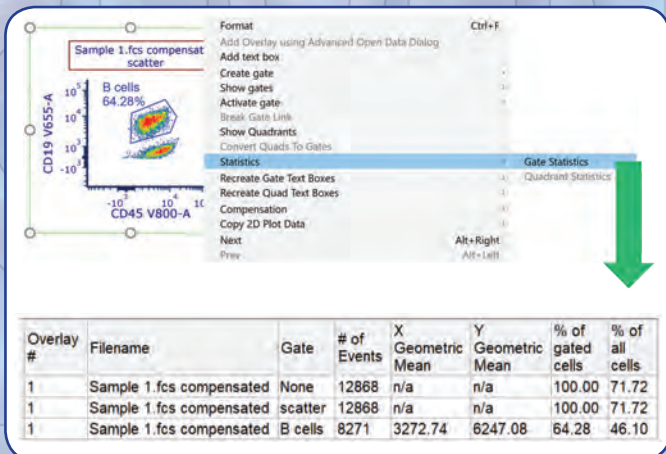


- Insert tab > GATE VIEW. Click on an empty spot on your layout.
- From here, you may re-define your gating hierarchy, delete or rename gates, etc.
- You can also drag and drop gates from here to any plot to re-gate that plot.

## VIEW SUMMARY STATISTICS

7

**View default summary statistics from this plot.**



The screenshot shows a flow cytometry plot with the following data:

Overlay #	Filename	Gate	# of Events	X Geometric Mean	Y Geometric Mean	% of gated cells	% of all cells
1	Sample 1.fcs compensated	None	12868	n/a	n/a	100.00	71.72
1	Sample 1.fcs compensated	scatter	12868	n/a	n/a	100.00	71.72
1	Sample 1.fcs compensated	B cells	8271	3272.74	6247.08	64.28	46.10

## VIEW SUMMARY STATISTICS

- These statistics reflect the population that the plot is gated on.
- You may right-click on the **STATISTICS WINDOW** to add or remove any desired statistic.
- You can also drag and drop any of these statistics to insert them onto a plot or elsewhere on your layout

***GREAT JOB!*** You've now learned the basics of:

- ***Loading your Data Files into the Layout***
  - ***Creating Gates*** and
  - ***Viewing Summary Statistics***
- 

Complete the next few steps to quickly summarize the, results from all your data files in a ***Batch Process*** to Microsoft Office™, PowerPoint™ & Excel™.

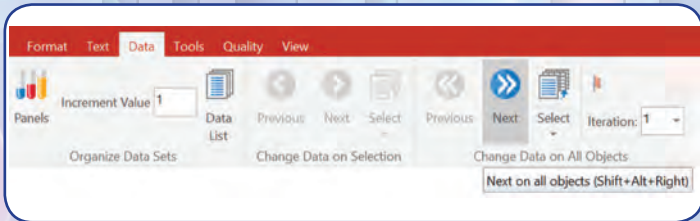
## BATCH PROCESS YOUR DATA FILES

8

### **Preview Your Data Files** (Optional)

**You can preview your entire list of data files without having to create replicate sets of plots for each, simply by using the *Next/Prev* buttons.**

*Just make sure you go back to Iteration #1 before going on to Step 10 below.*

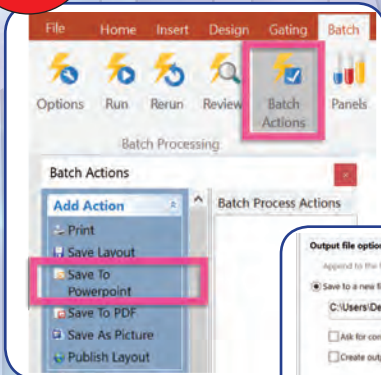


- **Data tab > Change Data on All Objects > Next/Previous**

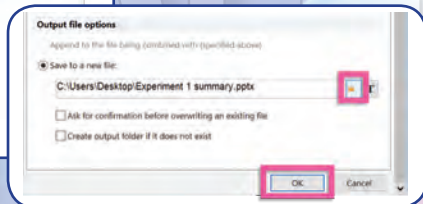
## BATCH PROCESS YOUR DATA FILES

9a

### Set Up a Batch Process to PowerPoint



- Batch tab > Batch Actions > Save to PowerPoint



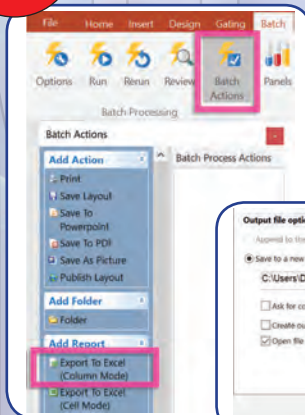
- Under Output File Options > Save to a New File, click on the yellow folder icon to set the filepath and filename for your PPT export > Click OK.



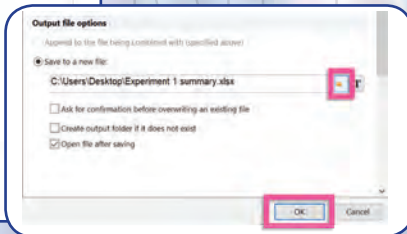
## BATCH PROCESS YOUR DATA FILES

9b

### Set up a Batch Process to Excel



- Batch tab > Batch Actions > Export to Excel (Column Mode)



- Under Output File Options > Save to a New File, click on the yellow folder icon to set the filepath and filename for your XLSX export > Click OK.

## BATCH PROCESS YOUR DATA FILES

9c

**Choose statistics and filenames or other metadata to export to Excel.**

Batch Actions

- Print
- Save Layout
- Save to PowerPoint
- Save to PDF
- Save As Picture
- Multiple Layout
- Add Folder
  - Folder
- Add Report
  - Export to Excel (Column Mode)
  - Export to Excel (Cell Mode)

Batch Process Actions:

- Export To PowerPoint
- Excel (Column Mode)
- Statistic: Filename for plot #1: gate scatter
- Statistic: X Median for plot #1: gate scatter
- Statistic: % of gated for plot #1: gate scatter

drag & drop onto "Excel (Column Mode)"

Sample 1.fcs compensated No Gate

Scatter 71.72%

SSC-A (x 1000)

FSC-A (x 1000)

Create Statistic

Display Text

Date Source

Statistic:

Plot Information

Select a quadrant: None

Gate

Select Gate: Scatter

Statistic

Statistic #

Scatter

Checking Gate

Gate

% of Events

% of Gated Events

% of Events

% of Gated Events

Number Display Options

Number of decimals: 2

Rounding mode: Standard

multiple-select items

## BATCH PROCESS YOUR DATA FILES

- Drag & drop a **PLOT** or a **GATE** to the “Excel (*Column Mode*)” Batch Action

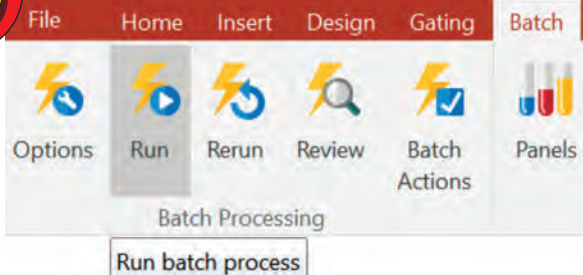
- Multiple-select items from the resulting dialog window to export to Excel and click OK

**NOTE:** Be sure to select **FILENAME** so that this descriptive information appears in the first column of your Excel Spreadsheet

## BATCH PROCESS YOUR DATA FILES

# 10

## Run the Batch Process



- “Batch tab > Batch Processing > Run”
- All data files in your experiment (viewable within the DATA LIST as shown in STEP 2 above) have now been PROCESSED and SUMMARIZED in visual and statistical form. Open your PowerPoint and Excel files, respectively, to see!  
*Need to adjust gates individually for each sample?* ↓

SEE TIP  #4

## FAQ/TIPS



**#1: I WANT COLOR DOT PLOTS, BUT I ALREADY INSERTED CONTOUR / DENSITY / HISTOGRAM PLOTS (OR VICE-VERSA). CAN I CHANGE MY MIND WITHOUT STARTING OVER?** *You can change the type of existing plots on your layout by selecting the plot(s) as you would object(s) in PowerPoint, and using the Format tab > Change Plot Type button.*



**#2: HOW DO I CREATE OVERLAYS?** *You can create overlays by dragging and dropping files from the Data List onto existing Color Dot or Histogram plots. Be sure to anchor control or reference overlays (e.g., positive and isotype controls) so that they don't change during the batch, by right-clicking on the plot with multiple overlays > Format > Overlays > select the control overlay(s) > uncheck Change data during Next/Prev/Batch.*



**#3: HOW CAN I CREATE QUADRANTS AND MARKERS?** *The Gating tab has buttons for Quads and Markers. You can also right-click on a plot to create Gates, Quads (on 2D-plots), and Markers (on 1D-plots) from the pop-up menu.*



**#4: MY GATED POPULATIONS SHIFT AROUND FROM SAMPLE TO SAMPLE. CAN THE BATCH PROCESS HANDLE THIS, OR MUST ALL GATE SIZES AND POSITIONS BE THE SAME ACROSS SAMPLES?** *You can adjust gate position and size individually for each data file via Batch tab > Options > check Unconditionally pause between iterations prior to Running or Re-running the Batch. Alternatively, you can use Gating tab > Data-Specific Gates, which are also useful for when you have plots from multiple samples side by side (simultaneously) in the layout.*

## HELP RESOURCES



### ***NEED HELP?***

Contact us by email or phone.  
Our response is guaranteed within  
24 business hours, usually much sooner  
(*within a few hours*).

**[Support@DeNovoSoftware.com](mailto:Support@DeNovoSoftware.com)**

*or*

**+1 (213) 814-1240**

# HELP RESOURCES

(Also accessible from Startup Screen)

## SEE OUR VIDEOS



Quick video clips (2-3 min each)

[https://www.denovosoftware.com/videos/  
#shortoverview](https://www.denovosoftware.com/videos/#shortoverview)



Full-length recorded webinars

<https://www.denovosoftware.com/videos/>

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## ONLINE STEP-BY-STEP WRITTEN TUTORIALS



and

**SEARCHABLE MANUAL**



[https://www.denovosoftware.com/full-access/  
manual-tutorials](https://www.denovosoftware.com/full-access/manual-tutorials)



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