

# Create and Edit Data Tables

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## 0. Open Prism 8

Go to desktop and search “Prism”. Double click “Prism 8”:



## 1. Prism 8 welcome dialog – Eight kinds of data tables

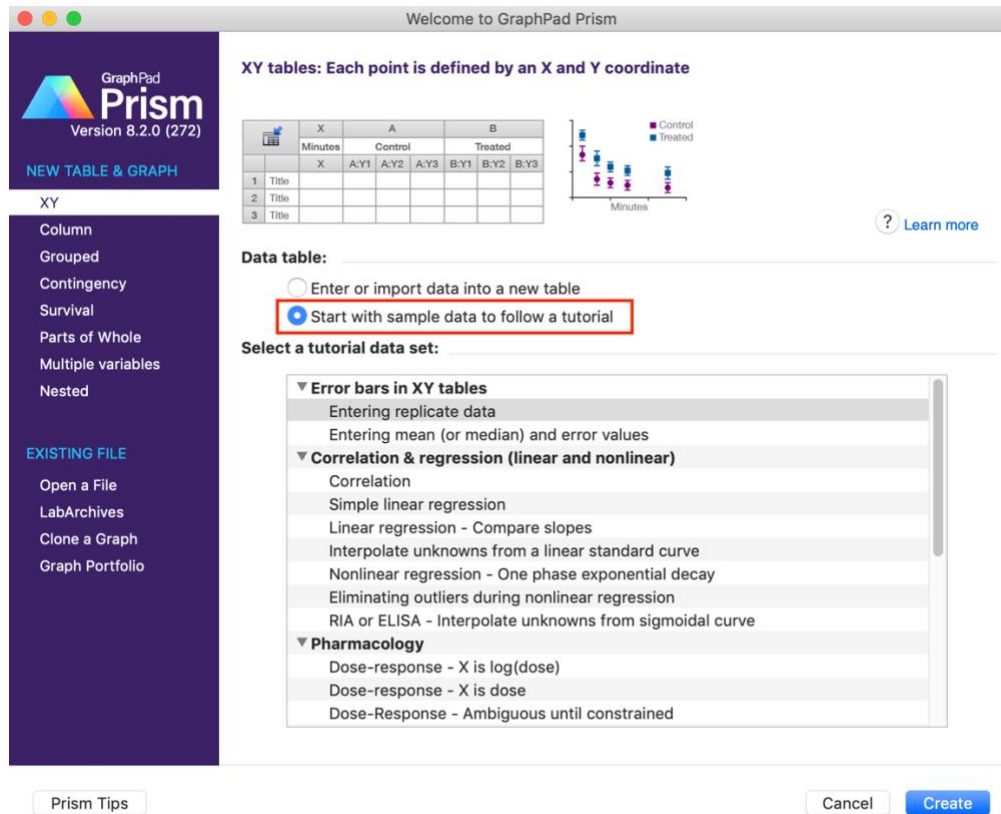
When you start Prism, you'll see the “Welcome to GraphPad Prism” dialog. You'll see eight tabs representing the eight kinds of data tables on the left. On the right, you could either enter data, import data, or start with a sample data for tutorial.

\*\*\* Which data table to choose? [Distinguishing the eight kinds of data tables](#)

## 2. Three ways to create / import data

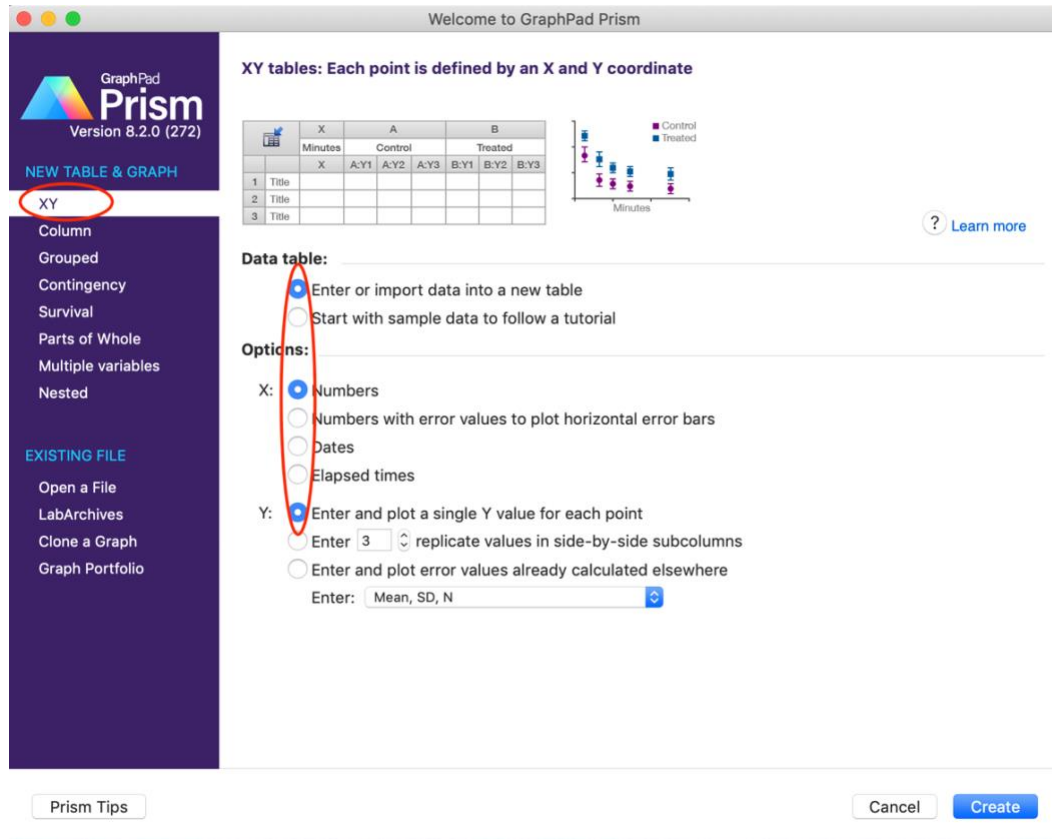
### 1) Starting with a sample data for tutorial

Similarly, on the Welcome dialog, select “**XY**” on the NEW TABLE & GRAPH section on the left. Select “**Start with sample data to follow a tutorial**” for Data table and whatever analysis you would like to explore.



## 2) Entering data

In this case, let's start with a XY data table example. Select **"XY"** on the NEW TABLE & GRAPH section on the left. Select **"Enter or import data into a new table"** for Data table, **"Numbers"** for X, **"Enter and plot a single Y value for each point"** for Y. Then click **"create"**.

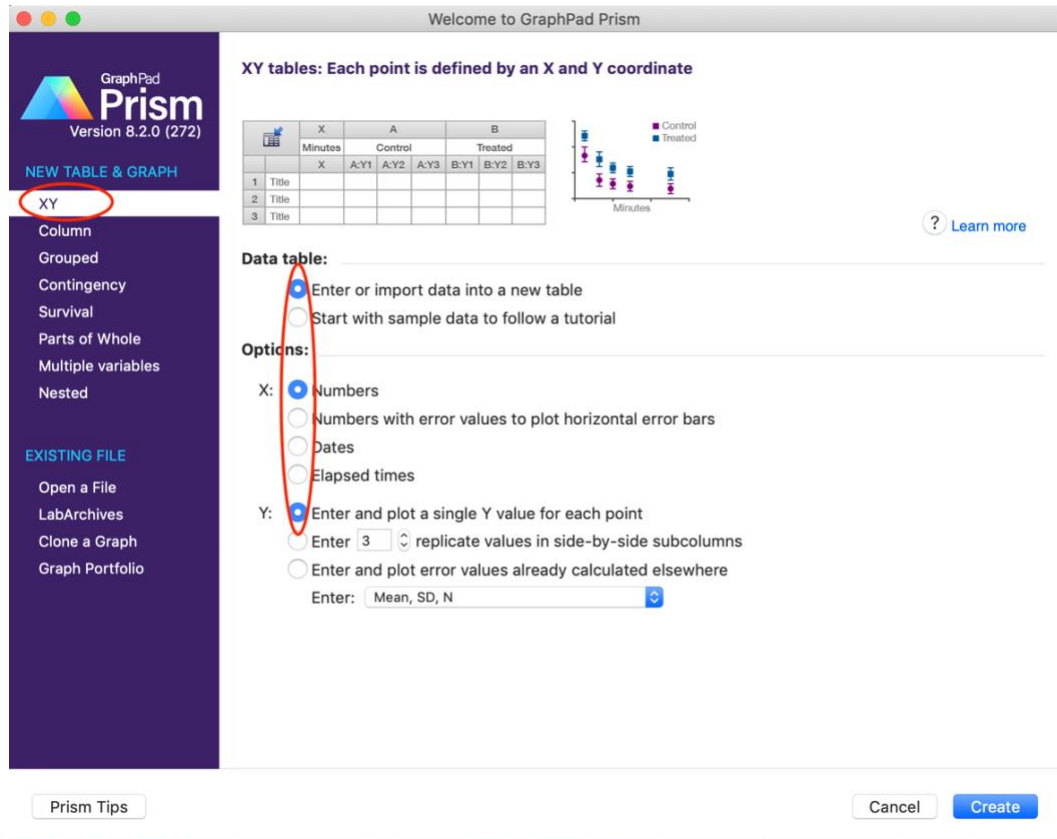


Then Prism would open an empty file. In this XY data table, there are one X column and several Y columns. You could enter your data as you want.

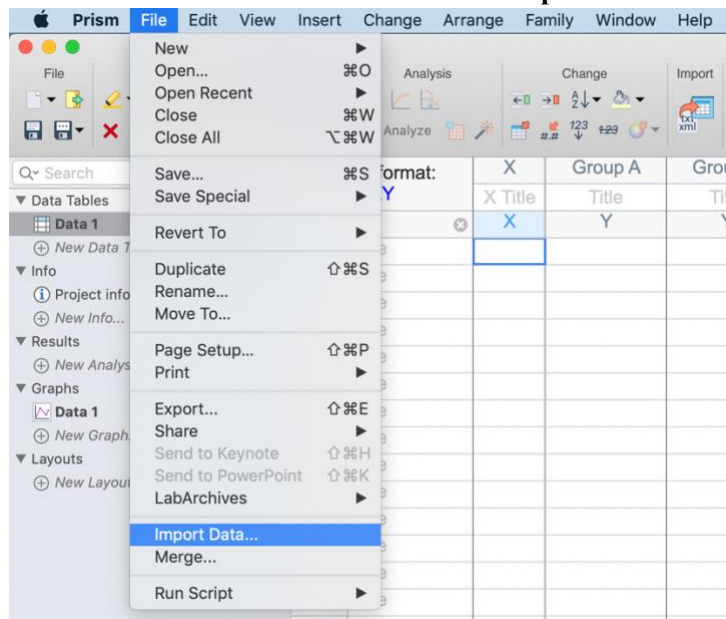
Q Search	Table format:	X	Group A	Group B	Group C
▼ Data Tables >>	XY	X Title	Title	Title	Title
▼ Data 1 >>		X	Y	Y	Y
⊕ New Data Table...	1	Title			
▼ Info >>	2	Title			
ⓘ Project info 1	3	Title			
⊕ New Info...	4	Title			
▼ Results >>	5	Title			
⊕ New Analysis...	6	Title			
▼ Graphs >>	7	Title			
▼ Data 1 >>	8	Title			
⊕ New Graph...	9	Title			
▼ Layouts >>	10	Title			
⊕ New Layout...					

### 3) Importing data (.csv OR .txt)

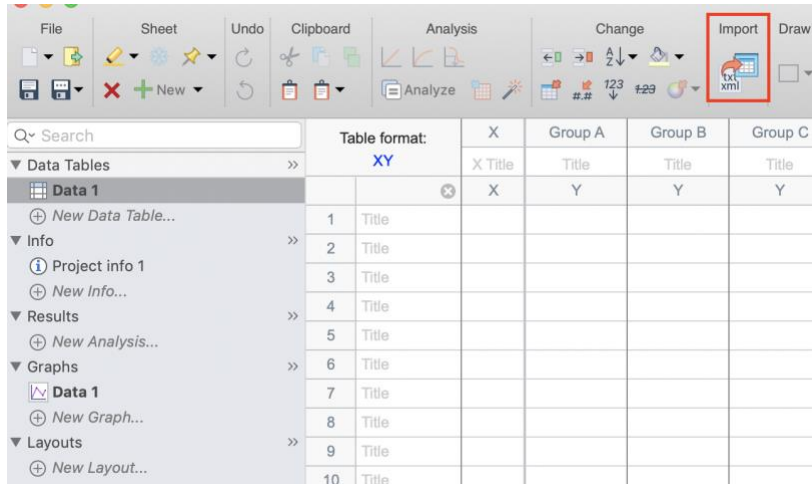
Prism can import text files delimited with tabs (.txt files) or commas (.csv files). To import an Excel file or text file, we also need to create an empty table first:



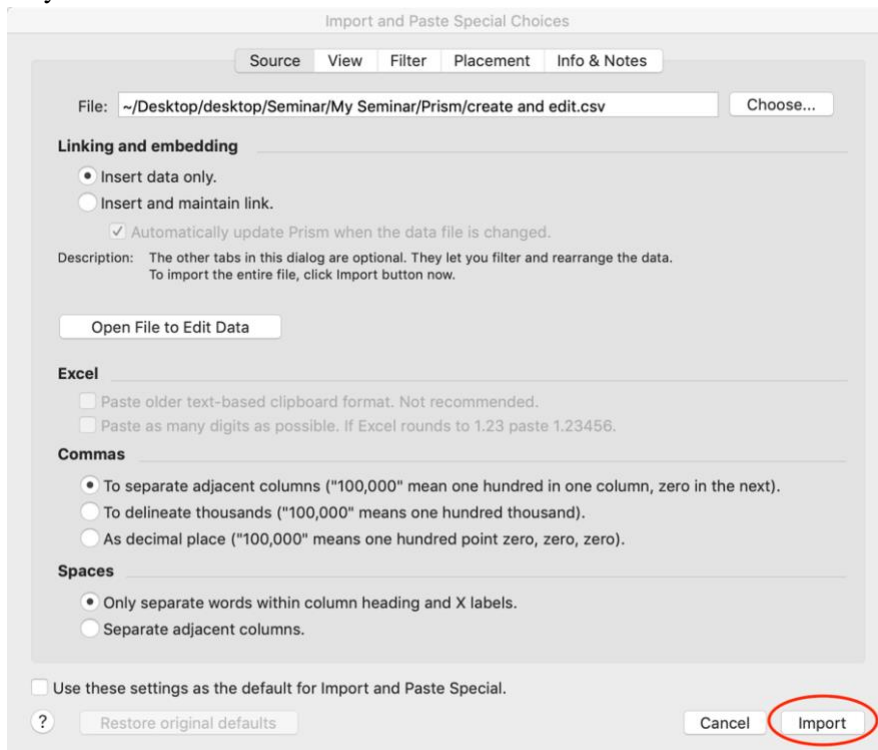
Click “File” on the menu bar then select “Import Data...”:



Alternatively, choose the import command or click the **Import** button:



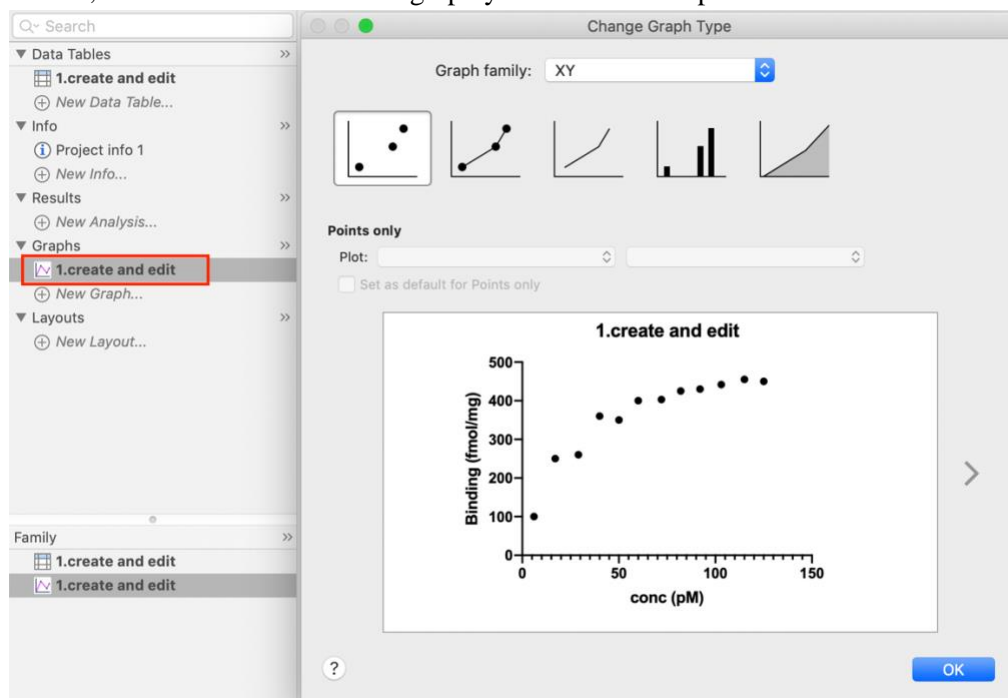
Select the file “**1.create and edit.csv**” or “**1.create and edit.txt**”. Use the default settings then click “**Import**” on the bottom right. You could also choose how to import the data based on your needs.



Then the data will be like the following:

Search		Table format:		X	Group A
		XY		conc (pM)	Binding (fmol/mg)
				X	Y
1	Title			6	100
2	Title			17	250
3	Title			29	260
4	Title			40	360
5	Title			50	350
6	Title			60	400
7	Title			72	403
8	Title			82	425
9	Title			92	430
10	Title			103	442
11	Title			115	455
12	Title			125	450

At the same time, Prism 8 also automatically creates a graph “1.create and edit”. Once you click it, it would ask what kind of graph you would like to present.



Notes:

The “Open a File” on the Welcome dialog is only for importing Prism project files (.pzfx).

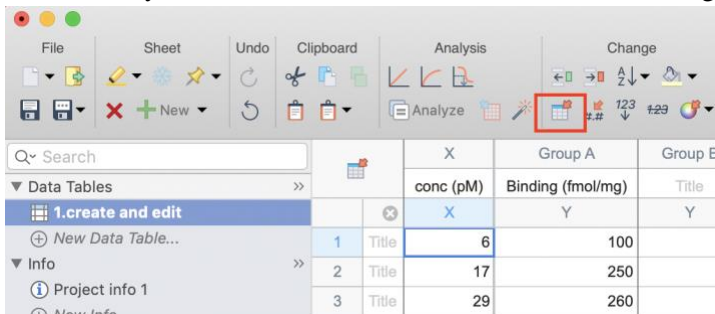
### 3. Changing a Data Table Format.

The choice you make about how to format your data table is important. If you don't choose the appropriate kind of data table, you won't be able to make the kind of graph you want or perform the analyses you have in mind.

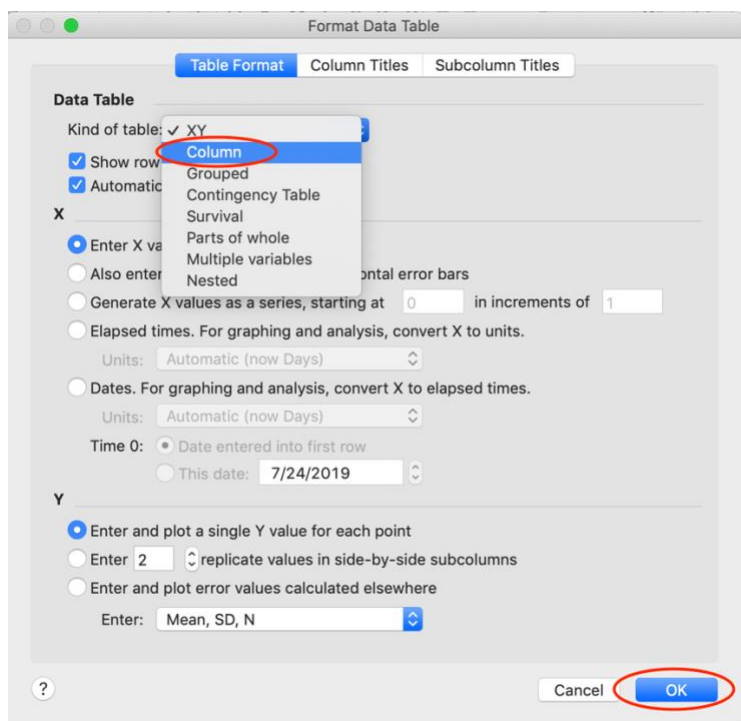
To change the format of a data table, **click on the Table format area** in the upper left of a data table.

Table format: XY		X	Group A
		conc (pM)	Binding (fmol/mg)
		X	Y
1	Title	6	100
2	Title	17	250
3	Title	29	260
4	Title	40	360
5	Title	50	350
6	Title	60	400
7	Title	72	403
8	Title	82	425
9	Title	92	430
10	Title	103	442
11	Title	115	455
12	Title	125	450

Alternatively, click on the Table Format button on the change toolbar.



Then pops up a window “Format Data Tables” and you could choose any data format you want. Select “**column**” under “kind of tables”, then **click “OK”** on the bottom right.



Apparently, the table has been changed to column format and no X exists in this table anymore.

Table format:		Group A
Column		Binding (fmol/mg)
		Y
1	Title	100
2	Title	250
3	Title	260
4	Title	360
5	Title	350
6	Title	400
7	Title	403
8	Title	425
9	Title	430
10	Title	442
11	Title	455
12	Title	450

#### 4. Entering dates as X

Change the table format back to “XY”; Select “Dates” for X, then click “OK”



Format Data Table

Table Format Column Titles Subcolumn Titles

**Data Table**

Kind of table: XY

☒ Show row titles

☒ Automatic column widths

**X**

☐ Enter X values

☐ Also enter X error values to plot horizontal error bars

☐ Generate X values as a series, starting at 0 in increments of 1

☐ Elapsed times. For graphing and analysis, convert X to units.

Units: Automatic (now Days)

☒ Dates. For graphing and analysis, convert X to elapsed times.

Units: Automatic (now Days)

Time 0: ☒ Date entered into first row

☐ This date: 7/24/2019

**Y**

☒ Enter and plot a single Y value for each point

☐ Enter 2 replicate values in side-by-side subcolumns

☐ Enter and plot error values calculated elsewhere

Enter: Mean, SD, N

Cancel OK

If you choose elapsed time, enter time as hh:mm or hh:mm:ss. For example, enter 1:12:30.2 to enter an elapsed time of 1 hour, 12 minutes, 30.2 seconds.

If you chose to enter dates, you can enter dates in almost any format. Prism will figure out what you meant and display the date on the table in a standard format (that you cannot change). Try to enter “01-01-2019”, “01/02/2019” and “13-13-2019” in the date column. Then see what happens.

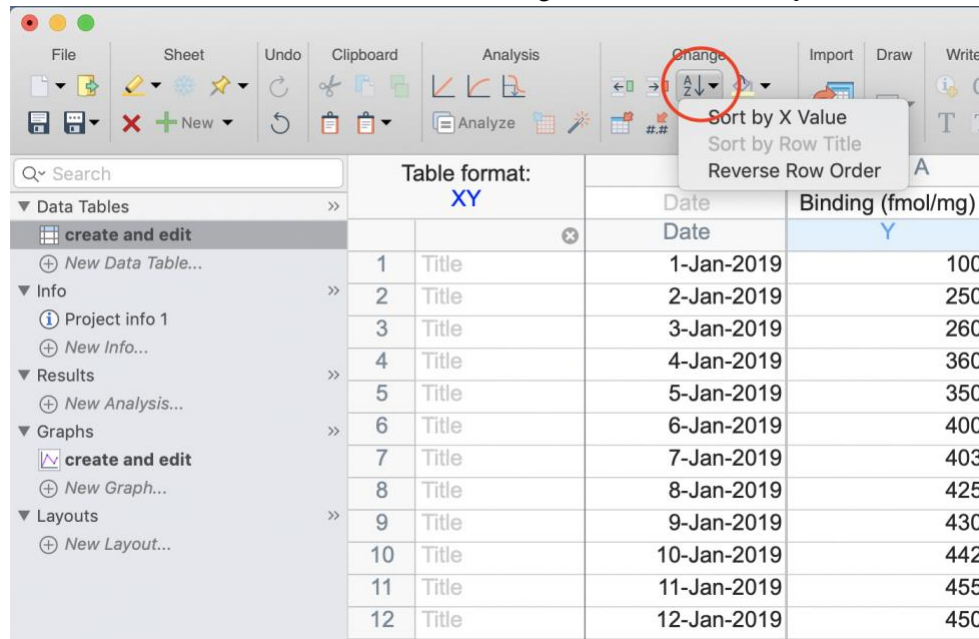
Table format: XY		X	Group A
		Date	Binding (fmol/mg)
		Date	Y
1	Title	1-Jan-2019	100
2	Title	2-Jan-2019	250
3	Title	?	260
4	Title	4-Jan-2019	360
5	Title	5-Jan-2019	350
6	Title	6-Jan-2019	400
7	Title	7-Jan-2019	403
8	Title	8-Jan-2019	425
9	Title	9-Jan-2019	430
10	Title	10-Jan-2019	442
11	Title	11-Jan-2019	455
12	Title	12-Jan-2019	450

## 5. Sorting Data

If you choose connecting lines on an XY graph, Prism connects the points in the order they appear on the data table. If the data are not sorted on the data table, the connecting lines will jump

back and forth across the graph. If you want the connecting lines to go from left to right across the graph, first sort the data table by X values.

**Click on the Sort Rows button on the Change toolbar, and sort by X value.**



The screenshot shows the Prism software interface. The 'Change' toolbar is visible, with the 'Sort Rows' button circled in red. A dropdown menu is open, showing options: 'Sort by X Value', 'Sort by Row Title', and 'Reverse Row Order'. The 'Sort by X Value' option is selected. Below the toolbar, a data table is visible with columns 'Date' and 'Binding (fmol/mg)'. The table contains 12 rows of data, with dates from 1-Jan-2019 to 12-Jan-2019 and binding values ranging from 100 to 450.

		Date	Binding (fmol/mg)
1	Title	1-Jan-2019	100
2	Title	2-Jan-2019	250
3	Title	3-Jan-2019	260
4	Title	4-Jan-2019	360
5	Title	5-Jan-2019	350
6	Title	6-Jan-2019	400
7	Title	7-Jan-2019	403
8	Title	8-Jan-2019	425
9	Title	9-Jan-2019	430
10	Title	10-Jan-2019	442
11	Title	11-Jan-2019	455
12	Title	12-Jan-2019	450

## 6. Specifying decimal places in a data table

Prism automatically chooses the number of decimal points to display in a data table automatically.

To change the number of decimal points displayed, **select the column or columns** you wish to change (click at the top of the column to highlight), and **click on the Change decimal format button** of the Change toolbar.

Table format: XY		X	Group A
		Date	Binding (fmol/mg)
		Date	Y
1	Title	1-Jan-2019	100
2	Title	2-Jan-2019	250
3	Title	3-Jan-2019	260
4	Title	4-Jan-2019	360
5	Title	5-Jan-2019	350
6	Title	6-Jan-2019	400
7	Title	7-Jan-2019	403
8	Title	8-Jan-2019	425
9	Title	9-Jan-2019	430
10	Title	10-Jan-2019	442
11	Title	11-Jan-2019	455
12	Title	12-Jan-2019	450

Change the minimum number (of the number of digits after the decimal) to 2, then click “OK”

Decimal Format

Number of digits after the decimal

Minimum number:

☒ Automatically increase as needed

Use scientific notation, i.e. 3.04e-08

☐ Always

☒ When the number of digits before the decimal point exceeds:

Accordingly, all values in Binding column get 2 decimal places:

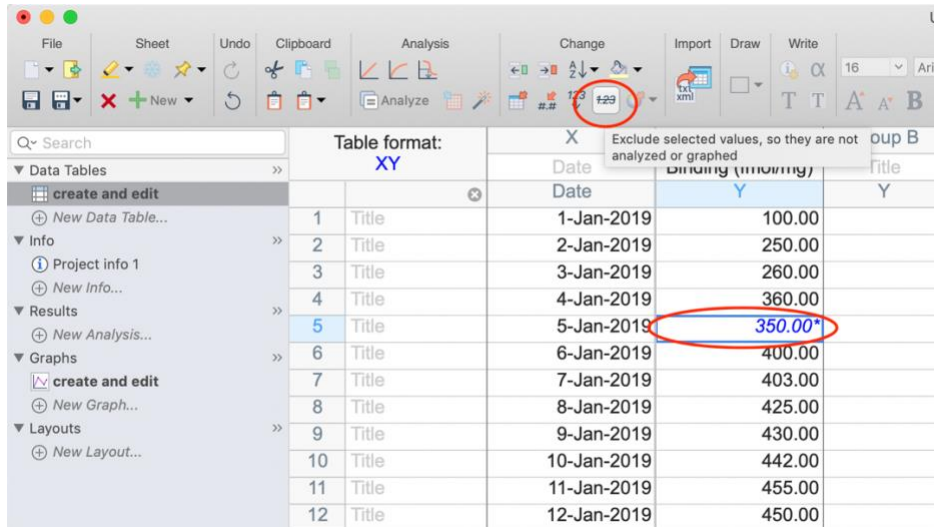
Table format: XY		X	Group A
		Date	Binding (fmol/mg)
		Date	Y
1	Title	1-Jan-2019	100.00
2	Title	2-Jan-2019	250.00
3	Title	3-Jan-2019	260.00
4	Title	4-Jan-2019	360.00
5	Title	5-Jan-2019	350.00
6	Title	6-Jan-2019	400.00
7	Title	7-Jan-2019	403.00
8	Title	8-Jan-2019	425.00
9	Title	9-Jan-2019	430.00
10	Title	10-Jan-2019	442.00
11	Title	11-Jan-2019	455.00
12	Title	12-Jan-2019	450.00

## 7. Excluding or Highlighting Values

If a value is too high or too low to be believable, you can exclude it. Excluded values are shown in blue italics on the data table, but are not included in analyses and are not shown on graphs.

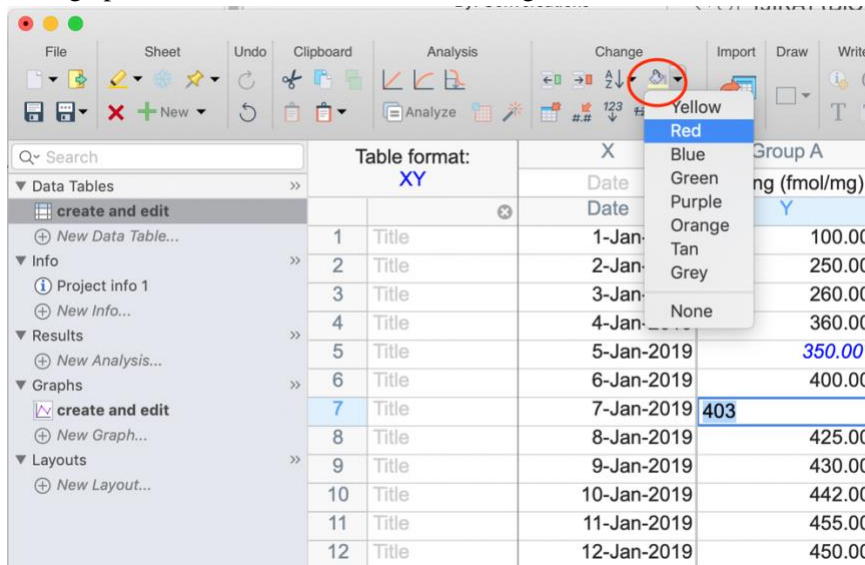
From the point of view of analyses and graphs, it is the same as if you had deleted the value, but the number remains on the data table to document its value.

To exclude selected values, **click the Exclude button** from the Change toolbar:

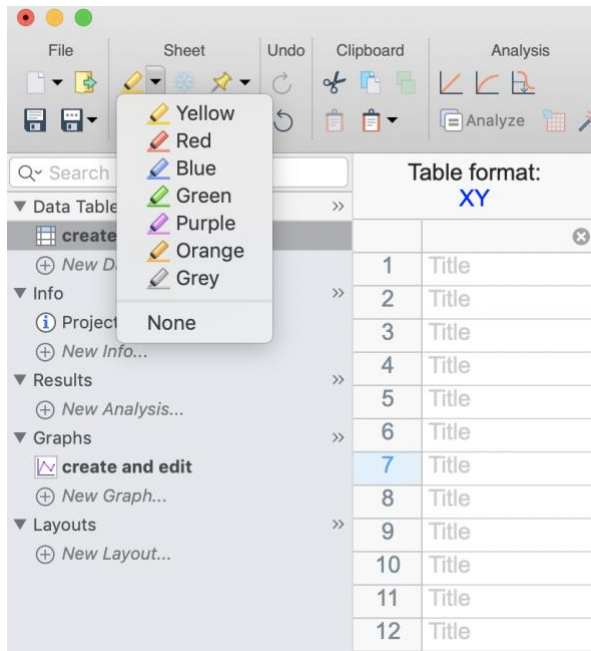


Then the value 350 is excluded and appears in blue italics, followed by an asterisk.

To highlight values: Select a cell or a range of cells, then **click the paint bucket icon** in the Change part of toolbar and choose cell background color.



To highlight sheets: Select a sheet in the Navigator and click on the **Highlight** button on the Sheet toolbar.



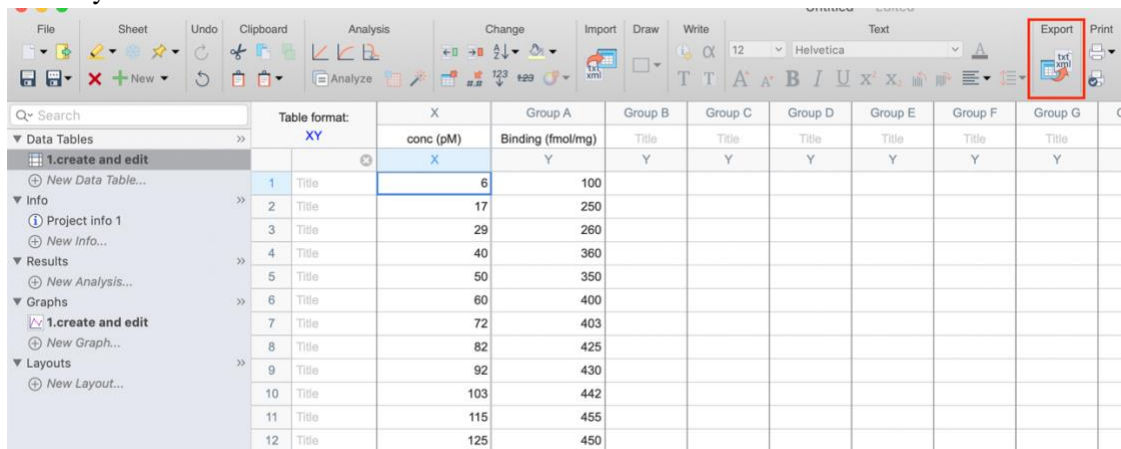
## 8. Exporting from data tables

### 1) Copy and paste

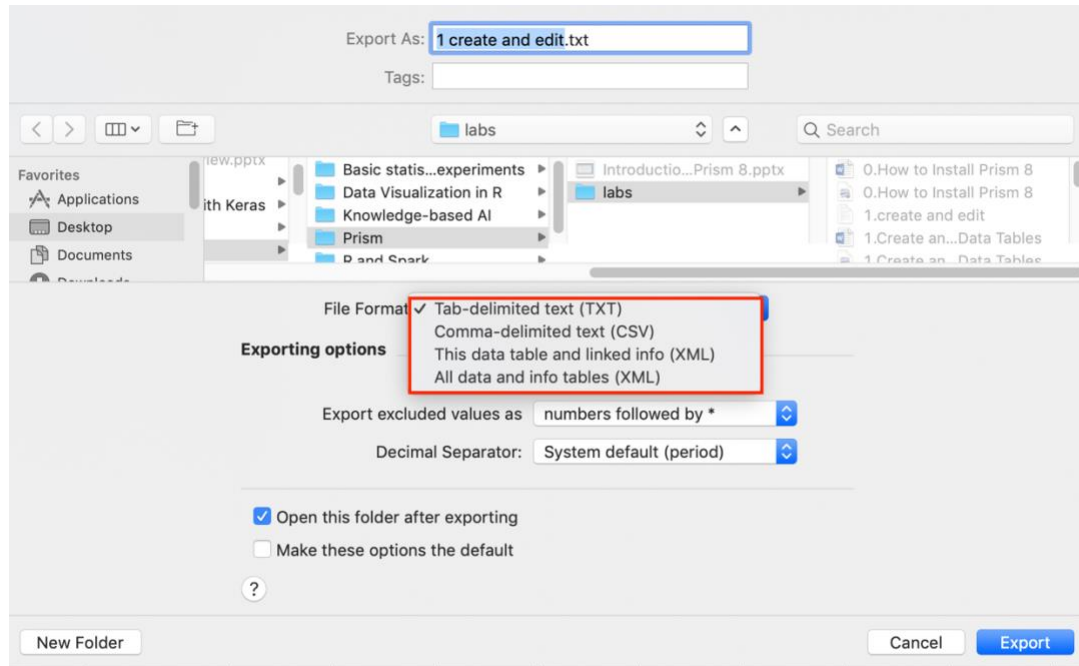
The best way to take Prism data or results and place into Word or PowerPoint is via copy and paste. If you do this, you'll find that Prism's tables remain tables when they are pasted. In contrast, if you export then import a text file, Word or PowerPoint won't format it as a table.

### 2) Exporting Prism data

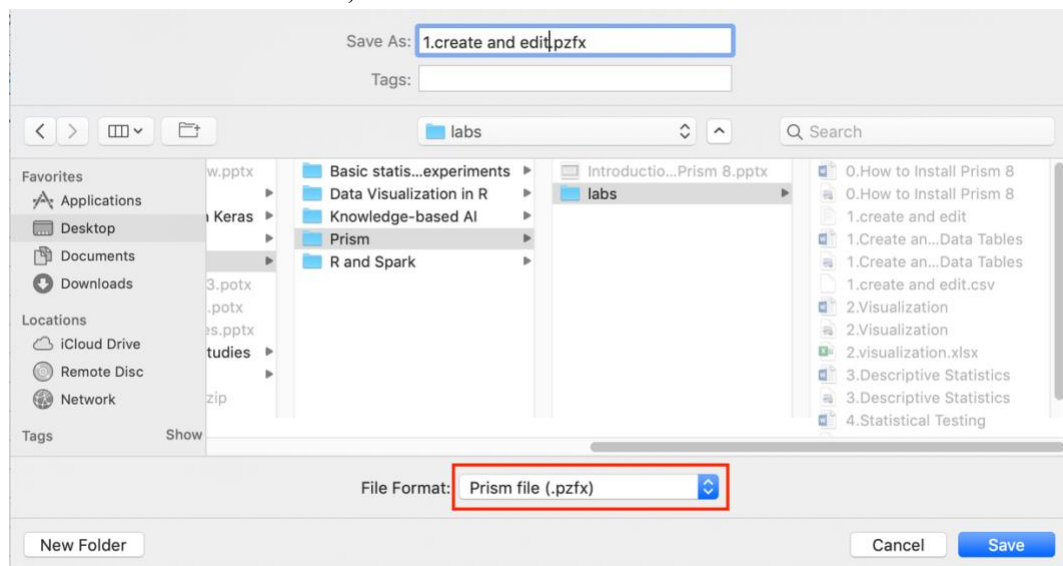
From any data or results table, **click on the Export button** on the toolbar and choose the format you want to use.



There are three kinds of exporting formats could be chosen.



- 3) Export entire project in a new XML based file format (.pzfx)  
Click “File” then “Save...”, name the file and save.



## **Conclusion**

Prism 8 has a lot of functions about manipulating data tables, please check [Prism 8 User Guide](#) for more details. If you have any question, please feel free to contact me ([qinlu.wang@nih.gov](mailto:qinlu.wang@nih.gov)) or BCBB ([bioinformatics@niaid.nih.gov](mailto:bioinformatics@niaid.nih.gov))

## **Reference**

[Prism 8 User Guide](#)