

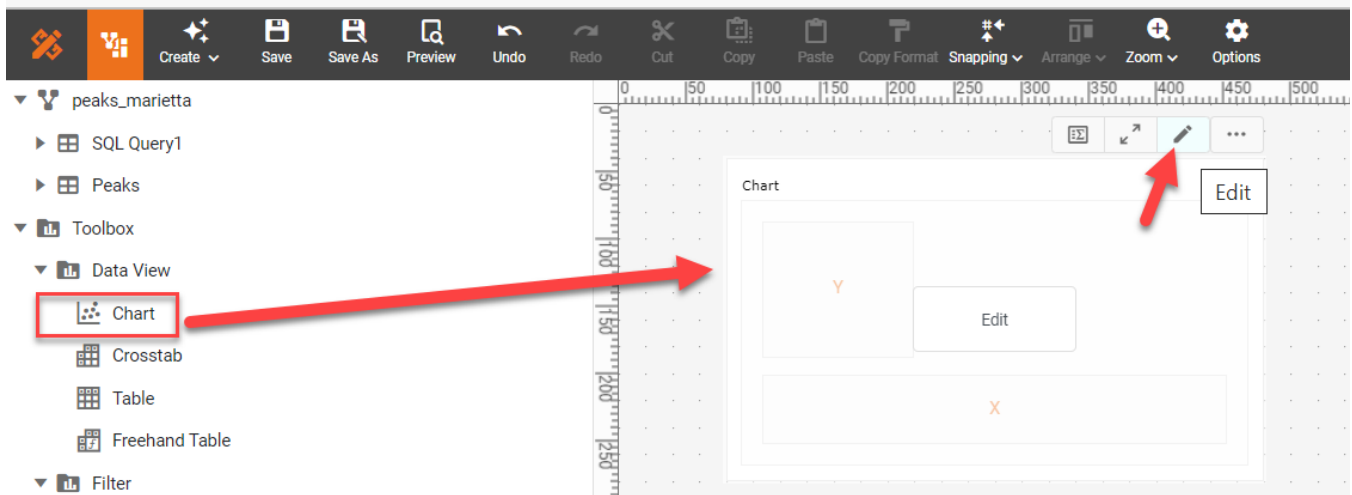
Create a control chart

This article explains how to create a control chart: a line chart showing the evolution of a measure with some reference lines representing the average of the sample, an upper line for the upper control limit, and a lower line for the lower control limit. The limits correspond to ± 3 standard deviations.

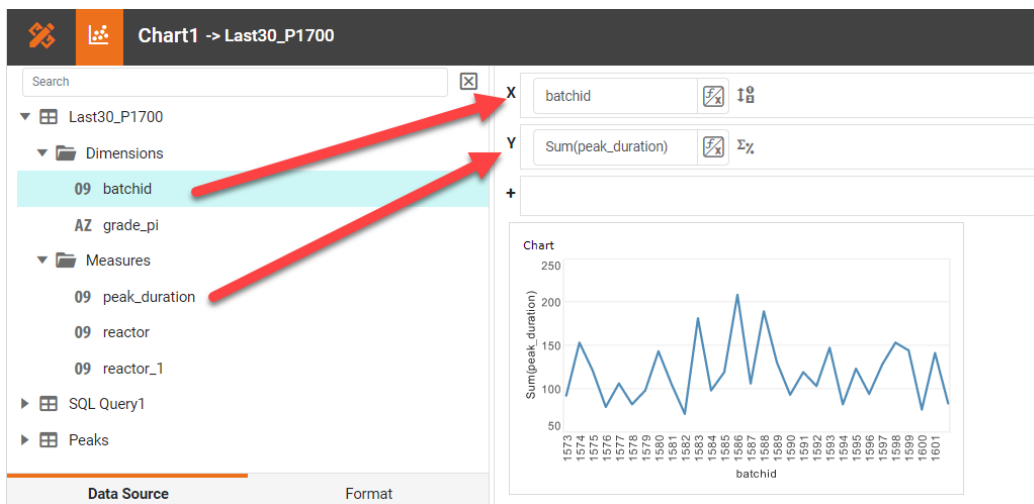
In our example, the measure is the *peak_duration* which will be plotted against the batch id.

batchid	grade_pi	peak_duration
139	P-1700	86.00
141	P-1700	124.00
143	P-1700	84.00
145	P-1700	75.00
147	P-1700	76.00
149	P-1700	167.00
151	P-1700	72.00
153	P-1700	80.00
155	P-1700	77.00
157	P-1700	93.00
159	P-1700	72.00
161	P-1700	178.00
163	P-1700	76.00
203	P-1700	205.00
205	P-1700	87.00
207	P-1700	180.00
209	P-1700	84.00
211	P-1700	164.00

Let's create a dashboard based on our worksheet, drag a chart item into the page designer and click on the *pencil* icon which appears when hovering over it.

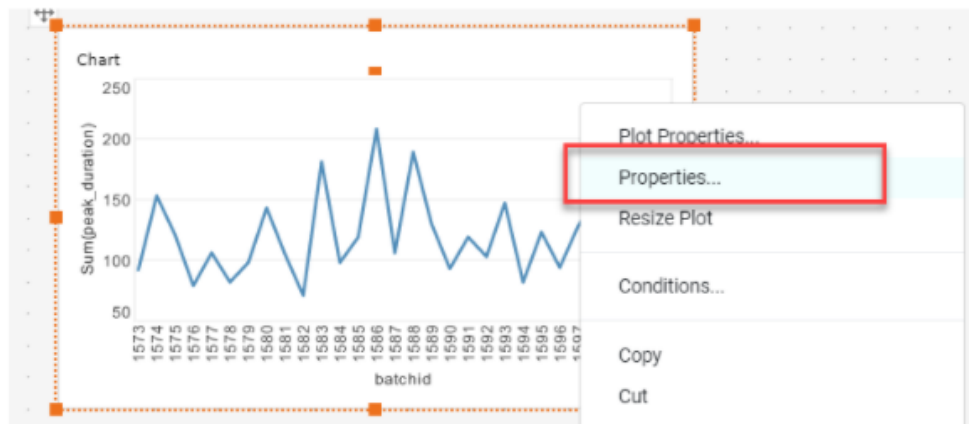


Drag the columns you want to have in the x-axis and y-axis.



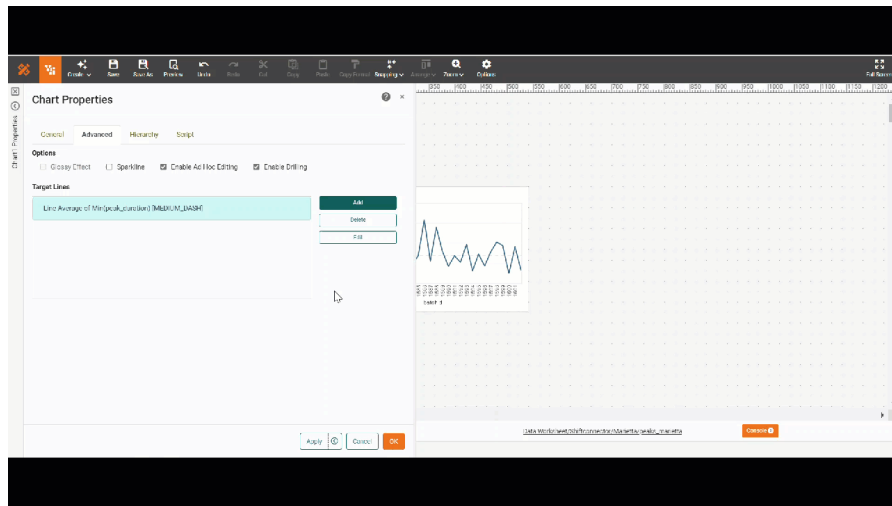
Add average and lower/upper limits

Right click on the chart open the *Properties* icon, go to the *Advanced* tab and click on *Add* .



To add the average line, select *peak_duration* as field (i.e. your measure) and *Average* as value. You will then be able to customize the line style.

To add an upper and lower limit corresponding to ± 3 standard deviations, from the *Properties* window click on add and then go the *Statistics* tab. Select the desired measure and then choose *Standard deviation* from the *Computation* dropdown selection. The default limits are 1 standard deviation away from the average, to change that, click on the *pencil* icon and adjust the value to -3,3.



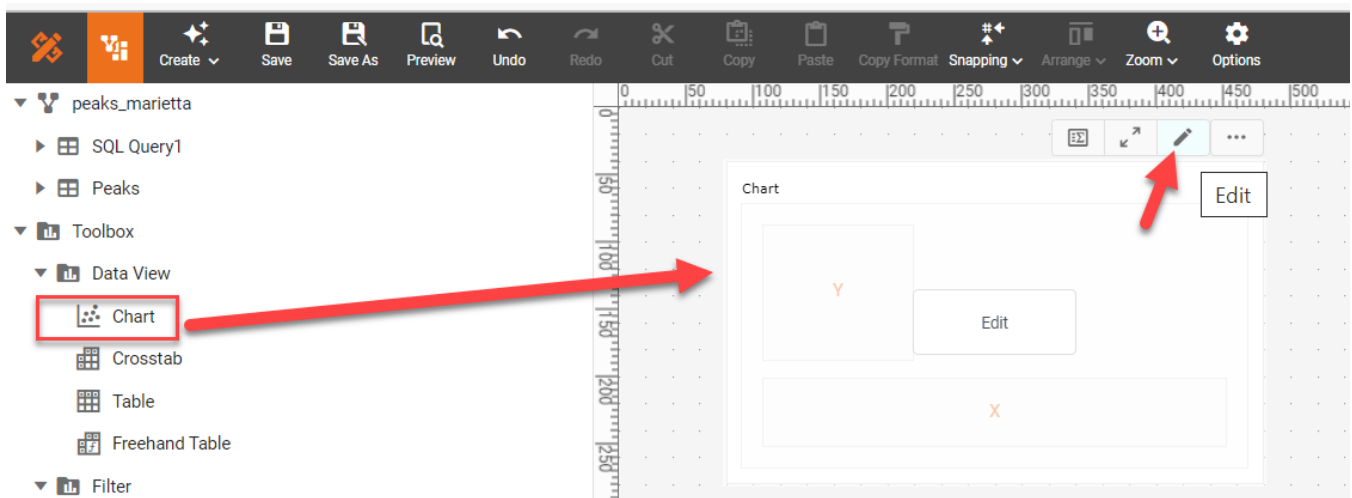
You can read the official documentation for more information ([link](#))

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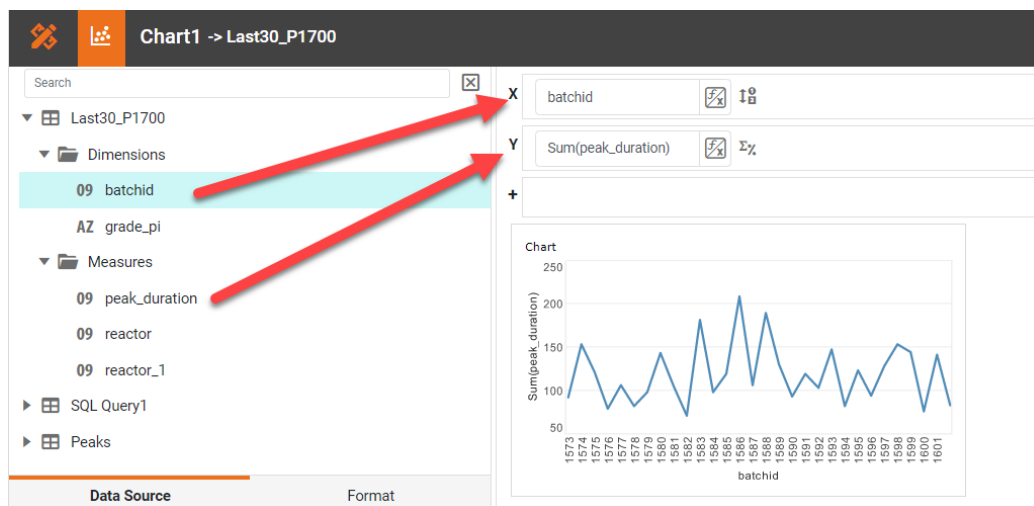
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Drag the columns you want to have in the x-axis and y-axis.



Add average and lower/upper limits

Right click on the chart open the *Properties* icon, go to the *Advanced* tab and click on *Add*.

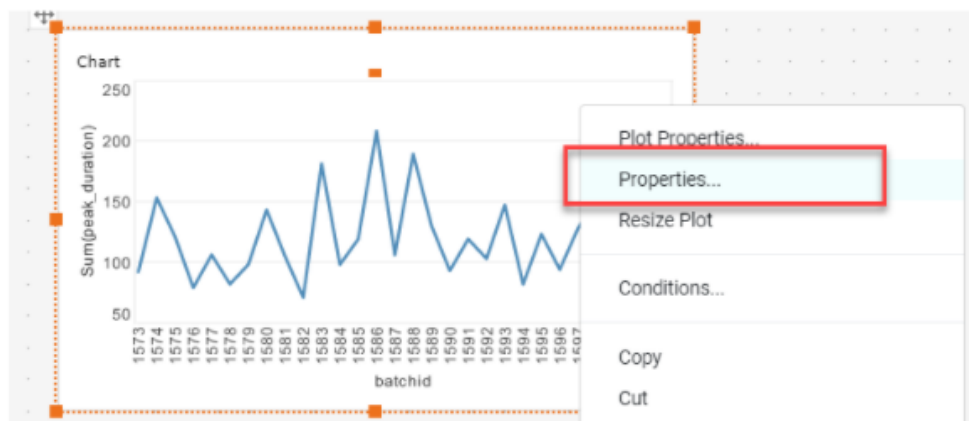


Chart Properties

General Advanced Hierarchy Script

Options

☐ Glossy Effect ☐ Sparkline ☒ Enable Ad Hoc Editing ☒ Enable Drilling

Target Lines

Add

Remove

Value

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Add Target



Line

Band

Statistics

Field

Sum(peak_duration)

Value

Average

Entire Chart

Label

(Target Value)

Line Style

Fill

Above

Below

Alpha

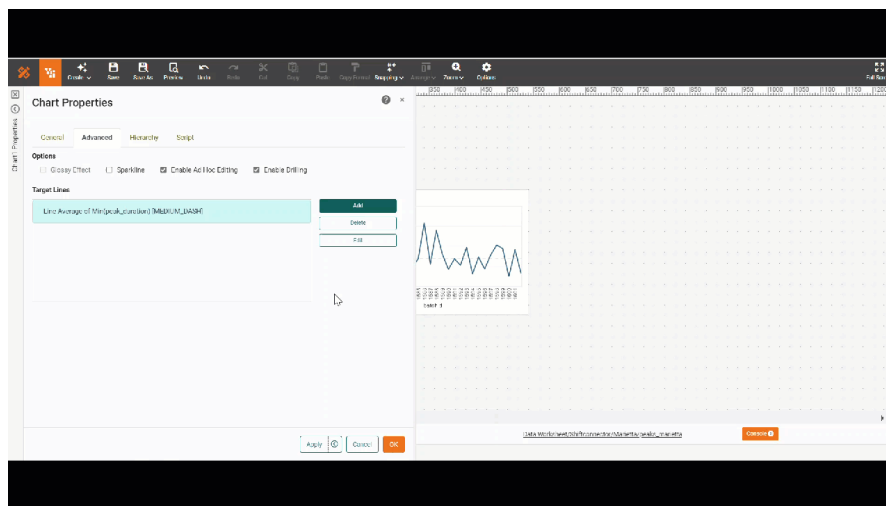
100

%

OK

Cancel

To add an upper and lower limit corresponding to ± 3 standard deviations, from the *Properties* window click on add and then go the *Statistics* tab. Select the desired measure and then choose *Standard deviation* from the *Computation* dropdown selection. The default limits are 1 standard deviation away from the average, to change that, click on the *pencil* icon and adjust the value to -3,3.



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