

The SPC Report is similar to the Result Settings Report, except the SPC values in the SPC Report are calculated using data points that fall within a user-defined date range. Whereas the SPC values in the Result Settings Report are based on the number of points set in the graph settings' "Data Range" option.

The screenshot shows the SPC Report setup interface. It includes a 'Report' dropdown menu set to 'SPC report', a 'Scope' dropdown menu set to 'All', and a 'For Dates' field with a date range of '5/11/2015 2:46 PM - 6/10/2015 2:46 PM'. Below these fields is an 'Options' section with a 'Data retrieval' dropdown menu set to 'Use date range from above'. There are three checkboxes: 'Hide inactive tree items' (checked), 'Show all statistical values' (unchecked), and 'Ignore breaks in SPC' (unchecked).

Figure 1: SPC Report setup

The *Data retrieval* dropdown box

If this dropdown box is set to *Use date range from above* then the SPC values in the report will be calculated based on data points that fall within the desired date range. If, on the other hand, this dropdown box is set to *Use graph settings* then the SPC values in the report will be calculated based upon that row's "Date range" setting in the Graphs.

The *Show all statistical values* checkbox

If this checkbox is unchecked, then the report will honor the Display options in the Graph Settings. Notice that in Figure 2, there are no values in the "Cp" column because the Display options in the Graph Settings were set to not include Cp in the Graphs. If you'd like to see Cp in this report anyway, simply check this checkbox.

The *Ignore breaks in SPC* checkbox

If this checkbox is unchecked, then the report will stop including data points in the SPC calculations when it encounters a Bookmark that causes a break in the SPC. Place a checkmark in this checkbox if you'd like the report to ignore SPC breaks, and thus include all the data points in the selected date range when calculating SPC values.

Component	Current	Last Result Date/Time	Cp	Cpk	R-Squared	Daily change	# points	break in SPC	LCL
g/l Manganate	13.36	1/3/2012 7:01 AM		1.67	0.01	0.002887	12		11.61
Total Manganese	9.57	1/3/2012 7:01 AM		1.30	0.00	-0.001475	12		8.41
Normality	1.12	1/3/2012 9:11 AM		0.99	0.02	-0.000456	11		0.90
g/l Permanganate	44.02	1/3/2012 7:01 AM		1.12	0.01	-0.011170	12		36.00
Concentration 3313	99	1/8/2012 6:14 AM		0.95	0.48	-0.541884	5	Yes	91
Normality	0.17	1/9/2012 6:13 AM		1.33	0.01	-0.000020	35		0.15
Copper Content	24	1/9/2012 6:13 AM		0.79	0.34	0.362104	35		-6
oz/Gal Boric Acid	75.000	5/1/2012 2:36 PM		-1.21	0.08	8.536025	6	Yes	10.797
oz/Gal ABC Concentration	0.00	5/24/2012 10:15 AM		0.51	0.21	-0.003505	92	Yes	1.76
g/l XYZ Concentration	0.03	5/4/2012 3:06 PM		2.08	0.35	-0.000222	54	Yes	0.07
pH	6.000	5/7/2012 2:05 PM		2.34	0.16	-0.001336	52	Yes	6.818
oz/Gal bradstone Concentration									
Bath Concentration	1.14	1/9/2012 6:14 AM		0.65	0.04	0.000109	12		1.10
PPM Copper Concentration	26	1/9/2012 6:14 AM		0.57	0.32	0.399097	12		-17
Normality	0.45	1/8/2012 10:39 AM		1.11	0.02	-0.000166	24		0.41
g/l Stannous Chlorides	6.64	1/8/2012 10:39 AM		2.38	0.01	-0.003285	20		5.49
PPM Copper Concentration	44	1/8/2012 10:39 AM		0.63	0.43	0.538627	23		-15
Catalyst Concentration	96.25	1/8/2012 10:39 AM		2.32	0.08	-0.033399	22		91.61
Normality	0.23	1/9/2012 6:14 AM		0.95	0.05	0.000141	40		0.20
ppm Copper Concentration	30	1/9/2012 6:14 AM		0.70	0.19	0.589189	40		-14

Figure 2: SPC Report table

The R-Square column

R-Square is a number between 0 and 1 indicating how well the data points for that row's Component fits a linear least squares "best fit" line that can be plotted through the data points.

The Daily Change column

This value represents the daily change (as determined by a linear least squares "best fit" line through the data points) for the component during the user-selected date range. A negative number indicates a downward trend. Note that there are hidden columns for Hourly Change, Weekly Change, and Monthly Change. To see those columns, click the "more options" button to change the current View of the report.

The Break In SPC column

This column will only be visible when the "Ignore breaks in SPC" checkbox is not checked. A "Yes" is placed in a cell if a Bookmark that causes a break in the SPC calculations exists in the date range selected by the user. Note: if you'd like the SPC calculations to include all data points in the date range (even those that are older than a Bookmark causing a break in the SPC) then place a checkmark in the "Ignore breaks in SPC" checkbox.