ACD/Labs

QUICK START GUIDE

Column Selector Web Tool

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Why compare columns?

Column screening begins with column selection. The better your initial column choices, the better the results you'll get from screening. For example, if you want to transfer an existing method to a new column, you should pick a column that's similar to the original. But if you're screening multiple columns for a new method, you should pick a set of dissimilar (or orthogonal) columns to cover more design space.

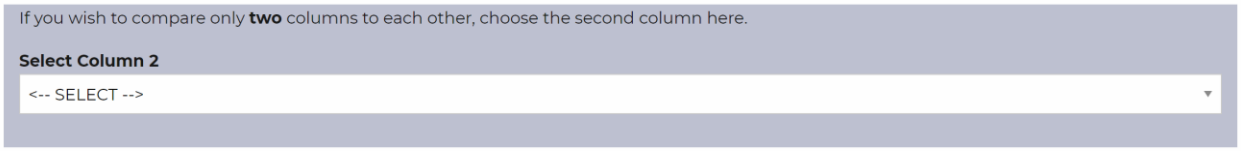
What does "similar" mean? The Tanaka parameters cover some of the most important column characteristics, including hydrophobicity, steric selectivity, and surface area. Compare columns by these parameters to quantitatively measure their similarity.

Compare one column to an entire list

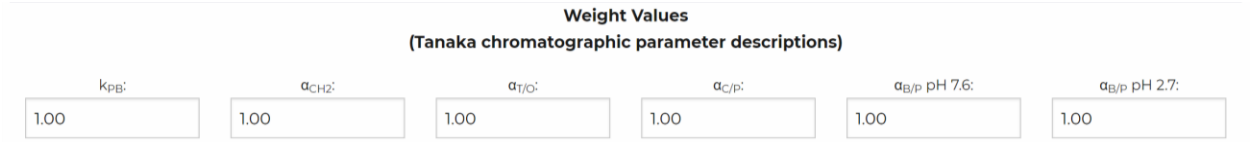
How To

1. Select the first column.

2. Leave the second selection blank.



3. Decide the importance of each Tanaka parameter. A higher weight value for a factor means that factor influences the comparison more. Weight values default to 1. You can adjust them up *or* down. *For example, if you're working at low pH, you might reduce $\alpha_{B/P}$ pH 7.6 to 0, since the properties at pH 7.6 are irrelevant.*



4. Click **Submit**.

Results

The tool ranks all 367 other columns against the selected one. The more similar columns (lower column distance factor (CDF)) are listed at the top and the most dissimilar ones are listed at the bottom.

Of the 367 columns, Zorbax SB-CN is most similar to Acclaim Mixed mode HILIC 5 um.

Rank	CDF	Column Name	k_{PB}	α_{CH2}	$\alpha_{T/O}$	$\alpha_{C/P}$	$\alpha_{B/P}$ pH 7.6	$\alpha_{B/P}$ pH 2.7	Type*	Particle Size** [µm]	Pore Size [A]
1	(0.705)	Zorbax SB-CN	0.36	1.18	2.12	1.14	1.62	0.10	CN	3.5	80

Cosmosil 5 PYE 5 um is most dissimilar to Acclaim Mixed mode HILIC 5 um.

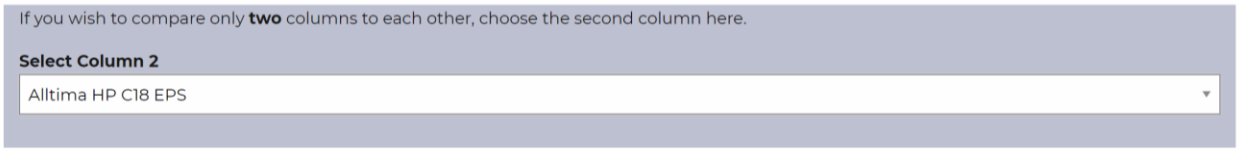
367	(17.225)	Cosmosil 5 PYE 5um	1.95	1.37	3.02	24.10	0.58	0.20	Aromatic	5	120

Compare two columns to each other

How To

1. Select the first column.

2. Select the second column.



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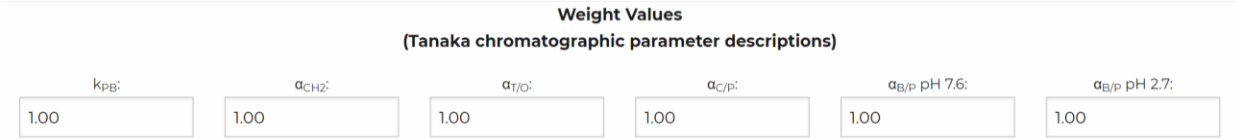

4. Click **Submit**.

Results

Single Pair Column Comparison

CDF = 1.470

Column Name	k_{PB}	α_{CH2}	$\alpha_{T/O}$	$\alpha_{C/P}$	$\alpha_{B/P}$ pH 7.6	$\alpha_{B/P}$ pH 2.7	Type*	Particle Size** [µm]	Pore Size [A]
Weightings	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**			
Acclaim Mixed mode HILIC 5um	0.55	1.25	1.90	1.19	2.18	0.06	Diol	5	120
Alltima HP C18 EPS	0.61	1.34	1.95	2.25	4.35	0.20	C18	5	190

The tool calculates the column distance factor (CDF). The higher the CDF, the more dissimilar the two columns. The chart shows a factor-by-factor comparison.