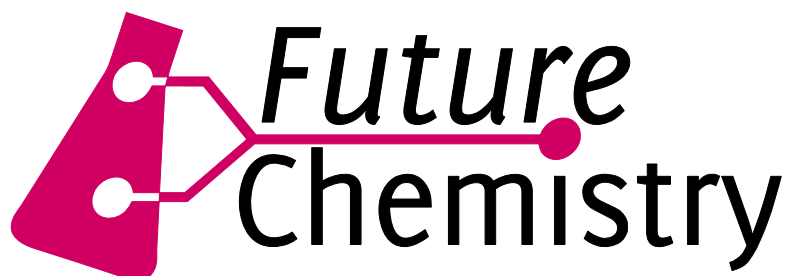


# FlowScreen

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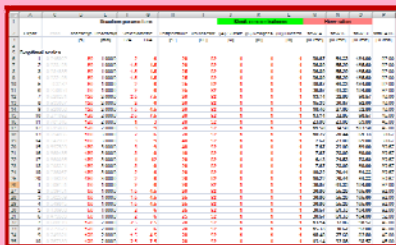
*Getting Started*



FutureChemistry's FlowScreen allows you to perform a large series of flow chemistry experiments, using only a small amount of liquids, running unattended and logically working together with your own analysis equipment. The steps below describe the entire procedure of one series of experiments:

## Step

1

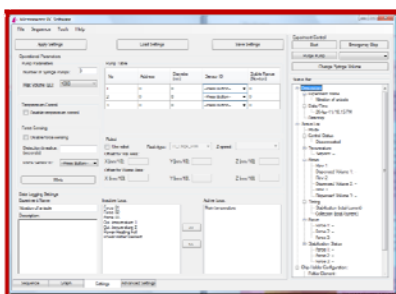


Run	Temp (°C)	Time (min)	Flow Rate (mL/min)	Yield (%)	Yield (mg)	Yield (mmol)	Yield (g/mol)	Yield (mol/L)	Yield (mol/kg)	Yield (mol/m <sup>3</sup> )	Yield (mol/dm <sup>3</sup> )	Yield (mol/cm <sup>3</sup> )	Yield (mol/m <sup>2</sup> )	Yield (mol/m <sup>2</sup> h)	Yield (mol/m <sup>2</sup> h)	Yield (mol/m <sup>2</sup> h)	Yield (mol/m <sup>2</sup> h)	Yield (mol/m <sup>2</sup> h)	Yield (mol/m <sup>2</sup> h)
1	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
6	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
8	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
9	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
10	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
11	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
14	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
15	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
17	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
21	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
22	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
24	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
26	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
27	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
28	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
29	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
30	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
31	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
32	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
33	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
34	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
35	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
36	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
37	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
38	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
39	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
40	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
41	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
42	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
43	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
44	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
45	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
46	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
47	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
48	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
49	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
50	100	10	1.0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

### Designing the experiment

Design your flow chemistry experiments: determine your parameters to be screened (for example temperature, reaction time) and their ranges. Use any of the provided templates to use standard experimental designs, and simply enter the values in a spreadsheet program. The output will be a sequence of typically 50 to 150 experiments.

2



### Preparing FlowScreen

Import the file created in your spreadsheet into the FlowScreen control software. Load the syringe pumps with the required solutions of reagents, reactants and quench, and connect the microreactor to the pumps. Prepare a vial rack with vials filled with solvent for HPLC or GC analysis.

3



### Running the experiment

Start the sequence. While FlowScreen runs unattended, the software may warn to refill syringes occasionally, depending on the amount of liquid used in the experiment.

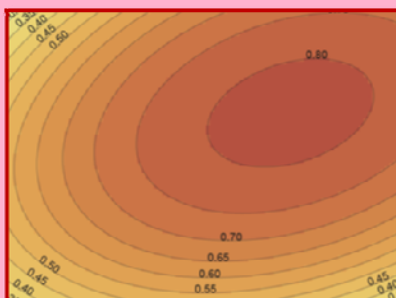
4



### Performing the analysis

Place the vials (or rack) with samples into your HPLC or GC equipment and run an entire analysis sequence. Using your own HPLC or GC analysis software, export analysis results to your original spreadsheet, now adding results to your screened parameters.

5



### Data interpretation

Import your data into FlowFit to interpret, model and visualise the dataset, easily identifying the optimal settings for your chemical reaction, or determine a new range of your experimental parameters for a second optimisation run.

