Uniqsis FlowSyn Frequently Asked Questions

FlowSyn Unit

Q What is the maximum pressure and temperature the Uniqsis FlowSyn can reach?

A The FlowSyn includes 2 separate heating modules. The coil reactor unit can be heated to 200 °C and the column can be heated to 150 °C The temperature of each reactor has been calibrated so that the temperature of the solution is accurate to ±1 °C therefore the block temperature may be slightly higher to achieve this.

The maximum temperatures are achievable using the stainless steel coil reactor (200 °C). For PEEK and Teflon coil reactors the system limits the maximum temperature to 80 °C this ensures that the tubing is not damaged by over-heating.

Currently the column reactor can be heated to 120 °C, however in the future we will offer columns that can withstand 150 °C

The pressure in the system is limited to 500 psi.

Q How many reagents can be used for 1 reaction?

A FlowSyn has 2 channels to introduce reagent, however you can premix reagents which do not react with each other

Q What happens if there is a leak or blockage?

A The FlowSyn has active pressure monitoring and will detect a pressure increase or decrease. An alarm will sound to alert the user to the problem, after 15 seconds the pumps and heaters will shutdown

Q Do the HPLC pumps have pulsing?

A The HPLC pump provider ensures that pulsing is less than 3% and will not affect mixing.

Coil Reactors

Q **Is there laminar flow in the coil reactor?**

A *Yes. The mixer and the first 1m of tubing is 500 micron inner diameter. This ensures laminar mixing. The reactors are 1mm (1000 micron) internal diameter*

Q **Could I have a wider tube to increase scale?**

A *We can offer custom coil reactors; however it has been shown that changing the inner diameter of the reactor can have an effect on the reaction. For that reason, we recommend using a longer coil reactor with the same inner diameter and increasing the flow rate to increase throughput.*

Q **What reactor do I choose for my reaction?**

A *FlowSyn can accommodate 2.5ml, 5ml, 10ml and 20ml coil reactors in PEEK, Teflon or Stainless Steel. 2.5ml is for reaction optimisation. The other coils are used for synthesis. You will find a comprehensive list of solvent compatibilities in the download section of the website.*

Column Reactors

Q **Do you provide pre-packed cartridges?**

A *At the moment we offer a column that the user can pack with material. This offers maximum flexibility. However, in the future we will offer a range of pre-packed columns for ease of use.*

Q **What is the column made of?**

A *Glass, Acetal and Teflon*