Scintica:

Frequently Asked Questions (FAQ)

Living Systems Flow Instruments

Intraluminal Flow Rate Ranges

Q 1. What flow rates can be achieved using the Model FC Flow Control Pump?

The flow rate delivered by the Model FC Flow Control Pump depends upon the size of the tube set that is installed in the pump head. Visit our Tubing and Accessories page to see all the tube sets that are available for the FC pump.

Here is a table that summarizes the flow rate ranges for each tube set.

Tube Set	Flow Rate Range (approximate)
FC-TS-015	3 to 80 µl/min
FC-TS-020	7 to 180 µl/min
FC-TS-031	13 to 350 µl/min
FC-TS-062	50 µl/min to 1.25 ml/min
FC-TS-093	117 µl/min to 2.4 ml/min

Flow Pulsations

Q 2. Can the flow fluctuations from the FC peristaltic pump be minimized, and about how large are they?

When the pump has been calibrated and flow set either by the speed dials, or from an external voltage, the mean flow will be the desired rate. However, the pump will produce a pulsating flow due to the nature of operation. The amplitude and frequency of these pulsations depend on the pump speed, the tube set used in the pump, and possibly on the system perfused by the pump. For example, a

FC-TS-015 tube set delivering 100 µl/min may have flow fluctuations of about ±3 µl/min, and half that at 50 µl/min.

Flow pulsations can be minimized by using a Windkessel. A Windkessel is an in-line device that has an air bubble trapped in the flow path that acts to dampen flow/pressure pulsations.

Recording Flow

Q 3. Can a signal voltage be obtained from the pump so that the actual flow can be recorded?

Yes. There is an output jack on the flow control peristaltic pump (FC) that provides a voltage proportional to the flow. A simple calibration procedure is used to establish this factor (in volts/µl/min).

Our flow indicator (FI-1) can be used with the FC and pressure servo controller with peristaltic pump (PS-200) to obtain a similar voltage output.

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Flow indicator

Q 4. Is there a way to monitor the flow while running an experiment?

Yes, the flow indicator (FI-1) instrument has a digital meter that shows the flow directly in µl/min. It connects to the flow control peristaltic pump (FC), or our pressure servo controller with peristaltic pump (PS-200). An output jack for recording the flow is provided.