

Table 0.1: Simulation Run Time Statistics

Data Time Resolution	1 second (all sensors)
Reservoir Capacity	$\lesssim 40\text{ L}$
Reservoir Temperature	$43 - 51^\circ\text{ C}$
Fluid	Heated Tap Water
Flow Rates	23 (Low), 41 (Med), 52 (High) $\frac{\text{L}}{\text{s}}$
Flow Sensor	$\frac{3}{4}''$ Digital Rotary Vane $\pm 10\%$
Flow Sensor Capacity	0.15 - 2.45 L/s
Typical Flow Times	190 (Low), 95 (Med), 65 (High) s
Sample Circuit Length	6.70 meters $\pm 0.3\text{ m}$
Circuit Piping	SCH 20 PVC $\frac{3}{4}''\varnothing$
Vessel Dimensions	4" x 27" (10 x 69 cm)
Vessel Volume	5.83 L
Vessel Material	SCH 40 PVC 4" \varnothing
Typical Sample Mass	4.5-4.9 kg
Pump Specification	$\frac{1}{2}$ hp electric centrifugal @ 2000 $\frac{\text{L}}{\text{hr}}$