# Parts	Device Name	\$CAD	Explanation	Links to products
1	Arduino Mega 2560 Rev3	0	Alec has one; an arduino mega is needed because there are a lot of sensors that need to be plugged in to it	N/A
1	Breadboar d	0	Alec has one: in order to connect all required sensors and devices to the arduino	N/A
2	LED light (green and red)	0	Alec has one; to demonstrate the specific gravity and to blink the correct color that goes with the specific gravity	N/A
3	Resistors (2x10kOh m) and 1(220 Ohm)	0	Alec has them; they will be used to correctly wire the LED lights along with the volumetric flow meter	N/A
1	Orifice plate	0	The prototype is 0.5" ID in diameter; therefore, the orifice plate must be smaller. The plate is designed by onshape CAD and produced by a 3D printer on makers lab offered free for UOttawa students	N/A
1	Differentia l sensor plate	65.95	To read the difference in pressure between the 2 pressure points (one before and one after the orifice plate)	Differential Pressure Sensor
1	Tubes	0	To transfer the pressure readings from the taps to the differential pressure sensor device (5mm ID is required)	N/A
2	Pneumatic Hose Fitting	0	To connect the tubes into the piping device based on the 3/16" ID of the tube and the slot created for the fitting	N/A
1	Volumetric Flow Meter	34	To calculate the amount of liquid that is passing through the straight pipe (in mL/s) to give us the value "q" in our main equation to find the specific gravity	Flow Meter
Total		\$99.95		