

Liquid Controller

Client: *Ian Bird, Ph.D; Bikash Pattnaik, Ph.D*

Team Members:

Steve Welch (Leader)

Joe Decker (Communications)

Justin Gearing (BSAC)

Dan Miller (BWIG)

12/5/08 – 12/11/08

Problem Statement:

Currently, reagents are added manually when testing cell signal functioning under a microscope. This leads to problems regarding accuracy of timing and amount. To resolve this issue, an automatic system is desired. This system will use pumps controlled by a computer interface to precisely deliver required reagents.

Last Week's Goals

- Poster Presentation tomorrow (Fri, Dec 5), 12:00 @ ECB
- Write final report (Due next Friday, Dec 12)
- Meet with client, deliver product and demonstrate operational use

Summary of Accomplishments

- Presentation
- Final report in progress
- Met with client, delivered product and demonstrated use
- Thanks for a great semester! Have a wonderful break!

This Week's Goals

- Deliverables, due tomorrow, 10:00 A.M.:
 - Final Report
 - Lab Notebook
 - Team Evaluations
- Meetings:
 - Professor Chesler, Tong Auditorium, Noon tomorrow
 - Professor Thompson, ECB 2156, Tuesday (Dec. 16) 1:00

Project Difficulties

- None to report

Activities

Name	This Week
Joe Decker	Client meeting/testing, 3 hr Report Writing, 2 hr
Justin Gearing	Report Writing, 2 hr
Dan Miller	Evaluations, 3 hr Report Writing, 2 hr
Steve Welch	Report Writing, 2 hr
Team	-
	Cumulative (Hr)
Joe Decker	30.5
Justin Gearing	24.0
Dan Miller	26.5
Steve Welch	50.5
Team	27.0
Total	158.5

Expenses

Item	Part #	Source	Qty	\$/unit	\$
NC Two-way isolation valve	161T011	www.nresearch.com	7	60.85	425.95
NO Two-way isolation valve	161T021	www.nresearch.com	1	73.05	73.05
NI Power Relay Board	SC-2062	www.ni.com	1	63.00*	63.00*
LabJack Interface	U12	www.labjack.com	1	129.00	129.00
Aluminum Panel 1/8"x4"x12"	9041K12	www.mcmaster.com	1	8.67	13.17*
Pipe Clamp	30285T35	www.mcmaster.com	2	10.00	20.00
Thumb Screw Pack	90181A595	www.mcmaster.com	1	6.37	10.87*
12V 1.5A AC/DC Adaptor	2731665	RadioShack	1	22.99	22.99
Electrical Tape	6402375	RadioShack	1	3.99	3.99
90' 22-Gauge Stranded Hook-Up Wire	2781218	RadioShack	2	5.99	11.98
CB25 Terminal Board	CB25	www.labjack.com	1	39.00	39.00
Weekendercase	629	www.plasticase.com	1	49.50	*58.68
#4-40 x 3/4" machine round head bolts	27461	Home Depot	2	0.98	1.96
Velcro	-	Home Depot	1	2.49	2.49
Rubber stoppers (22mm x 9mm)	-	Home Depot	1	1	2.49
4.5V 1.6A AC/DC Adaptor	2731760	RadioShack	1	19.99	19.99
Total (*Includes Shipping and Handling)					898.61

	September	October	November	December
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