

**PH CONTROLLER OF GLOBAL ELECTRONICS, HYDERABAD  
COMMISSIONING & TRIAL REPORT**

DATE: 19 DECEMBER 2006

LOCATION : VITALIFE LABORATORIES LTD.

**METHOD FOLLOWED**

1. BLANK TRIAL TAKEN WITH CONTINUOUS MANUAL ADDITION OF CITRIC ACID AND PH CONTROL BY CONTROLLER

CAUSTIC CONCENTRATION : 10%

CAUSTIC LOW RATE THROUGH SOLENOID VALVE ; 300 MI IN 10 SECONDS

CITRIC ACID ADDITION VARIED FROM DROP BY DROP ADDITION TO A MAXIMUM OF 2.1 LITERS/5 MIN.

SET PH CONTROLLER TIMINGS AND OBSERVED THAT EFFECTIVE CONTROL WAS TAKING PLACE BETWEEN PH VALUES OF 6.75 TO 7.01

CHANGED PH CONTROLLER TIMINGS AND REPEATED BLANK TRALS.

PH CONTROL BETWEEN 6.94 TO 6.97 WAS OBSERVED.

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BASED ON THE BLANK TRIAL RESULTS IT WAS DECIDED TO TAKE AN ACTUAL BATCH.

**SETTINGS FOR PROCESS BATCH**

ATC	ON
HT	OFF
STG	1
PRT	NO
RENCAL	2 PT
CLEAN	NO
1L1	6.88
1L2	6.93
1LL	6.88
1H1	7.10
1H2	7.10
1HH	7.10
1NLA	1
1SLA	17
1NLB	3
1SLB	15
1NHA	5
1SHA	6
ANHB	7
1SHB	8
AL DLY	2
S1t	5
R LO	1.00
R HO	13.00

ALKALI FLOW RATE THROUGH THE SOLENOID VALVE : 280 mL in 10 seconds

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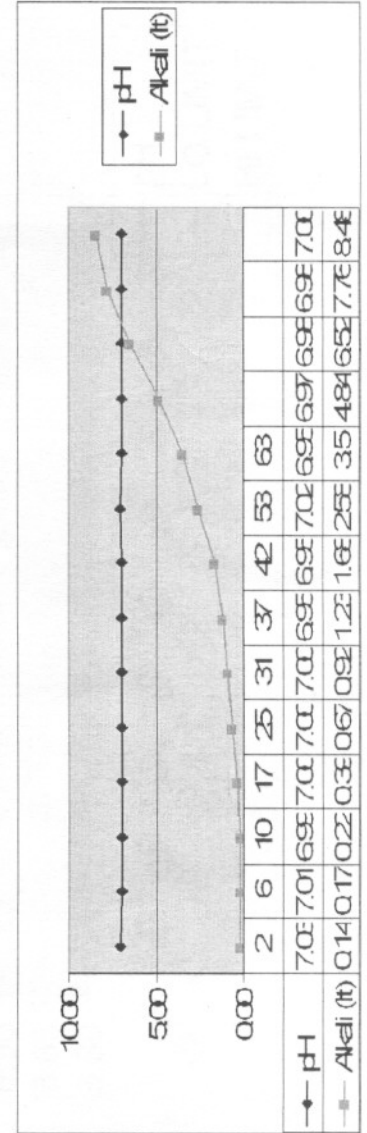
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BATCH STARTED AT 15: 30 HRD ON 19/12/06

OBSERVED FOR 2 HRS FROM START TIME OF 15: 30 HRS.

READINGS OBSERVED ARE AS UNDER

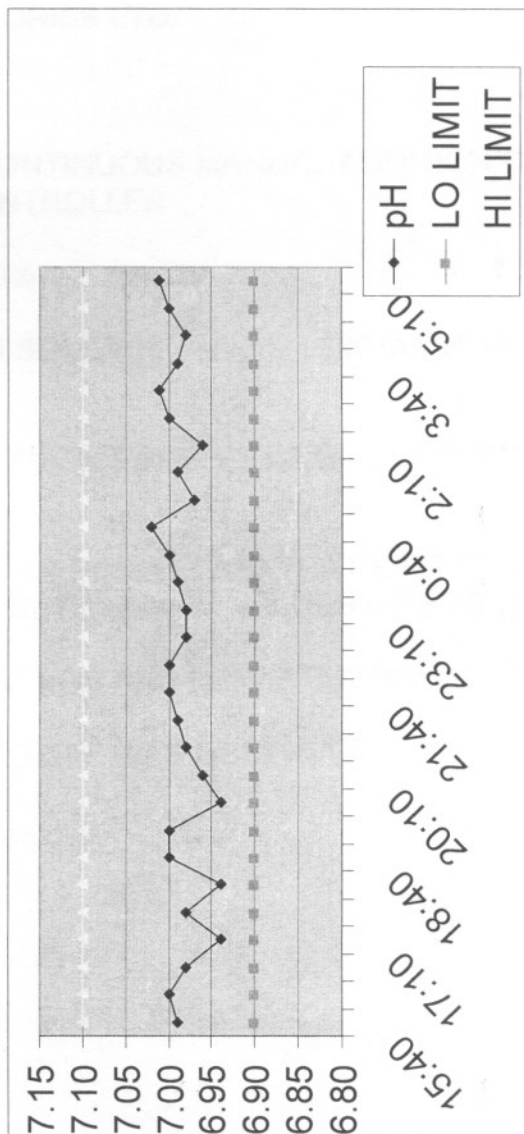
B.Time	pH	Alkali Valve open time	Alkali consumed Lts
2	7.03	5	0.14
6	7.01	6	0.168
10	6.99	8	0.224
17	7.00	14	0.392
25	7.00	24	0.672
31	7.00	33	0.924
37	6.95	44	1.232
42	6.95	60	1.68
53	7.02	92	2.576
63	6.95	125	3.5
79	6.97	173	4.844
97	6.98	233	6.524
110	6.98	277	7.756
118	7.00	303	8.484



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**TIME VS BATCH pH RECORDED OVER THE ENTIRE ENZYME REACTION  
BATCH DURATION**

Time	pH
15:40	6.99
16:10	7.00
16:40	6.98
17:10	6.94
17:40	6.98
18:10	6.94
18:40	7.00
19:10	7.00
19:40	6.94
20:10	6.96
20:40	6.98
21:10	6.99
21:40	7.00
22:10	7.00
22:40	6.98
23:10	6.98
23:40	6.99
0:10	7.00
0:40	7.02
1:10	6.97
1:40	6.99
2:10	6.96
2:40	7.00
3:10	7.01
3:40	6.99
4:10	6.98
4:40	7.00
5:10	7.01



The pH controller was successfully installed. The performance of the controller was very satisfactory in terms of the control achieved with respect to the batch requirements.

For Global Electronics

T.R.Subramaniam

For Vitalife Laboratories

SCADA is not installed.

