

Brianna Brown
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ENGR 115

Data:			
Time(sec)	H2 Volume (ml)	Voltage (V)	Current(A)
0	0	0	0
30	2	11.83	0.72
60	4	11.82	0.75
90	6	11.81	0.77
120	9	11.81	0.8
150	12	11.8	0.82
180	16	11.79	0.86
210	18	11.78	0.88
240	22	11.77	0.9
270	25	11.77	0.9
0	25	11.7	0.9
30	28	11.7	0.92
60	32	11.77	0.94
90	36	11.76	0.96
120	40	11.75	0.98
150	42	11.75	1
180	48	11.74	1.04
210	50	11.73	1.03
0	50	11.73	1.03
30	54	11.73	1.04
60	58	11.72	1.05
90	63	11.71	1.08
120	66	11.71	1.12
150	70	11.7	1.11
180	75	11.69	1.04

Electrical Power (J/s)
0
8.5176
8.865
9.0937
9.448
9.676
10.1394
10.3664
10.593
10.593
10.53
10.764
11.0638
11.2896
11.515
11.75
12.2096
12.0819
12.0819
12.1992
12.306
12.6468
13.1152
12.987
12.1576

Calculations:

Electrical Energy In (J)	Number of Moles of H <sub>2</sub>	Chemical Energy Out (J)	Electrolyzer Efficiency
0	0	0	0
255.528	8.23408E-05	19.51477781	7.637040877
265.95	8.23408E-05	19.51477781	7.337761915
272.811	8.23408E-05	19.51477781	7.153222492
283.44	0.000123511	29.27216672	10.32746497
290.28	0.000123511	29.27216672	10.08411421
304.182	0.000164682	39.02955563	12.8309879
310.992	8.23408E-05	19.51477781	6.275009586
317.79	0.000164682	39.02955563	12.28155563
317.79	0.000123511	29.27216672	9.21116672
315.9	0	0	0
322.92	0.000123511	29.27216672	9.064835476
331.914	0.000164682	39.02955563	11.75893624
338.688	0.000164682	39.02955563	11.52374918
345.45	0.000164682	39.02955563	11.29817792
352.5	8.23408E-05	19.51477781	5.536107181
366.288	0.000247023	58.54433344	15.98314262
362.457	8.23408E-05	19.51477781	5.38402564
362.457	0	0	0
365.976	0.000164682	39.02955563	10.66451232
369.18	0.000164682	39.02955563	10.57195829
379.404	0.000205852	48.78694453	12.85883769
393.456	0.000123511	29.27216672	7.439756089
389.61	0.000164682	39.02955563	10.01759596
364.728	0.000205852	48.78694453	13.37625423

