

## **Appendix A**

### **Supporting Data for Chapter 2**

#### **Biodurability of Talc**

##### **Contents:**

**Raw Data Table**

**Silica ICP results and rate calculations**

**Magnesium ICP results and rate calculations**

**Experimental results for all runs, pH vs. time data**

Compilation of Data Worksheet											
Sample #	Run time (min)	Sample Weight (g)	Flow Rate (ml/min)	Collect. time (min)	Si (ppm); VIS Analysis	Si (ppm); ICP Analysis	Mg (ppm); AA Analysis	Mg (ppm); ICP Analysis	Spec. SA (M <sup>2</sup> /g)	Run Type	
41117A	750	5	0.88	677	0.91	0.83	0.57	1.6	6.83	pH 4; 5.00 g. Fisher Talcum	
41118A	534	5	0.51	456	1.34	1.4	0.57	1.9	5.78	pH 4; 5.00 g. Fisher Talcum	
41121A-1	1190	5	0.88	1146	0.94	0.93	0.57	1.6	5.45	pH 4; 5.00 g. Fisher Talcum	
41121A-2	770	5	0.57	630	1.02	0.94	0.48	1.5		pH 4; 5.00 g. Fisher Talcum	
41123A	2621	5	0.67	2466	0.75	0.61	0.43	1.3		pH 4; 5.00 g. Fisher Talcum	
41125A	2859	5	1.1	1836	0.66	0.48	0.57	1.31		pH 4; 5.00 g. Fisher Talcum	
41125B	2859	5	1.1	2800	0.57	0.49	0.52	1.2		pH 4; 5.00 g. Fisher Talcum	
41128A	(1742+2621)	3.97	1.03	1211	0.67	0.39	0.44	1.1		pH 4; rerun of 41123	
41128B	(1742+2621)	3.97	1.03	1672	0.46	0.26	0.38	0.72		pH 4; rerun of 41123	
41130A	(1965+2859)	4.6	0.95	237	0.74	0.56	0.44	1.1	5.37	pH 4; rerun of 41125	
41130B	(1965+2859)	4.6	0.95	1352	0.4	0.31	0.31	0.78		pH 4; rerun of 41125	
41130C	(1965+2859)	4.6	0.95	1705	0.44	0.29	0.25	0.59		pH 4; rerun of 41125	
41202A	1325	5	0.88	282	1.02	0.8	0.5	0.78		pH 7.4; Talcum	
41202B	1325	5	0.88	1231	0.48	0.3	0.69	0.74		pH 7.4; Talcum	
41219A	1547	5	0.96	293	0.59	0.43	0.44	0.69		pH 7.4; Talcum	
41219B	1547	5	0.96	971	1.33	1.1	0.5	0.96		pH 7.4; Talcum	
41220A	1029	5	1.11	771	PBS	0.88	0.52	1.2		PBS; Talcum	
41220B	1029	5	1.11	1158	PBS	0.62	0.52	0.91		PBS; Talcum	
41221A	2686	5	1.1	1171	PBS	0.64	0.52	0.89		PBS; Talcum	
41221B	2686	5	1.1	2453	PBS	0.41	0.39	0.5		PBS; Talcum	
41221BLAI	2686	5	1.1	0	PBS	-0.14	0.21	-0.017		PBS; Talcum	
41223A	1739	5	1.1	1720	PBS	0.38	0.46	0.63		PBS; Talcum	
41223BLAI	1739	5	1.1	0	PBS	-0.12	0.27	-0.02		PBS; Talcum	
41227A	1304	5	1.08	121	PBS	2.8	0.76	2.9		PBS; Talcum	
41227B	1304	5	1.08	1279	PBS	0.6	0.64	0.88		PBS; Talcum	
41228A	1547	5	0.7	242	PBS	3.5	0.82	3.4		PBS; Talcum	
41228B	1547	5	0.7	762	PBS	1.8	0.82	2		PBS; Talcum	
41228C	1547	5	0.7	1499	PBS	1.2	0.76	0.64		PBS; Talcum	
41228BLAI	1547	5	0.7	0	PBS	-0.15	0.39	-0.002		PBS; Talcum	
41229A	1405	3.97	1.05	1102	PBS	0.24	0.64	0.31	5.65	PBS; Re-run of 41223	
41229B	1405	3.97	1.05	1281	PBS	0.23	0.64	0.42	5.65	PBS; Re-run of 41223.	
41229BLAI	1405	3.97	1.05	0	PBS	-0.17	0.33	-0.028	5.65	PBS; Re-run of 41223	

Compilation of Data Worksheet												
Sample #	Run time (min)	Sample Weight (g)	Flow Rate (ml/min)	Collect. time (min)	Si (ppm); VIS Analysis	Si (ppm); ICP Analysis	Mg (ppm); AA Analysis	Mg (ppm); ICP Analysis	Spec. SA (M <sup>2</sup> /g)	Run Type		
50501A	1271	5	0.98	1079	n/a	0.76	n/a	1.1		pH 2 aqueous		
50501B	1271	5	0.98	1210	n/a	0.72	n/a	1.1		pH 2 aqueous		
50502A	1273	5	0.77	203	n/a	2.2	n/a	4.8		pH 2 aqueous		
50502B	1273	5	0.77	1160	n/a	1.1	n/a	1.5		pH 2 aqueous		
50502C	1273	5	0.77	0	n/a	-0.12	n/a	0.044		pH 2 aqueous		
50503A	1381	4.69	1.03	209	n/a	0.56	n/a	0.8		pH 2 aqueous		
50503B	1381	4.69	1.03	1152	n/a	0.46	n/a	0.72		pH 2 aqueous		
50503C	1381	4.69	1.03	0	n/a	-0.18	n/a	0.001		pH 2 aqueous		
50504A	1103	5	0.96	257	n/a	1.5	n/a	2.9		pH 2 aqueous		
50504B	1103	5	0.96	1060	n/a	0.79	n/a	1.2		pH 2 aqueous		
50504C	1103	5	0.96	0	n/a	-0.16	n/a	0.048		pH 2 aqueous		
50703A	1008	5	0.99	231	n/a		n/a			Gamble's		
50703B	1008	5	0.99	967	n/a		n/a			Gamble's		
50704A	646	5	0.66	477	n/a		n/a			Gamble's		
50707B	646	5	0.66	0	n/a		n/a			Gamble's		
50705A	1193	5	0.95	127	n/a		n/a			Gamble's		
50705B	1193	5	0.95	1141	n/a		n/a			Gamble's		
50706A	697	4.02	0.99	95	n/a		n/a			Gamble's		
50706B	697	4.02	0.99	643	n/a		n/a			Gamble's		
50706C	697	4.02	0.99	0	n/a		n/a			Gamble's		

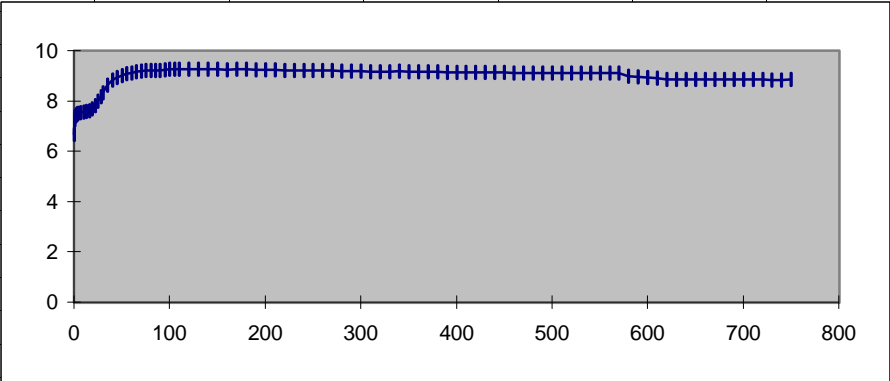
Silica Release Calculations, Fisher Scientific Talcum													
Sample #	Weight (g)	Flow Rate (ml/min)	Flow Rate (kg/sec)	Collect. time (min)	Si (ppm)	Si (mol/kg)	App. Diss. Rate (mol/sec)	Spec. SA (M <sup>2</sup> /g)	Sample SA (M <sup>2</sup> )	Actual Rate (mol/sec*M <sup>2</sup> )	Collect. pH	Log (Act. Rate)	Run Type
41117A	5	0.88	1.47E-05	677	0.83	2.95E-05	4.33E-10	6.83	34.2	1.27E-11	8.85	-10.90	pH 4
41118A	5	0.51	8.50E-06	456	1.4	4.98E-05	4.23E-10	5.78	28.9	1.47E-11	9.2	-10.83	
41121A-1	5	0.88	1.47E-05	1146	0.93	3.31E-05	4.85E-10	5.45	27.3	1.78E-11	9.13	-10.75	
41121A-2	5	0.57	9.50E-06	630	0.94	3.35E-05	3.18E-10	6.02	30.1	1.06E-11	9	-10.98	
41123A	5	0.67	1.12E-05	2466	0.61	2.17E-05	2.42E-10	6.02	30.1	8.05E-12	8.72	-11.09	
41125A	5	1.1	1.83E-05	1836	0.48	1.71E-05	3.13E-10	6.02	30.1	1.04E-11	8.66	-10.98	
41125B	5	1.1	1.83E-05	2800	0.49	1.74E-05	3.20E-10	6.02	30.1	1.06E-11	8.04	-10.97	
41128A	3.97	1.03	1.72E-05	1211	0.39	1.39E-05	2.38E-10	6.02	23.9	9.97E-12	6.77	-11.00	
41128B	3.97	1.03	1.72E-05	1672	0.26	9.25E-06	1.59E-10	6.02	23.9	6.65E-12	5.98	-11.18	
41130A	4.6	0.95	1.58E-05	237	0.56	1.99E-05	3.16E-10	6.02	27.7	1.14E-11	6.3	-10.94	
41130B	4.6	0.95	1.58E-05	1352	0.31	1.10E-05	1.75E-10	6.02	27.7	6.31E-12	4.98	-11.20	
41130C	4.6	0.95	1.58E-05	1705	0.29	1.03E-05	1.63E-10	6.02	27.7	5.90E-12	4.06	-11.23	
41202A	5	0.88	1.47E-05	282	0.8	2.85E-05	4.18E-10	6.02	30.1	1.39E-11	8.46	-10.86	pH 7.4
41202B	5	0.88	1.47E-05	1231	0.3	1.07E-05	1.57E-10	6.02	30.1	5.20E-12	7.66	-11.28	
41219A	5	0.96	1.60E-05	293	0.43	1.53E-05	2.45E-10	6.02	30.1	8.13E-12	9.03	-11.09	
41219B	5	0.96	1.60E-05	971	1.1	3.91E-05	6.26E-10	6.02	30.1	2.08E-11	8.47	-10.68	
41220A	5	1.11	1.85E-05	771	0.88	3.13E-05	5.79E-10	6.02	30.1	1.92E-11	8.1	-10.72	PBS
41220B	5	1.11	1.85E-05	1158	0.62	2.21E-05	4.08E-10	6.02	30.1	1.36E-11	8.14	-10.87	
41221A	5	1.1	1.83E-05	1171	0.64	2.28E-05	4.18E-10	6.02	30.1	1.39E-11	7.39	-10.86	
41221B	5	1.1	1.83E-05	2453	0.41	1.46E-05	2.67E-10	6.02	30.1	8.89E-12	7.4	-11.05	
41223A	5	1.1	1.83E-05	1720	0.38	1.35E-05	2.48E-10	6.02	30.1	8.24E-12	7.99	-11.08	
41227A	5	1.08	1.80E-05	121	2.8	9.96E-05	1.79E-09	6.02	30.1	5.96E-11	7.46	-10.22	
41227B	5	1.08	1.80E-05	1279	0.6	2.14E-05	3.84E-10	6.02	30.1	1.28E-11	7.38	-10.89	
41228A	5	0.7	1.17E-05	242	3.5	1.25E-04	1.45E-09	6.02	30.1	4.83E-11	7.5	-10.32	
41228B	5	0.7	1.17E-05	762	1.8	6.41E-05	7.47E-10	6.02	30.1	2.48E-11	7.4	-10.61	
41228C	5	0.7	1.17E-05	1499	1.2	4.27E-05	4.98E-10	6.02	30.1	1.66E-11	7.3	-10.78	
41229A	3.97	1.05	1.75E-05	1102	0.24	8.54E-06	1.49E-10	6.02	23.9	6.25E-12	7.35	-11.20	
41229B	3.97	1.05	1.75E-05	1281	0.23	8.19E-06	1.43E-10	6.02	23.9	5.99E-12	7.38	-11.22	
50501A	5	0.98	1.63E-05	1079	0.76	2.70E-05	4.42E-10	6.02	30.1	1.47E-11	1.48	-10.83	pH 2
50501B	5	0.98	1.63E-05	1210	0.72	2.56E-05	4.19E-10	6.02	30.1	1.39E-11	1.47	-10.86	
50502A	5	0.77	1.28E-05	203	2.2	7.83E-05	1.00E-09	6.02	30.1	3.34E-11	1.86	-10.48	
50502B	5	0.77	1.28E-05	1160	1.1	3.91E-05	5.02E-10	6.02	30.1	1.67E-11	1.83	-10.78	

Silica Release Calculations, Fisher Scientific Talcum													
Sample #	Weight (g)	Flow Rate (ml/min)	Flow Rate (kg/sec)	Collect. time (min)	Si (ppm)	Si (mol/kg)	App. Diss. Rate (mol/sec)	Spec. SA (M <sup>2</sup> /g)	Sample SA (M <sup>2</sup> )	Actual Rate (mol/sec*M <sup>2</sup> )	Collect. pH	Log (Act. Rate)	Run Type
50503A	4.69	1.03	1.72E-05	209	0.56	1.99E-05	3.42E-10	6.02	28.2	1.21E-11	1.89	-10.92	
50503B	4.69	1.03	1.72E-05	1152	0.46	1.64E-05	2.81E-10	6.02	28.2	9.95E-12	1.85	-11.00	
50504A	5	0.96	1.60E-05	257	1.5	5.34E-05	8.54E-10	6.02	30.1	2.84E-11	1.88	-10.55	
50504B	5	0.96	1.60E-05	1060	0.79	2.81E-05	4.50E-10	6.02	30.1	1.49E-11	1.85	-10.83	
50703A	5	0.99	1.65E-05	231	0.72	2.56E-05	4.23E-10	6.02	30.1	1.40E-11	8.06	-10.85	Gambles
50703B	5	0.99	1.65E-05	967	0.53	1.89E-05	3.11E-10	6.02	30.1	1.03E-11	8.08	-10.99	
50704A	5	0.66	1.10E-05	477	1.2	4.27E-05	4.70E-10	6.02	30.1	1.56E-11	5.24	-10.81	
50705A	5	0.95	1.58E-05	127	1.1	3.91E-05	6.20E-10	6.02	30.1	2.06E-11	7.66	-10.69	
50705B	5	0.95	1.58E-05	1141	0.38	1.35E-05	2.14E-10	6.02	30.1	7.11E-12	7.74	-11.15	
50706A	4.02	0.99	1.65E-05	95	0.33	1.17E-05	1.94E-10	6.02	24.2	8.01E-12	7.67	-11.10	
50706B	4.02	0.99	1.65E-05	643	0.15	5.34E-06	8.81E-11	6.02	24.2	3.64E-12	7.66	-11.44	

Magnesium Release Calculations, Fisher Scientific Talcum														
Sample #	Weight	Flow Rate (ml/min)	Flow Rate (kg/sec)	Collect. time	Mg (ppm)	Blank corrected Mg (ppm)	Mg (mol/kg)	Apparent Rate	spec SA (M <sup>2</sup> /g)	Rate	Collect. pH	Log (Mg rate)	Silicon Release Rate	Ratio (Mg/Si)
41117A	5	0.88	1.47E-05	677	1.6	1.6	6.58E-05	9.7E-10	6.01	3.21E-11	8.85	-10.493	1.64E-11	1.97
41118A	5	0.51	8.50E-06	456	1.9	1.9	7.82E-05	6.6E-10	6.01	2.21E-11	9.2	-10.655	1.89E-11	1.17
41121A-1	5	0.88	1.47E-05	1146	1.6	1.6	6.58E-05	9.7E-10	6.01	3.21E-11	9.13	-10.493	2.30E-11	1.40
41121A-2	5	0.57	9.50E-06	630	1.5	1.5	6.17E-05	5.9E-10	6.01	1.95E-11	9	-10.71	1.36E-11	1.43
41123A	5	0.67	1.12E-05	2466	1.3	1.3	5.35E-05	6E-10	6.01	1.99E-11	8.72	-10.702	1.04E-11	1.92
41125A	5	1.1	1.83E-05	1836	1.31	1.31	5.39E-05	9.9E-10	6.01	3.29E-11	8.66	-10.483	1.34E-11	2.45
41125B	5	1.1	1.83E-05	2800	1.2	1.2	4.94E-05	9.1E-10	6.01	3.01E-11	8.04	-10.521	1.37E-11	2.20
41128A	3.97	1.03	1.72E-05	1211	1.1	1.1	4.53E-05	7.8E-10	6.01	3.26E-11	6.77	-10.487	1.29E-11	2.53
41128B	3.97	1.03	1.72E-05	1672	0.72	0.72	2.96E-05	5.1E-10	6.01	2.13E-11	5.98	-10.671	8.57E-12	2.49
41130A	4.6	0.95	1.58E-05	237	1.1	1.1	4.53E-05	7.2E-10	6.01	2.59E-11	6.3	-10.586	1.47E-11	1.77
41130B	4.6	0.95	1.58E-05	1352	0.78	0.78	3.21E-05	5.1E-10	6.01	1.84E-11	4.98	-10.736	8.13E-12	2.26
41130C	4.6	0.95	1.58E-05	1705	0.59	0.59	2.43E-05	3.8E-10	6.01	1.39E-11	4.06	-10.857	7.61E-12	1.83
41202A	5	0.88	1.47E-05	282	0.78	0.78	3.21E-05	4.7E-10	6.01	1.57E-11	8.46	-10.805	1.79E-11	0.88
41202B	5	0.88	1.47E-05	1231	0.74	0.74	3.05E-05	4.5E-10	6.01	1.49E-11	7.66	-10.828	6.71E-12	2.22
41219A	5	0.96	1.60E-05	293	0.69	0.69	2.84E-05	4.5E-10	6.01	1.51E-11	9.03	-10.82	1.05E-11	1.44
41219B	5	0.96	1.60E-05	971	0.96	0.96	3.95E-05	6.3E-10	6.01	2.10E-11	8.47	-10.677	2.68E-11	0.78
41220A	5	1.11	1.85E-05	771	1.2	1.2	4.94E-05	9.1E-10	6.01	3.04E-11	8.1	-10.517	2.68E-11	1.13
41220B	5	1.11	1.85E-05	1158	0.91	0.91	3.74E-05	6.9E-10	6.01	2.31E-11	8.14	-10.637	1.75E-11	1.32
41221A	5	1.1	1.83E-05	1171	0.89	0.89	3.66E-05	6.7E-10	6.01	2.23E-11	7.39	-10.651	1.79E-11	1.25
41221B	5	1.1	1.83E-05	2453	0.5	0.5	2.06E-05	3.8E-10	6.01	1.26E-11	7.4	-10.901	1.15E-11	1.10
41223A	5	1.1	1.83E-05	1720	0.63	0.63	2.59E-05	4.8E-10	6.01	1.58E-11	7.99	-10.801	1.06E-11	1.49
41227A	5	1.08	1.80E-05	121	2.9	2.9	1.19E-04	2.1E-09	6.01	7.15E-11	7.46	-10.146	7.68E-11	0.93
41227B	5	1.08	1.80E-05	1279	0.88	0.88	3.62E-05	6.5E-10	6.01	2.17E-11	7.38	-10.664	1.65E-11	1.32
41228A	5	0.7	1.17E-05	242	3.4	3.4	1.40E-04	1.6E-09	6.01	5.43E-11	7.5	-10.265	6.22E-11	0.87
41228B	5	0.7	1.17E-05	762	2	2	8.23E-05	9.6E-10	6.01	3.20E-11	7.4	-10.495	3.20E-11	1.00
41228C	5	0.7	1.17E-05	1499	0.64	0.64	2.63E-05	3.1E-10	6.01	1.02E-11	7.3	-10.99	2.13E-11	0.48
41229A	3.97	1.05	1.75E-05	1102	0.31	0.31	1.28E-05	2.2E-10	6.01	9.36E-12	7.35	-11.029	8.06E-12	1.16
41229B	3.97	1.05	1.75E-05	1281	0.42	0.42	1.73E-05	3E-10	6.01	1.27E-11	7.38	-10.897	7.73E-12	1.64
50501A	5	0.98	1.63E-05	1079	1.1	1.1	4.53E-05	7.4E-10	6.01	2.46E-11	1.48	-10.609	1.89E-11	1.30
50501B	5	0.98	1.63E-05	1210	1.1	1.1	4.53E-05	7.4E-10	6.01	2.46E-11	1.47	-10.609	1.79E-11	1.37
50502A	5	0.77	1.28E-05	203	4.8	4.8	1.98E-04	2.5E-09	6.01	8.44E-11	1.86	-10.074	4.30E-11	1.96
50502B	5	0.77	1.28E-05	1160	1.5	1.5	6.17E-05	7.9E-10	6.01	2.64E-11	1.83	-10.579	2.15E-11	1.23

Magnesium Release Calculations, Fisher Scientific Talcum														
Sample #	Weight	Flow Rate (ml/min)	Flow Rate (kg/sec)	Collect. time	Mg (ppm)	Blank corrected Mg (ppm)	Mg (mol/kg)	Apparent Rate	spec SA (M <sup>2</sup> /g)	Rate	Collect. pH	Log (Mg rate)	Silicon Release Rate	Ratio (Mg/Si)
50503A	4.69	1.03	1.72E-05	209	0.8	0.8	3.29E-05	5.7E-10	6.01	2.01E-11	1.89	-10.698	1.56E-11	1.28
50503B	4.69	1.03	1.72E-05	1152	0.72	0.72	2.96E-05	5.1E-10	6.01	1.80E-11	1.85	-10.744	1.28E-11	1.41
50504A	5	0.96	1.60E-05	257	2.9	2.9	1.19E-04	1.9E-09	6.01	6.35E-11	1.88	-10.197	3.66E-11	1.74
50504B	5	0.96	1.60E-05	1060	1.2	1.2	4.94E-05	7.9E-10	6.01	2.63E-11	1.85	-10.58	1.93E-11	1.36
50703A	5	0.99	1.65E-05	231	20.3	1.1	4.53E-05	7.5E-10	6.01	2.49E-11	8.06	-10.605	1.41E-11	1.77
50703B	5	0.99	1.65E-05	967	20.7	1.5	6.17E-05	1E-09	6.01	3.39E-11	8.08	-10.47	1.04E-11	3.27
50704A	5	0.66	1.10E-05	477	21.1	1.9	7.82E-05	8.6E-10	6.01	2.86E-11	5.24	-10.543	1.56E-11	1.83
50705A	5	0.95	1.58E-05	127	21.1	1.9	7.82E-05	1.2E-09	6.01	4.12E-11	7.66	-10.385	2.06E-11	2.00
50705B	5	0.95	1.58E-05	1141	20.3	1.1	4.53E-05	7.2E-10	6.01	2.39E-11	7.74	-10.622	7.13E-12	3.35
50706A	4.02	0.99	1.65E-05	95	20.1	0.9	3.70E-05	6.1E-10	6.01	2.53E-11	7.67	-10.597	8.02E-12	3.15
50706B	4.02	0.99	1.65E-05	643	19.4	0.2	8.23E-06	1.4E-10	6.01	5.62E-12	7.66	-11.25	3.65E-12	1.54
61205-1	5	0.3	5.00E-06	133	n/a	n/a	#VALUE!	#VALUE!	6.01	#VALUE!	7.5	#####	1.74E-11	1.64
61205-2	5	0.25	4.17E-06	318	n/a	n/a	#VALUE!	#VALUE!	6.01	#VALUE!	7.5	#####	1.19E-11	
61206-1	5	0.18	3.00E-06	640	n/a	n/a	#VALUE!	#VALUE!	6.01	#VALUE!	7.69	#####	7.18E-12	
61206-2	5	0.16	2.67E-06	811	n/a	n/a	#VALUE!	#VALUE!	6.01	#VALUE!	7.57	#####	6.19E-12	
61207-1	5	0.25	4.17E-06	183	n/a	n/a	#VALUE!	#VALUE!	6.01	#VALUE!	7.79	#####	1.07E-11	
61207-2	5	0.12	2.00E-06	1723	n/a	n/a	#VALUE!	#VALUE!	6.01	#VALUE!	7.68	#####	5.49E-12	

Date:	11/17/94		Initial pH:	4.3	Notes:
Solid:	Fisher Sci. Talc Lot # 920194		Flow Rate:	0.88 ml/min	
Weight:	5.00 g		Run Time:	750 min	
<b>Time</b>	<b>pH</b>				
0	6.66				
0.5	7.24				
1	7.37				
1.5	7.4				
2	7.43				
2.5	7.45				
3	7.47				
3.5	7.49				
4	7.5				
7	7.53				
10	7.55				
13	7.57				
16	7.61				
19	7.69				
22	7.81				
25	7.98				
28	8.17				
30	8.32				
35	8.62				
40	8.82				
45	8.94				
50	9.02				
55	9.08				
60	9.12				
65	9.16				
70	9.18				
75	9.2				
80	9.21				
85	9.21				
90	9.22				
95	9.24				
100	9.25				
105	9.25				
110	9.25				
120	9.26				
130	9.26				
140	9.26				
150	9.27				
160	9.24				
170	9.26				
180	9.25				
190	9.24				
200	9.23				
210	9.23				
220	9.22				
230	9.22				



Sample collection started at T=677 min.

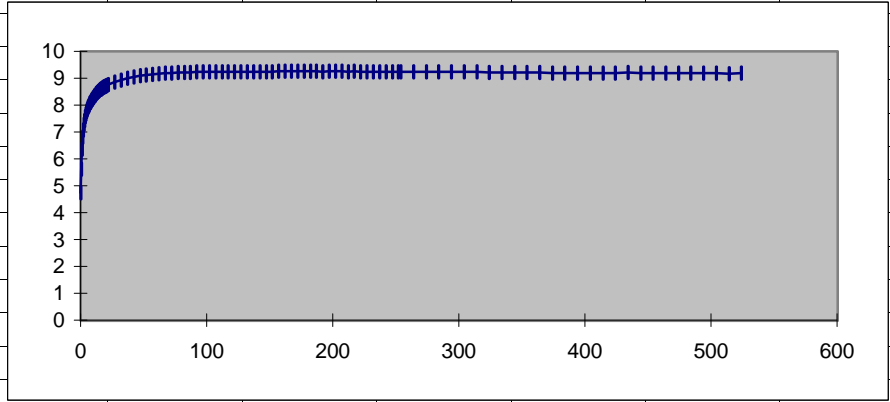


Date:	11/17/94			Initial pH:	4.3	Notes:	
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.88 ml/min		
Weight:	5.00 g			Run Time:	750 min		
<b>Time</b>	<b>pH</b>						
240	9.21						
250	9.2						
260	9.2						
270	9.2						
280	9.19						
290	9.18						
300	9.18						
310	9.17						
320	9.17						
330	9.17						
340	9.18						
350	9.16						
360	9.15						
370	9.15						
380	9.15						
390	9.14						
400	9.14						
410	9.13						
420	9.14						
430	9.13						
440	9.13						
450	9.13						
460	9.12						
470	9.12						
480	9.12						
490	9.12						
500	9.12						
510	9.12						
520	9.11						
530	9.11						
540	9.11						
550	9.11						
560	9.11						
570	9.11						
580	8.97						
590	8.96						
600	8.93						
610	8.91						
620	8.86						
630	8.86						
640	8.86						
650	8.86						
660	8.86						
670	8.85						
680	8.85						
690	8.86						

Experimental Run # 41117A

Date:	11/17/94			Initial pH:	4.3	Notes:	
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.88 ml/min		
Weight:	5.00 g			Run Time:	750 min		
<b>Time</b>	<b>pH</b>						
700	8.85						
710	8.85						
720	8.85						
730	8.84						
740	8.83						
750	8.85						

Date:	11/18/94		Initial pH:	4.25		
Solid:	Fisher Sci. Talc Lot # 920194		Flow Rate:	0.51 ml/min		
Weight:	5.00 g		Run Time:	534 min		
<b>Time</b>	<b>pH</b>					
0	4.73					
0.5	5.61					
1	6.36					
1.5	6.8					
2	7.08					
2.5	7.29					
3	7.44					
3.5	7.57					
4	7.67					
4.5	7.76					
5	7.84					
5.5	7.9					
6	7.96					
6.5	8.01					
7	8.06					
7.5	8.1					
8	8.14					
8.5	8.18					
9	8.22					
9.5	8.26					
10	8.29					
10.5	8.33					
11	8.36					
11.5	8.39					
12	8.42					
12.5	8.45					
13	8.48					
13.5	8.51					
14	8.53					
14.5	8.55					
15	8.57					
15.5	8.59					
16	8.6					
16.5	8.62					
17	8.63					
17.5	8.64					
18	8.66					
18.5	8.67					
19	8.68					
19.5	8.7					
20	8.71					
20.5	8.72					
21	8.73					
22	8.76					
27	8.85					
32	8.94					



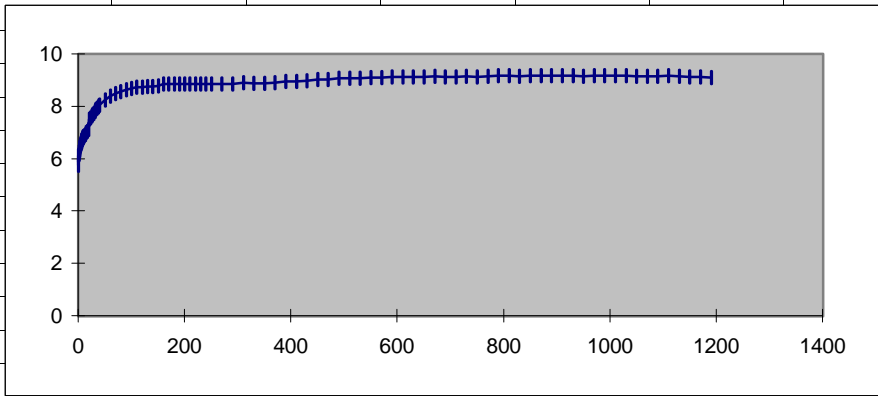
Sample collection started at T=456 min.

Date:	11/18/94			Initial pH:	4.25		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.51 ml/min		
Weight:	5.00 g			Run Time:	534 min		
<b>Time</b>	<b>pH</b>						
37	9						
42	9.04						
47	9.09						
52	9.12						
57	9.15						
62	9.17						
67	9.19						
72	9.2						
77	9.21						
82	9.22						
87	9.22						
92	9.23						
97	9.23						
102	9.24						
107	9.24						
112	9.25						
117	9.24						
122	9.25						
127	9.25						
132	9.25						
137	9.25						
142	9.25						
147	9.25						
152	9.25						
157	9.26						
162	9.26						
167	9.26						
172	9.26						
177	9.27						
182	9.26						
187	9.26						
192	9.25						
197	9.26						
202	9.26						
207	9.26						
212	9.25						
217	9.26						
222	9.24						
227	9.24						
232	9.25						
237	9.24						
242	9.25						
247	9.25						
252	9.23						
254	9.24						
264	9.23						

Experimental Run # 41118A

Date:	11/18/94			Initial pH:	4.25		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.51 ml/min		
Weight:	5.00 g			Run Time:	534 min		
<b>Time</b>	<b>pH</b>						
274	9.23						
284	9.23						
294	9.23						
304	9.23						
314	9.23						
324	9.22						
334	9.22						
344	9.21						
354	9.21						
364	9.21						
374	9.2						
384	9.2						
394	9.2						
404	9.2						
414	9.2						
424	9.2						
434	9.21						
444	9.2						
454	9.2						
464	9.19						
474	9.19						
484	9.19						
494	9.19						
504	9.18						
514	9.17						
524	9.18						

Date:	11/21/94		Initial pH:	4.25		
Solid:	Fisher Sci. Talc Lot # 920194		Flow Rate:	0.88 ml / min		
Weight:	5.00 g.		Run Time:	1190 min		
<b>Time</b>	<b>pH</b>					
0	5.74					
0.5	6.11					
1	6.16					
1.5	6.25					
2	6.31					
2.5	6.38					
3	6.42					
3.5	6.48					
4	6.52					
4.5	6.56					
5	6.6					
5.5	6.63					
6	6.67					
6.5	6.69					
7	6.72					
7.5	6.76					
8	6.77					
8.5	6.79		Sample collection started at T=1146 min			
9	6.81					
9.5	6.82		Notes:	long term run		
10	6.84			few small perturbations in pH		
11	6.87					
13	6.93					
15	6.99					
17	7.04					
19	7.11					
21	7.51					
23	7.55					
25	7.62					
27	7.68					
29	7.73					
31	7.79					
33	7.87					
35	7.92					
37	7.98					
39	8.03					
40	8.04					
50	8.24					
60	8.38					
70	8.48					
80	8.56					
90	8.62					
100	8.67					
110	8.72					
120	8.74					
130	8.76					



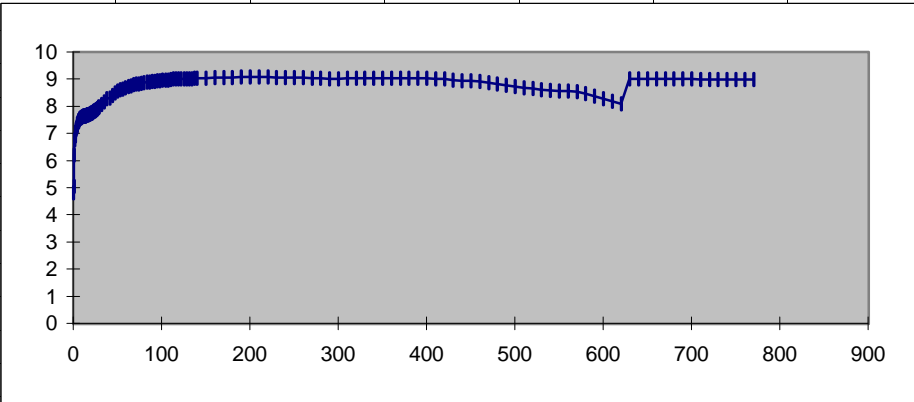
Date:	11/21/94			Initial pH:	4.25		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.88 ml / min		
Weight:	5.00 g.			Run Time:	1190 min		
<b>Time</b>	<b>pH</b>						
140	8.76						
150	8.77						
160	8.84						
170	8.85						
180	8.84						
190	8.85						
200	8.86						
210	8.86						
220	8.86						
230	8.85						
240	8.86						
250	8.86						
270	8.86						
290	8.85						
310	8.89						
330	8.87						
350	8.88						
370	8.91						
390	8.94						
410	8.96						
430	8.97						
450	9.02						
470	9.03						
490	9.06						
510	9.08						
530	9.08						
550	9.1						
570	9.09						
590	9.11						
610	9.11						
630	9.12						
650	9.12						
670	9.14						
690	9.13						
710	9.13						
730	9.14						
750	9.13						
770	9.14						
790	9.16						
810	9.16						
830	9.14						
850	9.16						
870	9.16						
890	9.16						
910	9.16						
930	9.16						

Experimental Run # 41121A

Date:	11/21/94			Initial pH:	4.25			
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.88 ml / min			
Weight:	5.00 g.			Run Time:	1190 min			
<b>Time</b>	<b>pH</b>							
950	9.15							
970	9.16							
990	9.16							
1010	9.16							
1030	9.16							
1050	9.15							
1070	9.14							
1090	9.15							
1110	9.16							
1130	9.15							
1150	9.13							
1170	9.11							
1190	9.1							



Date:	11/22/94		Initial pH:	4.21		
Solid:	Fisher Sci. Talc Lot # 920194		Flow Rate:	0.57 ml/min.		
Weight:	5.00 g.		Run Time:	770 min.		
<b>Time</b>	<b>pH</b>					
0	4.8					
0.5	5.04					
1	6.21					
1.5	6.76					
2	6.92					
2.5	7.05					
3	7.14					
3.5	7.22					
4	7.29					
4.5	7.35					
5	7.41					
5.5	7.44					
6	7.48					
6.5	7.51					
7	7.54					
7.5	7.55					
8	7.57					
8.5	7.57					
9	7.59					
9.5	7.6					
10	7.61					
10.5	7.62					
11	7.63					
11.5	7.64					
12	7.64					
12.5	7.65					
13	7.65					
13.5	7.65					
14	7.65					
14.5	7.66					
15	7.67					
15.5	7.68					
16	7.68					
16.5	7.68					
17	7.7					
17.5	7.7					
18	7.71					
18.5	7.71					
19	7.73					
19.5	7.73					
20	7.74					
20.5	7.75					
21	7.77					
21.5	7.77					
22	7.79					
22.5	7.8					



Sample collection at T=630 min.

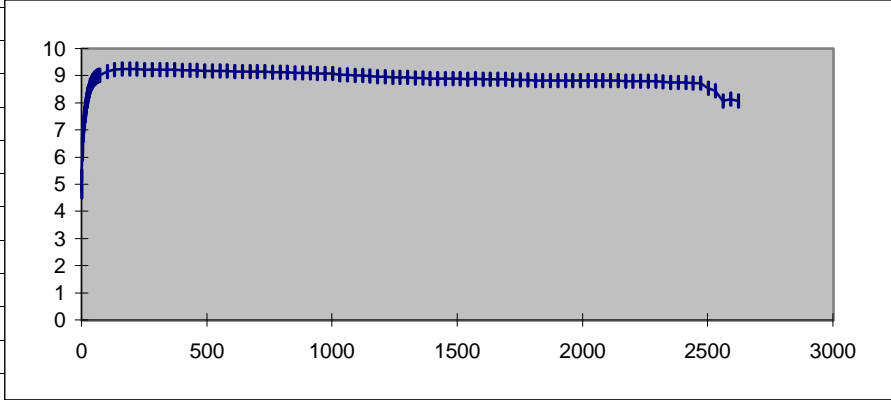
Notes: Are slopes flow rate dependent?  
Grounding problem with the sample collection

Date:	11/22/94			Initial pH:	4.21		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.57 ml/min.		
Weight:	5.00 g.			Run Time:	770 min.		
<b>Time</b>	<b>pH</b>						
23	7.8						
23.5	7.82						
24	7.83						
24.5	7.83						
25	7.86						
25.5	7.87						
26	7.88						
26.5	7.89						
27	7.91						
27.5	7.92						
28	7.94						
28.5	7.96						
29	7.97						
32	8.07						
35	8.17						
38	8.28						
41	8.3						
44	8.39						
47	8.48						
50	8.55						
53	8.6						
56	8.64						
59	8.69						
62	8.72						
65	8.76						
68	8.79						
71	8.81						
74	8.83						
77	8.85						
80	8.87						
83	8.88						
86	8.9						
89	8.91						
92	8.92						
95	8.93						
98	8.94						
101	8.96						
104	8.97						
107	8.97						
110	8.99						
113	9						
116	9						
119	9						
122	9.01						
125	9.01						
128	9.02						

Date:	11/22/94			Initial pH:	4.21		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.57 ml/min.		
Weight:	5.00 g.			Run Time:	770 min.		
<b>Time</b>	<b>pH</b>						
131	9.02						
134	9.02						
137	9.03						
140	9.04						
150	9.04						
160	9.06						
170	9.06						
180	9.06						
190	9.07						
200	9.07						
210	9.08						
220	9.07						
230	9.05						
240	9.06						
250	9.05						
260	9.06						
270	9.04						
280	9.03						
290	9.02						
300	9.02						
310	9.03						
320	9.03						
330	9.03						
340	9.03						
350	9.03						
360	9.03						
370	9.03						
380	9.03						
390	9.03						
400	9.03						
410	9.02						
420	9						
430	8.97						
440	8.95						
450	8.93						
460	8.91						
470	8.87						
480	8.83						
490	8.78						
500	8.73						
510	8.68						
520	8.65						
530	8.62						
540	8.58						
550	8.57						
560	8.55						

Date:	11/22/94			Initial pH:	4.21			
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.57 ml/min.			
Weight:	5.00 g.			Run Time:	770 min.			
<b>Time</b>	<b>pH</b>							
570	8.53							
580	8.46							
590	8.37							
600	8.27							
610	8.19							
620	8.1							
630	9							
640	9.02							
650	9.02							
660	9.01							
670	9.01							
680	9.01							
690	9							
700	9							
710	8.99							
720	8.98							
730	8.98							
740	8.98							
750	8.98							
760	8.98							
770	8.98							

Date:	11/23/94		Initial pH:	4.71		
Solid:	Fisher Sci. Talc Lot # 920194		Flow Rate:	0.67 ml/min		
Weight:	5.00 g.		Run Time:	2621 min.		
<b>Time</b>	<b>pH</b>					
0	4.71					
1	5.31					
1.5	6.11					
2	6.34					
2.5	6.49					
3	6.62					
3.5	6.71					
4	6.8					
4.5	6.87					
5	6.95					
5.5	7.01					
6	7.07					
6.5	7.12					
7	7.16					
7.5	7.21					
8	7.25					
8.5	7.29					
9	7.32					
9.5	7.37					
10	7.4					
10.5	7.43					
11	7.48					
11.5	7.5					
12	7.55					
12.5	7.58					
13	7.62					
13.5	7.65					
14	7.69					
14.5	7.72					
15	7.75					
15.5	7.79					
16	7.82					
16.5	7.85					
17	7.88					
17.5	7.91					
18	7.94					
18.5	7.97					
19	8					
19.5	8.04					
20	8.06					
20.5	8.1					
21	8.11					
21.5	8.16					
22	8.18					
22.5	8.21					
23	8.23					



Sample collection began at T=2466 min.

Notes: leak developed in supply line at T=2450

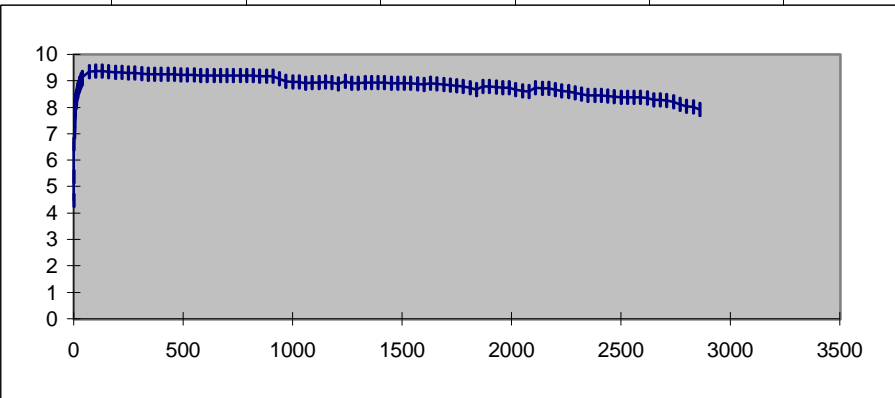
Date:	11/23/94			Initial pH:	4.71		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.67 ml/min		
Weight:	5.00 g.			Run Time:	2621 min.		
<b>Time</b>	<b>pH</b>						
23.5	8.26						
24	8.28						
24.5	8.3						
25	8.33						
25.5	8.35						
26	8.36						
26.5	8.38						
27	8.41						
27.5	8.42						
28	8.45						
30	8.52						
32	8.59						
34	8.63						
36	8.68						
38	8.71						
40	8.75						
42	8.78						
44	8.81						
46	8.84						
48	8.86						
50	8.89						
52	8.91						
54	8.92						
56	8.94						
58	8.96						
60	8.97						
62	8.98						
64	8.99						
66	9						
68	9.01						
70	9.02						
71	9.02						
101	9.15						
131	9.22						
161	9.25						
191	9.25						
221	9.25						
251	9.23						
281	9.23						
311	9.22						
341	9.21						
371	9.21						
401	9.2						
431	9.19						
461	9.19						
491	9.18						

Date:	11/23/94			Initial pH:	4.71		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.67 ml/min		
Weight:	5.00 g.			Run Time:	2621 min.		
<b>Time</b>	<b>pH</b>						
521	9.18						
551	9.17						
581	9.17						
611	9.16						
641	9.16						
671	9.15						
701	9.15						
731	9.14						
761	9.13						
791	9.12						
821	9.12						
851	9.11						
881	9.11						
911	9.1						
941	9.08						
971	9.07						
1001	9.07						
1031	9.04						
1061	9.03						
1091	9.02						
1121	9						
1151	8.98						
1181	8.97						
1211	8.96						
1241	8.94						
1271	8.94						
1301	8.93						
1331	8.92						
1361	8.91						
1391	8.9						
1421	8.9						
1451	8.89						
1481	8.88						
1511	8.88						
1541	8.87						
1571	8.88						
1601	8.87						
1631	8.86						
1661	8.86						
1691	8.86						
1721	8.84						
1751	8.84						
1781	8.84						
1811	8.82						
1841	8.82						
1871	8.82						

Date:	11/23/94			Initial pH:	4.71			
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	0.67 ml/min			
Weight:	5.00 g.			Run Time:	2621 min.			
<b>Time</b>	<b>pH</b>							
1901	8.81							
1931	8.81							
1961	8.82							
1991	8.82							
2021	8.82							
2051	8.81							
2081	8.81							
2111	8.81							
2141	8.81							
2171	8.8							
2201	8.8							
2231	8.79							
2261	8.79							
2291	8.79							
2321	8.78							
2351	8.76							
2381	8.75							
2411	8.74							
2441	8.72							
2471	8.72							
2501	8.53							
2531	8.44							
2561	8.06							
2591	8.14							
2621	8.06							



Date:	11/25/94		Initial pH:	4.24			
Solid:	Fisher Sci. Talc Lot # 920194		Flow Rate:	1.1 ml/min			
Weight:	5.00 g.		Run Time:	2859 min			
<b>Time</b>	<b>pH</b>						
0	4.48						
0.5	5.37						
1	6.62						
1.5	7.07						
2	7.33						
2.5	7.49						
3	7.62						
3.5	7.71						
4	7.79						
4.5	7.86						
5	7.93						
5.5	7.99						
6	8.04						
6.5	8.08						
7	8.12						
7.5	8.16						
8	8.2						
8.5	8.22		Sample Collection at T=1836 & 2800 min.				
9	8.25		Notes:	Run not technically bad, but erratic			
9.5	8.28						
10	8.32						
11	8.34						
13	8.43						
15	8.52						
17	8.6						
19	8.68						
21	8.75						
23	8.8						
25	8.85						
27	8.9						
29	8.94						
31	8.99						
33	9.03						
35	9.06						
37	9.09						
39	9.13						
69	9.34						
99	9.37						
129	9.36						
159	9.35						
189	9.33						
219	9.31						
249	9.3						
279	9.29						
309	9.27						
339	9.26						

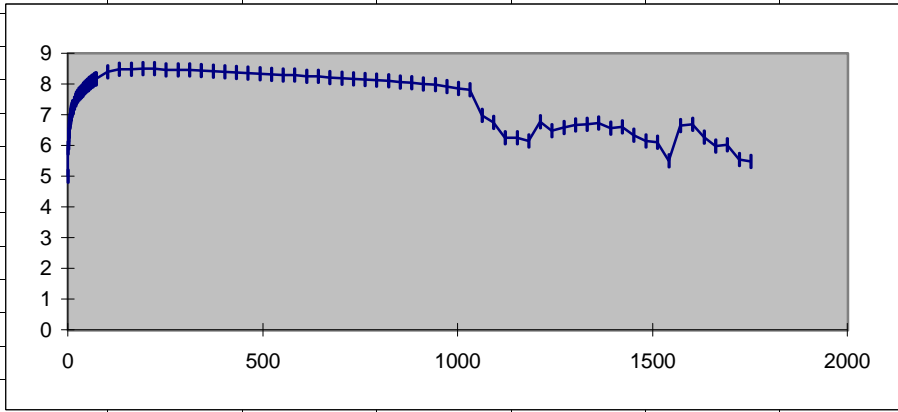


Date:	11/25/94			Initial pH:	4.24		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	1.1 ml/min		
Weight:	5.00 g.			Run Time:	2859 min		
<b>Time</b>	<b>pH</b>						
369	9.26						
399	9.25						
429	9.25						
459	9.24						
489	9.22						
519	9.23						
549	9.22						
579	9.21						
609	9.21						
639	9.21						
669	9.2						
699	9.2						
729	9.2						
759	9.2						
789	9.19						
819	9.19						
849	9.18						
879	9.18						
909	9.18						
939	9.09						
969	8.99						
999	8.97						
1029	8.95						
1059	8.9						
1089	8.93						
1119	8.93						
1149	8.95						
1179	8.94						
1209	8.89						
1239	8.99						
1269	8.92						
1299	8.91						
1329	8.93						
1359	8.93						
1389	8.93						
1419	8.93						
1449	8.91						
1479	8.91						
1509	8.91						
1539	8.91						
1569	8.88						
1599	8.85						
1629	8.92						
1659	8.88						
1689	8.87						
1719	8.84						

Experimental Run # 41125A,B

Date:	11/25/94			Initial pH:	4.24		
Solid:	Fisher Sci. Talc Lot # 920194			Flow Rate:	1.1 ml/min		
Weight:	5.00 g.			Run Time:	2859 min		
<b>Time</b>	<b>pH</b>						
1749	8.81						
1779	8.78						
1809	8.75						
1839	8.66						
1869	8.78						
1899	8.79						
1929	8.77						
1959	8.75						
1989	8.74						
2019	8.67						
2049	8.63						
2079	8.6						
2109	8.74						
2139	8.72						
2169	8.71						
2199	8.67						
2229	8.63						
2259	8.6						
2289	8.54						
2319	8.5						
2349	8.46						
2379	8.45						
2409	8.44						
2439	8.42						
2469	8.41						
2499	8.38						
2529	8.37						
2559	8.38						
2589	8.37						
2619	8.35						
2649	8.29						
2679	8.29						
2709	8.25						
2739	8.2						
2769	8.11						
2799	8.04						
2829	8.01						
2859	7.91						

Date:	11/28/94		Initial pH:	4.22		
Solid:	solid material from 41123 run		Flow Rate:	1.03 ml/min		
Weight:	3.97 g.		Run Time:	1742 min		
<b>Time</b>	<b>pH</b>					
0	4.99					
0.5	5.91					
1	6.09					
1.5	6.22					
2	6.34					
2.5	6.46					
3	6.54					
3.5	6.62					
4	6.68					
4.5	6.75					
5	6.8					
5.5	6.84					
6	6.89					
6.5	6.94					
7	6.98					
7.5	7.02					
8	7.05					
8.5	7.07		Sample collection at T= 1211 min & 1672 min			
9	7.1		Notes: Unknown problem occurred at 6:00-6:30 a.m. 11/29/94			
9.5	7.13		(T=1030 min)			
10	7.15					
10.5	7.18					
11	7.2					
11.5	7.22					
12	7.24					
12.5	7.25					
13	7.28					
16	7.38					
19	7.47					
22	7.54					
25	7.6					
28	7.66					
31	7.71					
34	7.76					
37	7.8					
40	7.84					
43	7.88					
46	7.92					
49	7.95					
52	7.98					
55	8.02					
58	8.05					
61	8.08					
64	8.1					
67	8.14					
70	8.17					

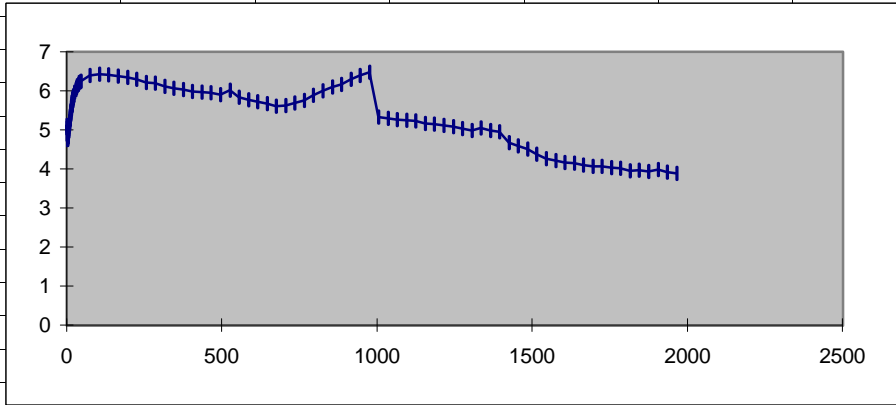


Date:	11/28/94			Initial pH:	4.22		
Solid:	solid material from 41123 run			Flow Rate:	1.03 ml/min		
Weight:	3.97 g.			Run Time:	1742 min		
<b>Time</b>	<b>pH</b>						
72	8.17						
102	8.39						
132	8.47						
162	8.48						
192	8.5						
222	8.49						
252	8.46						
282	8.46						
312	8.45						
342	8.43						
372	8.41						
402	8.39						
432	8.38						
462	8.36						
492	8.34						
522	8.32						
552	8.3						
582	8.29						
612	8.26						
642	8.25						
672	8.21						
702	8.19						
732	8.17						
762	8.15						
792	8.13						
822	8.1						
852	8.06						
882	8.04						
912	8						
942	7.97						
972	7.91						
1002	7.85						
1032	7.81						
1062	6.97						
1092	6.75						
1122	6.25						
1152	6.25						
1182	6.15						
1212	6.77						
1242	6.48						
1272	6.59						
1302	6.66						
1332	6.69						
1362	6.72						
1392	6.57						
1422	6.6						

Experimental Run # 41128A,B

Date:	11/28/94			Initial pH:	4.22			
Solid:	solid material from 41123 run			Flow Rate:	1.03 ml/min			
Weight:	3.97 g.			Run Time:	1742 min			
<b>Time</b>	<b>pH</b>							
1452	6.33							
1482	6.14							
1512	6.1							
1542	5.51							
1572	6.64							
1602	6.68							
1632	6.28							
1662	5.98							
1692	6.02							
1722	5.54							
1752	5.48							

Date:	11/30/94		Initial pH:	4.18		
Solid:	41125 solids rerun		Flow Rate:	0.95 ml/min		
Weight:	4.6 g.		Run Time:	1965 min		
<b>Time</b>	<b>pH</b>					
0	4.89					
0.5	5.11					
1	5.05					
1.5	4.9					
2	4.75					
2.5	4.75					
3	4.79					
3.5	4.82					
4	4.85					
4.5	4.86					
5	4.91					
5.5	4.96					
6	5.01					
6.5	5.06					
7	5.09					
7.5	5.13					
8	5.17					
8.5	5.19	Sample collection at T= 237 min, T=1352 min, & 1705 min				
9	5.22	Notes: Unknown problem occurred at 11 p.m. & 4 a.m. 12/1/94				
9.5	5.26		(T=750-1000 min)			
10	5.29					
10.5	5.32					
11	5.36					
11.5	5.39					
12	5.43					
12.5	5.46					
13	5.49					
13.5	5.52					
14	5.55					
14.5	5.58					
15	5.6					
15.5	5.63					
16	5.66					
16.5	5.68					
17	5.7					
17.5	5.72					
18	5.74					
18.5	5.76					
19	5.78					
19.5	5.8					
20	5.82					
20.5	5.84					
21	5.86					
21.5	5.87					
22	5.88					
25	5.97					



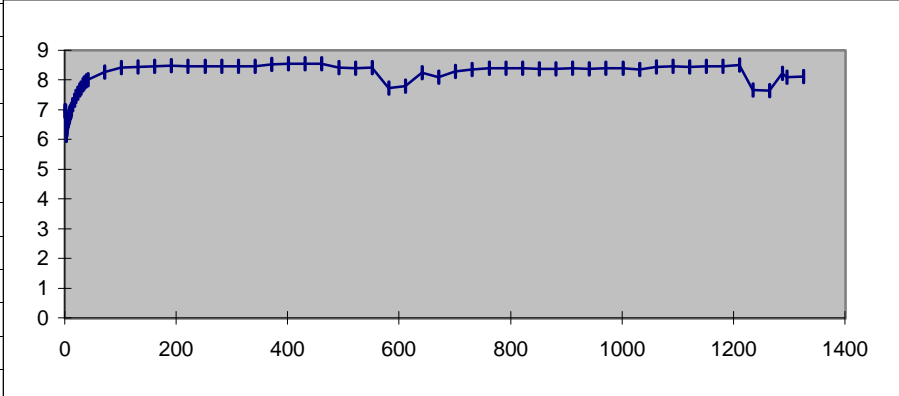
Date:	11/30/94			Initial pH:	4.18		
Solid:	41125 solids rerun			Flow Rate:	0.95 ml/min		
Weight:	4.6 g.			Run Time:	1965 min		
<b>Time</b>	<b>pH</b>						
28	6.04						
31	6.09						
34	6.13						
37	6.17						
40	6.21						
43	6.23						
45	6.25						
75	6.39						
105	6.42						
135	6.41						
165	6.38						
195	6.34						
225	6.3						
255	6.21						
285	6.19						
315	6.11						
345	6.07						
375	6.03						
405	5.99						
435	5.96						
465	5.95						
495	5.9						
525	6.02						
555	5.83						
585	5.77						
615	5.72						
645	5.67						
675	5.6						
705	5.62						
735	5.69						
765	5.76						
795	5.89						
825	6						
855	6.1						
885	6.16						
915	6.3						
945	6.39						
975	6.47						
1005	5.32						
1035	5.3						
1065	5.26						
1095	5.25						
1125	5.23						
1155	5.17						
1185	5.14						
1215	5.11						



Experimental Run # 41130A,B,C

Date:	11/30/94			Initial pH:	4.18		
Solid:	41125 solids rerun			Flow Rate:	0.95 ml/min		
Weight:	4.6 g.			Run Time:	1965 min		
<b>Time</b>	<b>pH</b>						
1245	5.08						
1275	5.04						
1305	4.99						
1335	5.05						
1365	4.98						
1395	4.95						
1425	4.68						
1455	4.59						
1485	4.51						
1515	4.38						
1545	4.27						
1575	4.21						
1605	4.16						
1635	4.14						
1665	4.1						
1695	4.06						
1725	4.07						
1755	4.04						
1785	4.02						
1815	3.95						
1845	3.96						
1875	3.93						
1905	3.99						
1935	3.92						
1965	3.89						

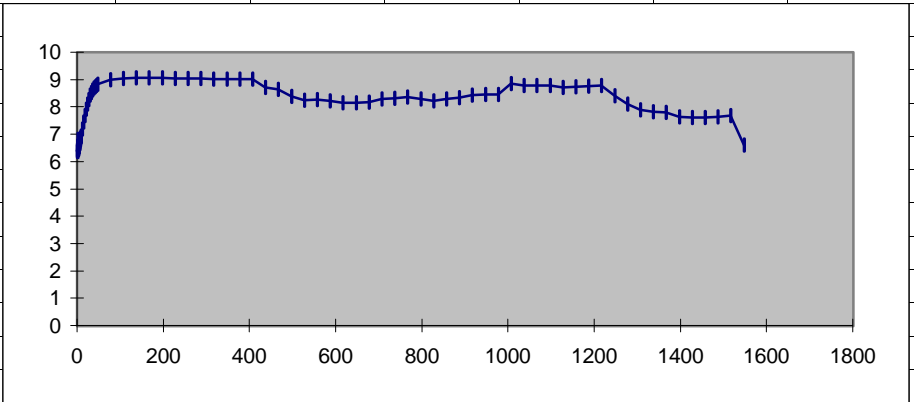
Date:	12/2/94		Initial pH:	7.3		
Solid:	Fisher Sci. Talcum #		Flow Rate:	0.88 ml/min		
Weight:	5.00 g		Run Time:	1325 min		
<b>Time</b>	<b>pH</b>					
0	6.98					
0.5	6.94					
1	6.96					
1.5	6.65					
2	6.44					
2.5	6.14					
3	6.32					
3.5	6.4					
4	6.48					
4.5	6.54					
5	6.59					
5.5	6.63					
6	6.68					
6.5	6.72					
7	6.75					
7.5	6.79					
8	6.83					
8.5	6.86		Sample Collection @ T=282 min & T=1231 min			
9	6.89		Notes: probable grounding problem, static discharge			
9.5	6.92		disruption of pH meter			
10	6.94					
10.5	6.96					
11	7.01					
14	7.18					
17	7.33					
20	7.45					
23	7.56					
26	7.66					
29	7.74					
32	7.84					
35	7.91					
38	7.97					
41	8.01					
71	8.26					
101	8.42					
131	8.44					
161	8.46					
191	8.48					
221	8.47					
251	8.47					
281	8.46					
311	8.46					
341	8.47					
371	8.52					
401	8.54					
431	8.55					



Experimental Run # 41202A,B

Date:	12/2/94			Initial pH:	7.3		
Solid:	Fisher Sci. Talcum #			Flow Rate:	0.88 ml/min		
Weight:	5.00 g			Run Time:	1325 min		
<b>Time</b>	<b>pH</b>						
461	8.55						
491	8.41						
521	8.4						
551	8.42						
581	7.72						
611	7.79						
641	8.25						
671	8.1						
701	8.3						
731	8.36						
761	8.4						
791	8.39						
821	8.39						
851	8.38						
881	8.38						
911	8.4						
941	8.38						
971	8.4						
1001	8.4						
1031	8.36						
1061	8.44						
1091	8.46						
1121	8.45						
1151	8.46						
1181	8.47						
1211	8.5						
1235	7.66						
1265	7.65						
1288	8.23						
1295	8.09						
1325	8.11						

Date:	12/19/94		Initial pH:	6.78		
Solid:	Fisher Scientific Talc		Flow Rate:	0.96 ml/min		
Weight:	5.00 g		Run Time:	1547 min		
<b>Time</b>	<b>pH</b>					
0	6.41					
0.5	6.38					
1	6.81					
1.5	6.55					
2	6.38					
2.5	6.45					
3	6.46					
3.5	6.5					
4	6.53					
4.5	6.58					
5	6.61					
5.5	6.66					
6	6.7					
6.5	6.75					
7	6.79					
7.5	6.83					
8	6.87					
8.5	6.91		Sample Collection @ T=293 min & T=971 min			
9	6.94		Notes:	noted air around electrode 12/21/94		
12	7.19			leak discovered 12/21/94, unstable flow rate		
15	7.45					
18	7.69					
21	7.92					
24	8.11					
27	8.27					
30	8.42					
33	8.53					
36	8.62					
39	8.68					
42	8.73					
45	8.78					
47	8.82					
77	9					
107	9.05					
137	9.07					
167	9.07					
197	9.06					
227	9.05					
257	9.04					
287	9.03					
317	9.01					
347	9.02					
377	9.02					
407	9.01					
437	8.71					
467	8.65					

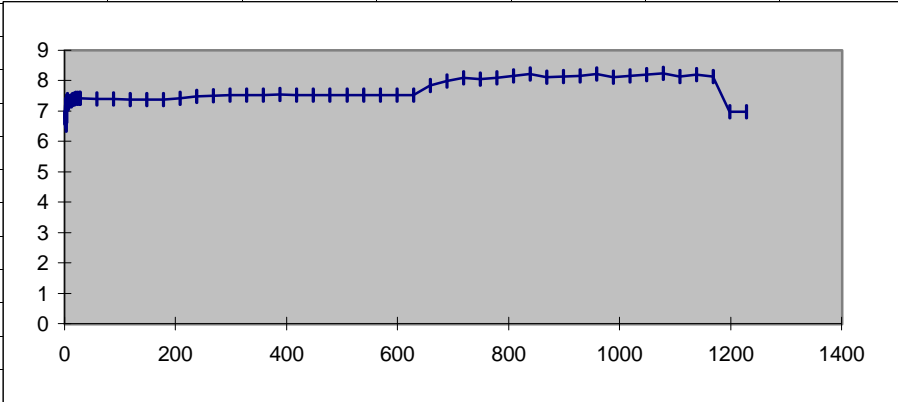


Experimental Run # 41219A,B

Date:	12/19/94			Initial pH:	6.78		
Solid:	Fisher Scientific Talc			Flow Rate:	0.96 ml/min		
Weight:	5.00 g			Run Time:	1547 min		
<b>Time</b>	<b>pH</b>						
497	8.38						
527	8.25						
557	8.27						
587	8.23						
617	8.15						
647	8.15						
677	8.17						
707	8.29						
737	8.32						
767	8.35						
797	8.28						
827	8.23						
857	8.29						
887	8.34						
917	8.42						
947	8.45						
977	8.45						
1007	8.85						
1037	8.79						
1067	8.79						
1097	8.78						
1127	8.72						
1157	8.74						
1187	8.77						
1217	8.79						
1247	8.4						
1277	8.11						
1307	7.9						
1337	7.82						
1367	7.79						
1397	7.64						
1427	7.61						
1457	7.61						
1487	7.64						
1517	7.68						
1547	6.6						

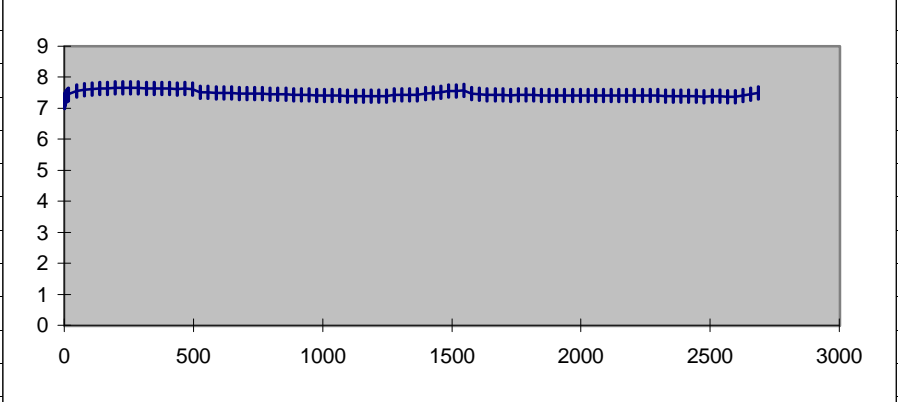
Experimental Run # 41220A,B

Date:	12/19/94			Initial pH:	7.38		
Solid:	Fisher Sci. Talcum			Flow Rate:	1.11 ml/min		
Weight:	5.00 g.			Run Time:	1028		
<b>Time</b>	<b>pH</b>						
0	6.77						
0.5	6.78						
1	7.21						
1.5	6.67						
2	6.54						
2.5	6.91						
3	7.32						
3.5	6.83						
4	7.34						
4.5	7.32						
5	7.37						
5.5	7.24						
6	7.28						
6.5	7.29						
7	7.31						
11	7.33						
14	7.37						
17	7.4	Notes:		Samples collected at T = 771 min			
20	7.41			and at T = 1158 min.			
23	7.42						
26	7.42						
28	7.41						
58	7.4						
88	7.4						
118	7.38						
148	7.38						
178	7.38						
208	7.41						
238	7.48						
268	7.51						
298	7.52						
328	7.53						
358	7.53						
388	7.54						
418	7.53						
448	7.53						
478	7.53						
508	7.53						
538	7.53						
568	7.52						
598	7.52						
628	7.52						
658	7.84						
688	7.99						
718	8.09						
748	8.06						



778	8.1							
808	8.15							
838	8.21							
868	8.11							
898	8.13							
928	8.15							
958	8.21							
988	8.12							
1018	8.15							
1048	8.2							
1078	8.24							
1108	8.13							
1138	8.19							
1168	8.14							
1198	6.97							
1228	6.98							

Date:	12/21/94		Initial pH:	7.47		
Solid:	Fisher Scientific talc		Flow Rate:	1.10 ml/min		
Weight:	5.00 g		Run Time:	2686		
<b>Time</b>	<b>pH</b>					
0	7.18					
0.5	7.23					
1	7.27					
1.5	7.28					
2	7.3					
3	7.31					
6	7.36					
9	7.41					
12	7.44					
15	7.44					
16	7.46					
46	7.56					
76	7.6					
106	7.62					
136	7.63					
166	7.63					
196	7.65					
226	7.65	Notes:	Sample collection at T=1171 min & @ T=2453 min			
256	7.66					
286	7.66					
316	7.64					
346	7.64					
376	7.63					
406	7.63					
436	7.62					
466	7.63					
496	7.62					
526	7.52					
556	7.51					
586	7.5					
616	7.49					
646	7.49					
676	7.47					
706	7.48					
736	7.47					
766	7.47					
796	7.46					
826	7.45					
856	7.45					
886	7.43					
916	7.43					
946	7.43					
976	7.42					
1006	7.42					
1036	7.42					
1066	7.42					



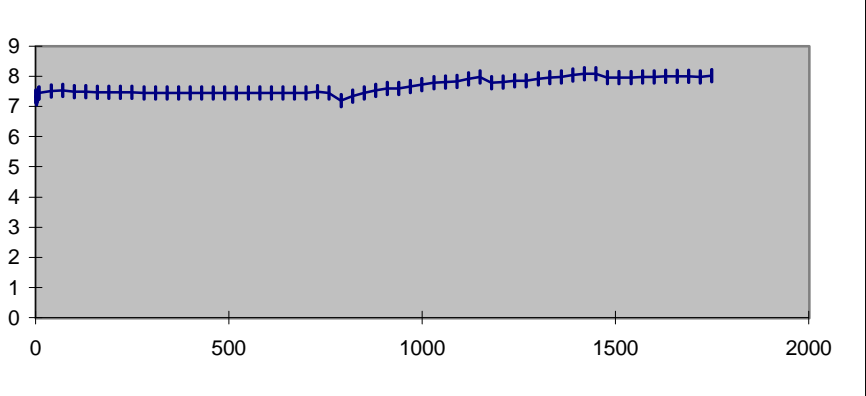


Date:	12/21/94			Initial pH:	7.47		
Solid:	Fisher Scientific talc			Flow Rate:	1.10 ml/min		
Weight:	5.00 g			Run Time:	2686		
<b>Time</b>	<b>pH</b>						
1096	7.4						
1126	7.4						
1156	7.4						
1186	7.39						
1216	7.39						
1246	7.39						
1276	7.43						
1306	7.43						
1336	7.44						
1366	7.43						
1396	7.47						
1426	7.49						
1456	7.52						
1486	7.55						
1516	7.56						
1546	7.58						
1576	7.48						
1606	7.46						
1636	7.44						
1666	7.44						
1696	7.43						
1726	7.42						
1756	7.43						
1786	7.43						
1816	7.43						
1846	7.42						
1876	7.42						
1906	7.42						
1936	7.42						
1966	7.41						
1996	7.42						
2026	7.42						
2056	7.41						
2086	7.41						
2116	7.41						
2146	7.41						
2176	7.41						
2206	7.41						
2236	7.41						
2266	7.41						
2296	7.41						
2326	7.4						
2356	7.4						
2386	7.4						
2416	7.4						
2446	7.4						

Experimental Run # 41221A,B

Date:	12/21/94			Initial pH:	7.47			
Solid:	Fisher Scientific talc			Flow Rate:	1.10 ml/min			
Weight:	5.00 g			Run Time:	2686			
<b>Time</b>	<b>pH</b>							
2476	7.37							
2506	7.38							
2536	7.39							
2566	7.36							
2596	7.36							
2626	7.41							
2656	7.46							
2686	7.49							

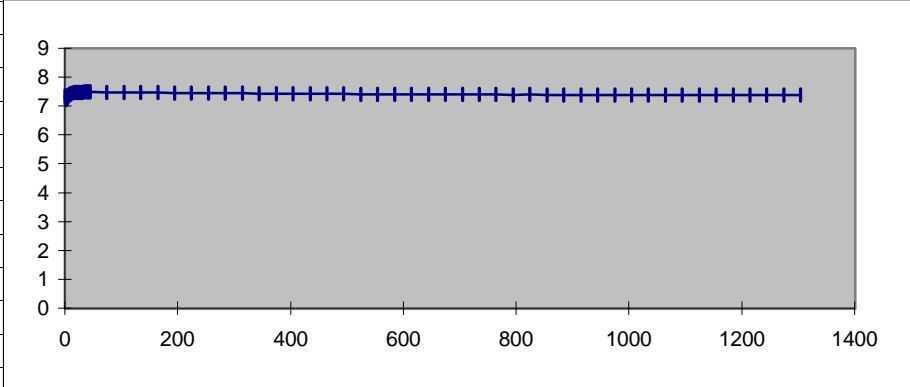
Date:	12/23/94		Initial pH:	7.47		
Solid:	Fisher Scientific Talcum		Flow Rate:	1.10 ml/min.		
Weight:	5.00 g		Run Time:	1739 min		
<b>Time</b>	<b>pH</b>					
0	7.32					
0.5	7.34					
1	7.26					
1.5	7.29					
2	7.32					
3	7.34					
6	7.42					
9	7.44					
39	7.52					
69	7.53					
99	7.5					
129	7.49					
159	7.48					
189	7.48					
219	7.47					
249	7.47					
279	7.46					
309	7.46	Notes:	Sample collected at T=1720 min.			
339	7.46					
369	7.46					
399	7.46					
429	7.45					
459	7.46					
489	7.45					
519	7.45					
549	7.45					
579	7.45					
609	7.45					
639	7.45					
669	7.45					
699	7.45					
729	7.5					
759	7.45					
789	7.2					
819	7.34					
849	7.45					
879	7.54					
909	7.59					
939	7.59					
969	7.66					
999	7.73					
1029	7.78					
1059	7.82					
1089	7.83					
1119	7.91					
1149	7.98					



Date:	12/23/94			Initial pH:	7.47		
Solid:	Fisher Scientific Talcum			Flow Rate:	1.10 ml/min.		
Weight:	5.00 g			Run Time:	1739 min		
<b>Time</b>	<b>pH</b>						
1179	7.79						
1209	7.82						
1239	7.86						
1269	7.85						
1299	7.91						
1329	7.95						
1359	7.99						
1389	8.04						
1419	8.08						
1449	8.08						
1479	7.96						
1509	7.96						
1539	7.97						
1569	7.99						
1599	7.99						
1629	8						
1659	8.01						
1689	8.01						
1719	7.99						
1749	8.02						

Experimental Run # 41227A,B,Blank

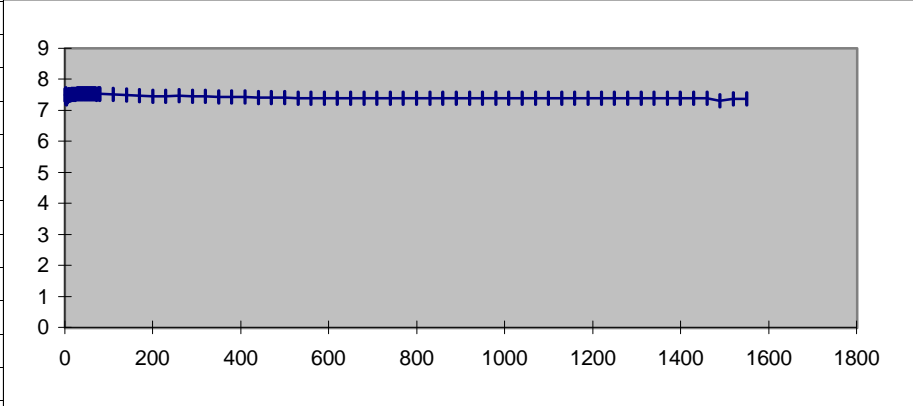
Date:	12/21/94		Initial pH:	7.32		
Solid:	Fisher Scientific Talcum		Flow Rate:	1.08 ml/min.		
Weight:	5.00 g.		Run Time:	1304 min.		
<b>Time</b>	<b>pH</b>					
0	7.37					
0.5	7.29					
1	7.29					
1.5	7.31					
2	7.23					
2.5	7.25					
3	7.28					
3.5	7.29					
4	7.31					
4.5	7.33					
5	7.35					
5.5	7.37					
6	7.37					
6.5	7.38					
7	7.39					
7.5	7.4					
8	7.4					
8.5	7.41	Notes:	Samples collected at T=121 min. & at T=1279 min.			
9	7.41					
10	7.42					
13	7.44					
16	7.46					
19	7.47					
22	7.48					
25	7.48					
28	7.48					
31	7.48					
34	7.49					
37	7.49					
40	7.49					
43	7.49					
44	7.49					
74	7.48					
104	7.47					
134	7.46					
164	7.46					
194	7.45					
224	7.45					
254	7.45					
284	7.44					
314	7.44					
344	7.42					
374	7.43					
404	7.42					
434	7.42					
464	7.42					



Experimental Run # 41227A,B,Blank

Date:	12/21/94			Initial pH:	7.32		
Solid:	Fisher Scientific Talcum			Flow Rate:	1.08 ml/min.		
Weight:	5.00 g.			Run Time:	1304 min.		
<b>Time</b>	<b>pH</b>						
494	7.42						
524	7.41						
554	7.41						
584	7.41						
614	7.41						
644	7.4						
674	7.4						
704	7.4						
734	7.4						
764	7.4						
794	7.39						
824	7.4						
854	7.39						
884	7.39						
914	7.39						
944	7.39						
974	7.39						
1004	7.39						
1034	7.39						
1064	7.38						
1094	7.39						
1124	7.39						
1154	7.38						
1184	7.38						
1214	7.38						
1244	7.38						
1274	7.38						
1304	7.38						

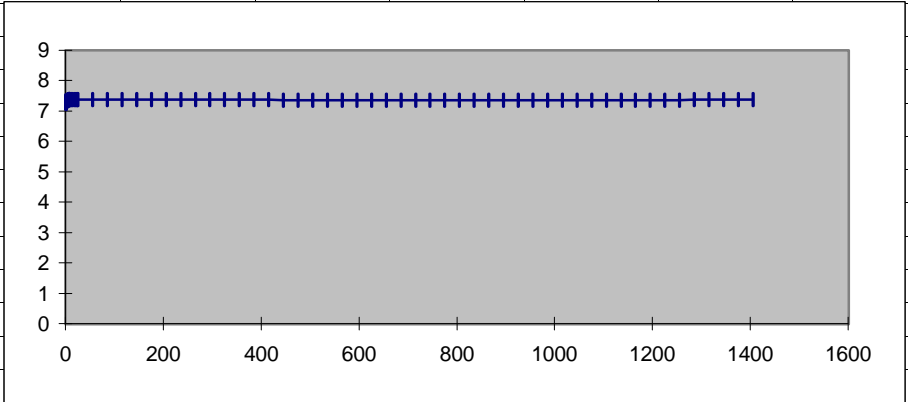
Date:	12/28/94		Initial pH:	7.35		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.70 ml/min.		
Weight:	5.00 g.		Run Time:	1547 min.		
<b>Time</b>	<b>pH</b>					
0	7.49					
0.5	7.5					
1	7.53					
1.5	7.45					
2	7.38					
2.5	7.37					
3	7.38					
3.5	7.4					
4	7.44					
4.5	7.45					
5	7.46					
5.5	7.47					
6	7.47					
6.5	7.47					
7	7.48					
7.5	7.49					
8	7.49					
8.5	7.5	Notes:	Samples collected at T=242 min., T=762 min., and T=1499 min.			
9	7.5					
12	7.5					
15	7.51					
18	7.51					
21	7.52					
24	7.52					
27	7.53					
30	7.53					
33	7.53					
36	7.54					
39	7.53					
42	7.54					
45	7.54					
48	7.53					
51	7.54					
54	7.54					
57	7.53					
60	7.54					
63	7.54					
66	7.53					
69	7.53					
72	7.52					
75	7.53					
78	7.52					
79	7.53					
109	7.51					
139	7.49					
169	7.48					



Date:	12/28/94			Initial pH:	7.35		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.70 ml/min.		
Weight:	5.00 g.			Run Time:	1547 min.		
<b>Time</b>	<b>pH</b>						
199	7.46						
229	7.45						
259	7.48						
289	7.45						
319	7.45						
349	7.44						
379	7.43						
409	7.43						
439	7.42						
469	7.41						
499	7.41						
529	7.4						
559	7.4						
589	7.4						
619	7.4						
649	7.39						
679	7.39						
709	7.39						
739	7.39						
769	7.39						
799	7.39						
829	7.39						
859	7.39						
889	7.39						
919	7.39						
949	7.39						
979	7.39						
1009	7.39						
1039	7.39						
1069	7.39						
1099	7.39						
1129	7.39						
1159	7.39						
1189	7.39						
1219	7.38						
1249	7.38						
1279	7.38						
1309	7.38						
1339	7.39						
1369	7.4						
1399	7.39						
1429	7.39						
1459	7.38						
1489	7.3						
1519	7.36						
1549	7.36						



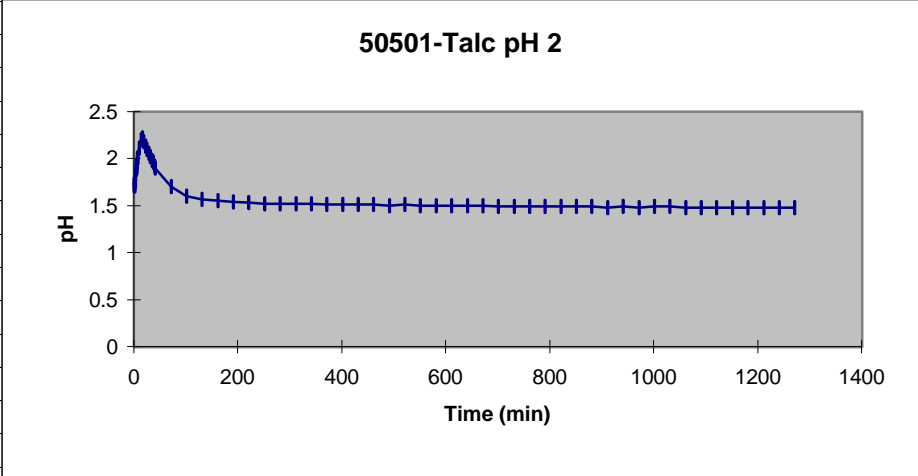
Date:	12/29/94		Initial pH:	7.4		
Solid:	Solids from 12/23/94		Flow Rate:	1.05 ml/min.		
Weight:	3.97 g.		Run Time:	1405 min.		
<b>Time</b>	<b>pH</b>					
0	7.34					
0.5	7.26					
1	7.26					
1.5	7.3					
2	7.32					
2.5	7.33					
3	7.35					
3.5	7.35					
4	7.36					
4.5	7.36					
5	7.36					
5.5	7.37					
6	7.37					
6.5	7.37					
7	7.37					
7.5	7.37					
8	7.38					
8.5	7.37	Notes:	Samples collected at T = 1102 min and			
9	7.37		at T = 1281 min.			
12	7.38					
15	7.38					
18	7.38					
21	7.37					
24	7.38					
25	7.38					
55	7.38					
85	7.38					
115	7.37					
145	7.37					
175	7.37					
205	7.37					
235	7.37					
265	7.37					
295	7.37					
325	7.37					
355	7.37					
385	7.37					
415	7.37					
445	7.36					
475	7.36					
505	7.36					
535	7.36					
565	7.36					
595	7.36					
625	7.36					
655	7.36					



Experimental Run # 41229A,B

Date:	12/29/94			Initial pH:	7.4		
Solid:	Solids from 12/23/94			Flow Rate:	1.05 ml/min.		
Weight:	3.97 g.			Run Time:	1405 min.		
<b>Time</b>	<b>pH</b>						
685	7.36						
715	7.35						
745	7.35						
775	7.35						
805	7.35						
835	7.35						
865	7.35						
895	7.35						
925	7.35						
955	7.35						
985	7.35						
1015	7.36						
1045	7.36						
1075	7.35						
1105	7.35						
1135	7.36						
1165	7.36						
1195	7.36						
1225	7.36						
1255	7.36						
1285	7.38						
1315	7.37						
1345	7.37						
1375	7.37						
1405	7.37						

Date:	5/1/95		Initial pH:	1.7		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.98 ml/min		
Weight:	5.00 g.		Run Time:	1271 min		
<b>Time</b>	<b>pH</b>					
0	1.73					
0.5	1.71					
1	1.71					
1.5	1.72					
2	1.76					
2.5	1.79					
3	1.84					
3.5	1.88					
4	1.91					
4.5	1.91					
5	1.9					
5.5	1.93					
6	1.96					
6.5	2					
7	2.01					
10	2.11					
13	2.2					
16	2.22	Notes:	Samples collected at T= 1079 min. & at T=1210 min.			
19	2.18		Solvent blank sample (50501-C) collected at the end			
22	2.13		of the run			
25	2.1					
28	2.06					
31	2.02					
34	1.98					
37	1.96					
40	1.92					
41	1.9					
71	1.7					
101	1.6					
131	1.57					
161	1.55					
191	1.54					
221	1.53					
251	1.52					
281	1.52					
311	1.52					
341	1.52					
371	1.51					
401	1.51					
431	1.51					
461	1.51					
491	1.5					
521	1.51					
551	1.5					
581	1.5					
611	1.5					



Experimental Run # 50501-A,B,C

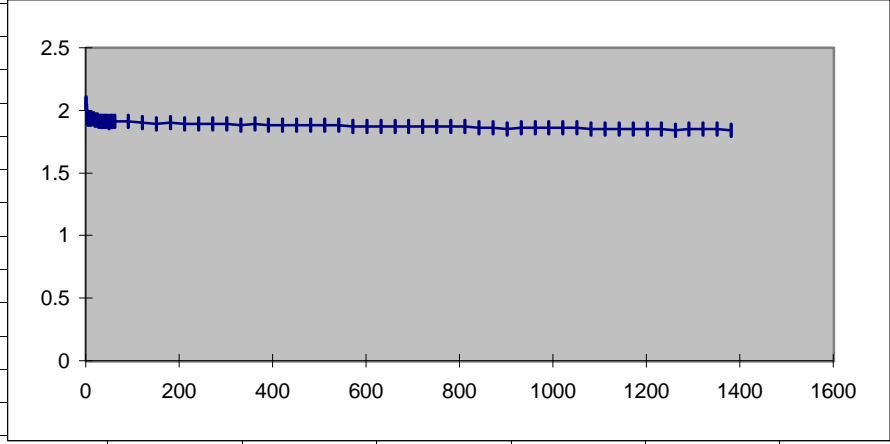
Date:	5/1/95			Initial pH:	1.7		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.98 ml/min		
Weight:	5.00 g.			Run Time:	1271 min		
<b>Time</b>	<b>pH</b>						
641	1.5						
671	1.5						
701	1.49						
731	1.49						
761	1.49						
791	1.49						
821	1.49						
851	1.49						
881	1.49						
911	1.48						
941	1.49						
971	1.48						
1001	1.49						
1031	1.49						
1061	1.48						
1091	1.48						
1121	1.48						
1151	1.48						
1181	1.48						
1211	1.48						
1241	1.48						
1271	1.48						

Date:	5/2/95			Initial pH:	1.98		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.77 ml/min		
Weight:	5.00 g.			Run Time:	1273 min.		
<b>Time</b>	<b>pH</b>						
0	1.98						
0.5	2.02	<div data-bbox="467 390 1388 848" data-label="Figure"> <p>50502 Talc-pH2</p> </div>					
1	1.99						
1.5	1.95						
2	1.95						
2.5	1.97						
3	1.97						
3.5	1.98						
4	1.99						
4.5	1.99						
5	2						
5.5	2.01						
6	2.02						
6.5	2.03						
7	2.04						
7.5	2.05						
8	2.07						
8.5	2.08	Notes:	Samples collected @ T=203 min and @ T=1160 min.				
9	2.09						
9.5	2.11						
10	2.12						
10.5	2.13						
11	2.14						
11.5	2.15						
12	2.16						
12.5	2.18						
13	2.19						
13.5	2.2						
14	2.21						
14.5	2.22						
15	2.22						
18	2.28						
21	2.33						
24	2.37						
27	2.4						
30	2.42						
33	2.42						
36	2.41						
39	2.38						
42	2.35						
43	2.34						
73	2.08						
103	1.96						
133	1.91						
163	1.88						
193	1.87						

Experimental Run # 50502-A,B,C

Date:	5/2/95			Initial pH:	1.98		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.77 ml/min		
Weight:	5.00 g.			Run Time:	1273 min.		
<b>Time</b>	<b>pH</b>						
223	1.86						
253	1.86						
283	1.85						
313	1.85						
343	1.84						
373	1.85						
403	1.85						
433	1.85						
463	1.84						
493	1.84						
523	1.84						
553	1.84						
583	1.84						
613	1.84						
643	1.84						
673	1.84						
703	1.84						
733	1.83						
763	1.83						
793	1.83						
823	1.83						
853	1.83						
883	1.83						
913	1.83						
943	1.83						
973	1.82						
1003	1.83						
1033	1.83						
1063	1.83						
1093	1.83						
1123	1.83						
1153	1.83						
1183	1.83						
1213	1.83						
1243	1.83						
1273	1.83						

Date:	5/3/95		Initial pH:	2.02		Notes:	
Solid:	Talcum solids from 50501 run		Flow Rate:	1.03 ml/min			
Weight:	4.69 g.		Run Time:	1381 min			
<b>Time</b>	<b>pH</b>						
0	2.05						
0.5	2.06						
1	2						
1.5	1.96						
2	1.95						
2.5	1.95						
3	1.94						
3.5	1.93						
4	1.93						
4.5	1.93						
5	1.93						
5.5	1.94						
6	1.94						
6.5	1.94						
7	1.93						
7.5	1.94						
8	1.94						
8.5	1.93		Notes:	Samples collected at T=209 min and at T=1152 min.			
9	1.93						
9.5	1.93						
10	1.93						
13	1.93						
16	1.93						
19	1.92						
22	1.92						
25	1.92						
28	1.91						
31	1.91						
34	1.91						
37	1.91						
40	1.91						
43	1.91						
46	1.91						
49	1.9						
52	1.91						
55	1.91						
58	1.91						
61	1.91						
91	1.91						
121	1.9						
151	1.89						
181	1.9						
211	1.89						
241	1.89						
271	1.89						
301	1.89						

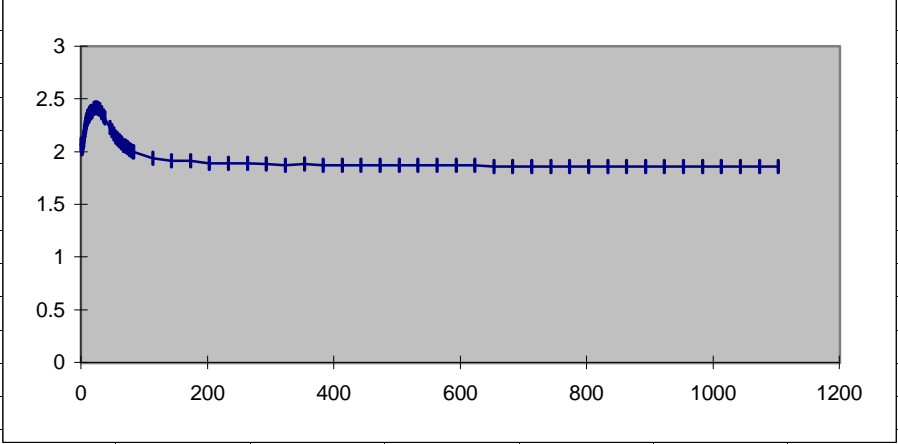


Experimental Run # 50503-A,B,C

Date:	5/3/95			Initial pH:	2.02		Notes:	
Solid:	Talcum solids from 50501 run			Flow Rate:	1.03 ml/min			
Weight:	4.69 g.			Run Time:	1381 min			
<b>Time</b>	<b>pH</b>							
331	1.88							
361	1.89							
391	1.88							
421	1.88							
451	1.88							
481	1.88							
511	1.88							
541	1.88							
571	1.87							
601	1.87							
631	1.87							
661	1.87							
691	1.87							
721	1.87							
751	1.87							
781	1.87							
811	1.87							
841	1.86							
871	1.86							
901	1.85							
931	1.86							
961	1.86							
991	1.86							
1021	1.86							
1051	1.86							
1081	1.85							
1111	1.85							
1141	1.85							
1171	1.85							
1201	1.85							
1231	1.85							
1261	1.84							
1291	1.85							
1321	1.85							
1351	1.85							
1381	1.84							



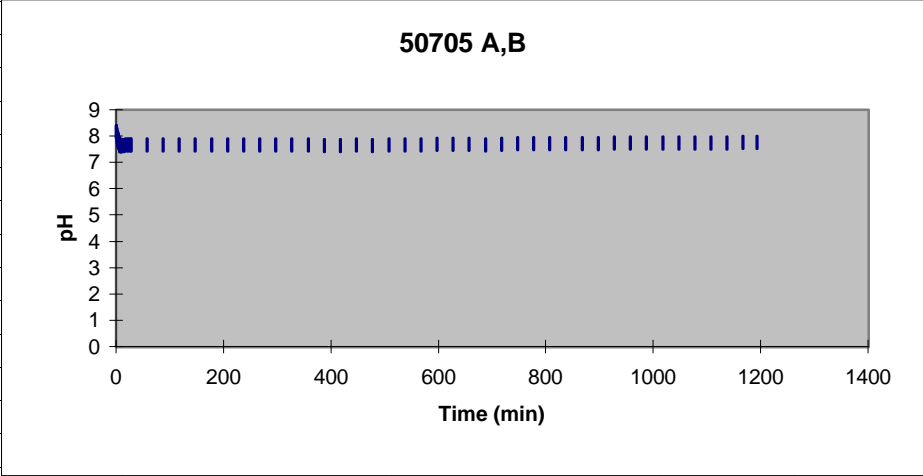
Date:	5/4/95		Initial pH:	1.99		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.96 ml/min		
Weight:	5.00 g.		Run Time:	1103 min.		
<b>Time</b>	<b>pH</b>					
0	2.06					
0.5	2.07					
1	2.03					
1.5	2.03					
2	2.04					
2.5	2.05					
3	2.08					
3.5	2.09					
4	2.11					
4.5	2.14					
5	2.16					
5.5	2.19					
6	2.2					
6.5	2.23					
7	2.24					
7.5	2.26					
8	2.28					
8.5	2.29	Notes:	Samples collected at T=257 min. and at T=1060 min.			
9	2.3		pH 2 run			
9.5	2.31					
10	2.32					
10.5	2.33					
11	2.33					
11.5	2.34					
12	2.34					
12.5	2.35					
13	2.35					
13.5	2.36					
14	2.37					
14.5	2.37					
15	2.37					
15.5	2.38					
16	2.38					
17	2.38					
20	2.41					
23	2.42					
26	2.41					
29	2.4					
32	2.37					
35	2.34					
37	2.32					
46	2.23					
49	2.2					
52	2.17					
55	2.14					
58	2.12					



Date:	5/4/95			Initial pH:	1.99		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.96 ml/min		
Weight:	5.00 g.			Run Time:	1103 min.		
<b>Time</b>	<b>pH</b>						
61	2.1						
64	2.08						
67	2.06						
70	2.05						
73	2.04						
76	2.02						
79	2.01						
82	2						
83	2						
113	1.94						
143	1.91						
173	1.91						
203	1.89						
233	1.89						
263	1.89						
293	1.88						
323	1.87						
353	1.88						
383	1.87						
413	1.87						
443	1.87						
473	1.87						
503	1.87						
533	1.87						
563	1.87						
593	1.87						
623	1.87						
653	1.86						
683	1.86						
713	1.86						
743	1.86						
773	1.86						
803	1.86						
833	1.86						
863	1.86						
893	1.86						
923	1.86						
953	1.86						
983	1.86						
1013	1.86						
1043	1.86						
1073	1.86						
1103	1.86						

Experimental Run # 50705 A,B

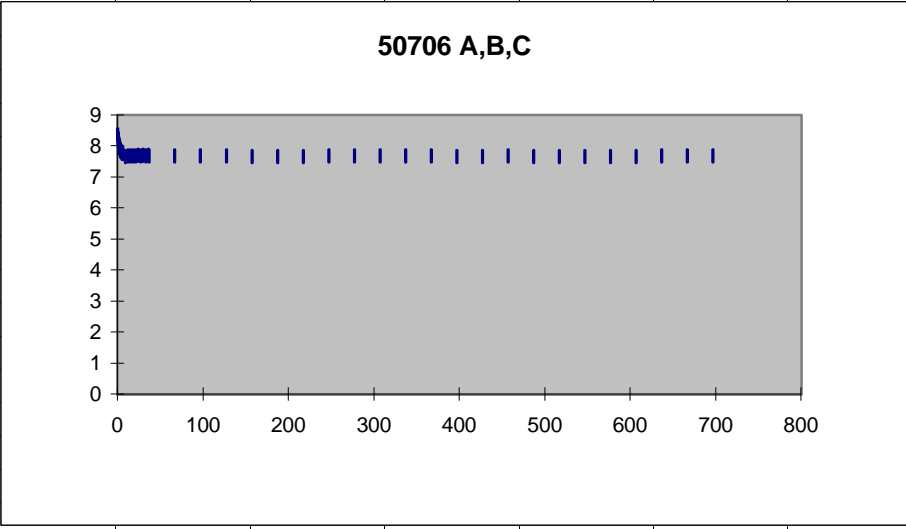
Date:	7/5/95		Initial pH:	8.03		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.95 ml/min.		
Weight:	5.00 g.		Run Time:	1193 min.		
<b>Time</b>	<b>pH</b>					
0	8.18					
0.5	8.16					
1	8.04					
1.5	7.97					
2	7.93					
2.5	7.88					
3	7.85					
3.5	7.81					
4	7.79					
4.5	7.77					
5	7.74					
5.5	7.7					
6	7.68					
6.5	7.64					
7	7.63					
7.5	7.64					
8	7.63					
8.5	7.64	Notes:	Samples collected at T=127 min. and at T=1141 min.			
9	7.64		Good Run (mechanically)			
9.5	7.63					
10	7.64					
11	7.63					
14	7.64					
17	7.66					
20	7.66					
23	7.65					
26	7.66					
27	7.66					
57	7.66					
87	7.65					
117	7.66					
147	7.66					
177	7.65					
207	7.66					
237	7.65					
267	7.65					
297	7.65					
327	7.66					
357	7.65					
387	7.64					
417	7.64					
447	7.65					
477	7.64					
507	7.65					
537	7.66					
567	7.67					



Experimental Run # 50705 A,B

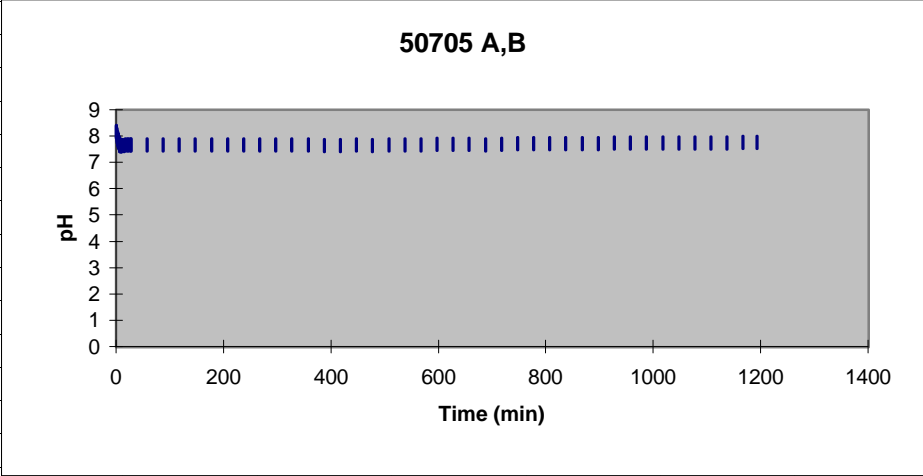
Date:	7/5/95			Initial pH:	8.03		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.95 ml/min.		
Weight:	5.00 g.			Run Time:	1193 min.		
<b>Time</b>	<b>pH</b>						
597	7.68						
627	7.68						
657	7.68						
687	7.67						
717	7.68						
747	7.7						
777	7.7						
807	7.71						
837	7.72						
867	7.72						
897	7.72						
927	7.73						
957	7.73						
987	7.73						
1017	7.73						
1047	7.74						
1077	7.74						
1107	7.74						
1137	7.74						
1167	7.75						
1193	7.75						

Date:	7/6/95		Initial pH:	8.03		
Solid:	Solids from 50703		Flow Rate:	0.99 ml/min		
Weight:	4.02 g.		Run Time:	697 min.		
<b>Time</b>	<b>pH</b>					
0	8.36					
0.5	8.23					
1	8.13					
1.5	8.08					
2	7.98					
2.5	7.93					
3	7.88					
3.5	7.85					
4	7.83					
4.5	7.8					
5	7.76					
6	7.76					
9	7.66					
12	7.67					
15	7.68					
18	7.68					
21	7.68					
24	7.69	Notes:	Samples collected at T=95 min and at T=643 min.			
27	7.68		Solvent blank collected (50706C)			
30	7.69		DI Blank collected			
33	7.68					
36	7.69					
37	7.67					
67	7.68					
97	7.67					
127	7.68					
157	7.65					
187	7.66					
217	7.66					
247	7.68					
277	7.67					
307	7.67					
337	7.67					
367	7.67					
397	7.66					
427	7.66					
457	7.67					
487	7.66					
517	7.66					
547	7.66					
577	7.66					
607	7.66					
637	7.67					
667	7.67					
697	7.67					



Experimental Run # 50705 A,B

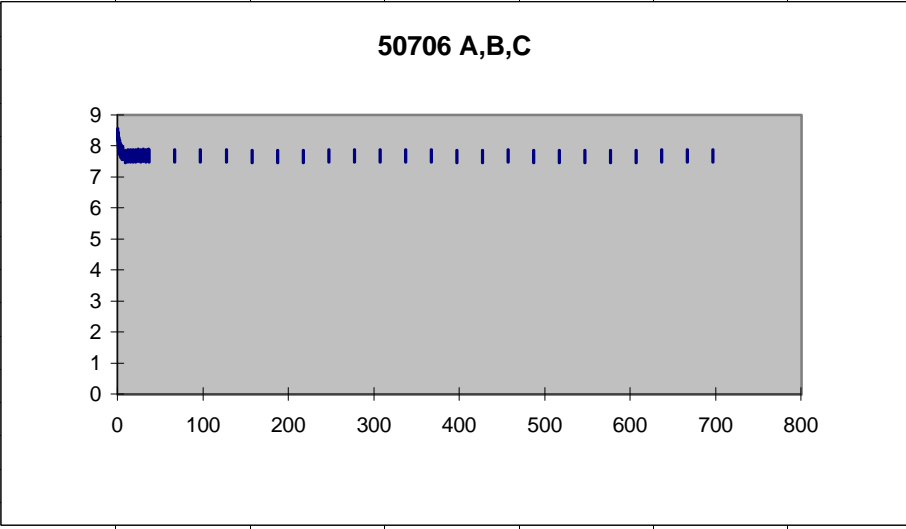
Date:	7/5/95		Initial pH:	8.03			
Solid:	Fisher Scientific Talcum		Flow Rate:	0.95 ml/min.			
Weight:	5.00 g.		Run Time:	1193 min.			
<b>Time</b>	<b>pH</b>						
0	8.18						
0.5	8.16						
1	8.04						
1.5	7.97						
2	7.93						
2.5	7.88						
3	7.85						
3.5	7.81						
4	7.79						
4.5	7.77						
5	7.74						
5.5	7.7						
6	7.68						
6.5	7.64						
7	7.63						
7.5	7.64						
8	7.63						
8.5	7.64	Notes:	Samples collected at T=127 min. and at T=1141 min.				
9	7.64		Good Run (mechanically)				
9.5	7.63						
10	7.64						
11	7.63						
14	7.64						
17	7.66						
20	7.66						
23	7.65						
26	7.66						
27	7.66						
57	7.66						
87	7.65						
117	7.66						
147	7.66						
177	7.65						
207	7.66						
237	7.65						
267	7.65						
297	7.65						
327	7.66						
357	7.65						
387	7.64						
417	7.64						
447	7.65						
477	7.64						
507	7.65						
537	7.66						
567	7.67						



Experimental Run # 50705 A,B

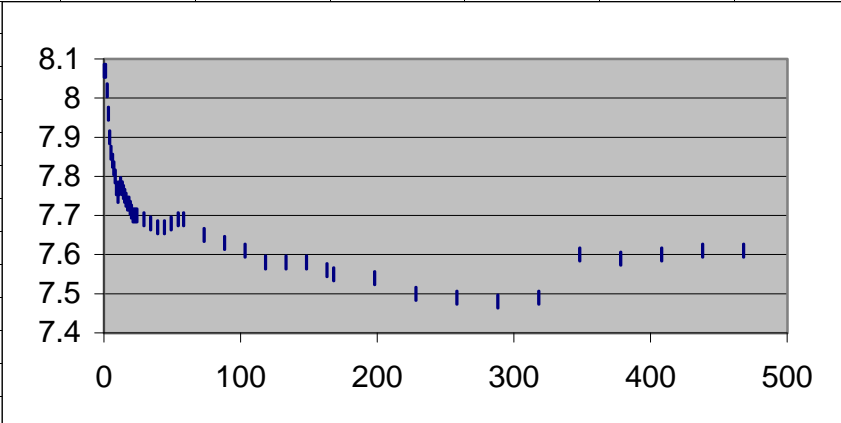
Date:	7/5/95			Initial pH:	8.03		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.95 ml/min.		
Weight:	5.00 g.			Run Time:	1193 min.		
<b>Time</b>	<b>pH</b>						
597	7.68						
627	7.68						
657	7.68						
687	7.67						
717	7.68						
747	7.7						
777	7.7						
807	7.71						
837	7.72						
867	7.72						
897	7.72						
927	7.73						
957	7.73						
987	7.73						
1017	7.73						
1047	7.74						
1077	7.74						
1107	7.74						
1137	7.74						
1167	7.75						
1193	7.75						

Date:	7/6/95		Initial pH:	8.03		
Solid:	Solids from 50703		Flow Rate:	0.99 ml/min		
Weight:	4.02 g.		Run Time:	697 min.		
<b>Time</b>	<b>pH</b>					
0	8.36					
0.5	8.23					
1	8.13					
1.5	8.08					
2	7.98					
2.5	7.93					
3	7.88					
3.5	7.85					
4	7.83					
4.5	7.8					
5	7.76					
6	7.76					
9	7.66					
12	7.67					
15	7.68					
18	7.68					
21	7.68					
24	7.69	Notes:	Samples collected at T=95 min and at T=643 min.			
27	7.68		Solvent blank collected (50706C)			
30	7.69		DI Blank collected			
33	7.68					
36	7.69					
37	7.67					
67	7.68					
97	7.67					
127	7.68					
157	7.65					
187	7.66					
217	7.66					
247	7.68					
277	7.67					
307	7.67					
337	7.67					
367	7.67					
397	7.66					
427	7.66					
457	7.67					
487	7.66					
517	7.66					
547	7.66					
577	7.66					
607	7.66					
637	7.67					
667	7.67					
697	7.67					



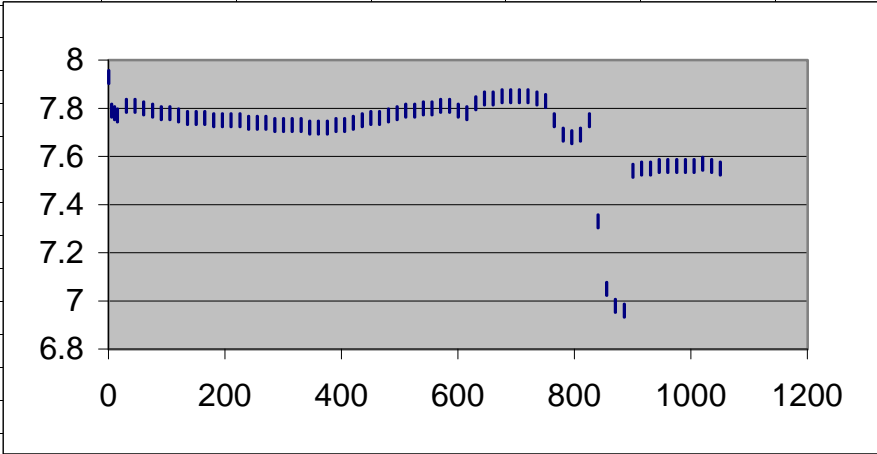


Date:	12/5/96		Initial pH:	8.07		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.31ml/min		
Weight:	5.00 g		Run Time:	468 min		
<b>Time</b>	<b>pH</b>					
0	8.07					
1	8.07					
2	8.02					
3	7.96					
4	7.9					
5	7.86					
6	7.84					
7	7.82					
8	7.8					
9	7.77					
10	7.75					
11	7.77					
12	7.78					
13	7.77					
14	7.76					
15	7.75					
16	7.74		Sample A collected at T=133 min			
17	7.73		Sample B collected at T=318 min			
18	7.73					
19	7.72					
20	7.71					
21	7.7					
22	7.7					
23	7.7					
24	7.7					
29	7.69					
34	7.68					
39	7.67					
44	7.67					
49	7.68					
54	7.69					
58	7.69					
73	7.65					
88	7.63					
103	7.61					
118	7.58					
133	7.58					
148	7.58					
163	7.56					
168	7.55					
198	7.54					
228	7.5					
258	7.49					
288	7.48					
318	7.49					
348	7.6					
378	7.59					



Date:	12/5/96			Initial pH:	8.07			
Solid:	Fisher Scientific Talcum			Flow Rate:	0.31ml/min			
Weight:	5.00 g			Run Time:	468 min			
<b>Time</b>	<b>pH</b>							
408	7.6							
438	7.61							
468	7.61							

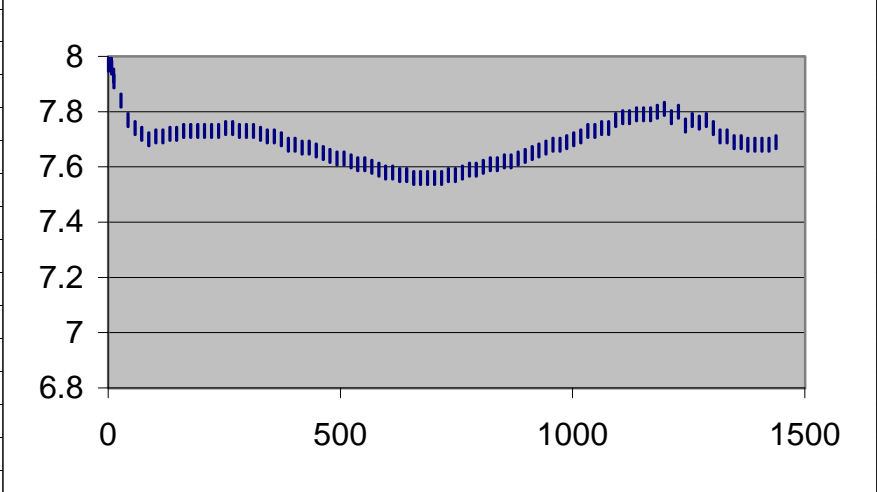
Date:	12/6/96		Initial pH:	7.93		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.18ml/min		
Weight:	5.00 g		Run Time:	1050 min.		
<b>Time</b>	<b>pH</b>					
0	7.93					
5	7.79					
10	7.78					
15	7.77					
30	7.81					
45	7.81					
60	7.8					
75	7.79					
90	7.78					
105	7.78					
120	7.77					
135	7.76					
150	7.76					
165	7.76					
180	7.75					
195	7.75					
210	7.75					
225	7.75					
240	7.74					
255	7.74					
270	7.74					
285	7.73					
300	7.73					
315	7.73					
330	7.73					
345	7.72					
360	7.72					
375	7.72					
390	7.73					
405	7.73					
420	7.74					
435	7.75					
450	7.76					
465	7.76					
480	7.77					
495	7.78					
510	7.79					
525	7.79					
540	7.8					
555	7.8					
570	7.81					
585	7.81					
600	7.79					
615	7.78					
630	7.82					
645	7.84					
660	7.84					



Sample A collected at T= 640 min  
 Sample B collected at T= 811 min  
 NOTE: Flow through cell drained between collection of  
 Sample A and Sample B. Erratic pH resulted.

Date:	12/6/96			Initial pH:	7.93		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.18ml/min		
Weight:	5.00 g			Run Time:	1050 min.		
<b>Time</b>	<b>pH</b>						
675	7.85						
690	7.85						
705	7.85						
720	7.85						
735	7.84						
750	7.83						
765	7.75						
780	7.69						
795	7.68						
810	7.69						
825	7.75						
840	7.33						
855	7.05						
870	6.98						
885	6.96						
900	7.54						
915	7.55						
930	7.55						
945	7.56						
960	7.56						
975	7.56						
990	7.56						
1005	7.56						
1020	7.57						
1035	7.56						
1050	7.55						

Date:	12/7/96		Initial pH:	7.97		
Solid:	Fisher Scientific Talcum		Flow Rate:	0.25ml/min		
Weight:	5.00 g		Run Time:	1437 min		
<b>Time</b>	<b>pH</b>					
0	7.97					
3	8.01					
6	7.97					
7	7.96					
11	7.93					
12	7.91					
27	7.84					
42	7.77					
57	7.74					
72	7.72					
87	7.7					
102	7.71					
117	7.71					
132	7.72					
147	7.72					
162	7.73					
177	7.73					
192	7.73		Sample A collected at T= 918 min			
207	7.73		Sample B collected at T=1198 min			
222	7.73		Leak noted at peristaltic pump overnight, approx. 1 L leaked.			
237	7.73					
252	7.74					
267	7.74					
282	7.73					
297	7.73					
312	7.73					
327	7.72					
342	7.71					
357	7.71					
372	7.7					
387	7.68					
402	7.68					
417	7.67					
432	7.67					
447	7.66					
462	7.65					
477	7.64					
492	7.63					
507	7.63					
522	7.62					
537	7.61					
552	7.61					
567	7.6					
582	7.59					
597	7.58					
612	7.58					
627	7.57					



Date:	12/7/96			Initial pH:	7.97		
Solid:	Fisher Scientific Talcum			Flow Rate:	0.25ml/min		
Weight:	5.00 g			Run Time:	1437 min		
<b>Time</b>	<b>pH</b>						
642	7.57						
657	7.56						
672	7.56						
687	7.56						
702	7.56						
717	7.56						
732	7.57						
747	7.57						
762	7.58						
777	7.59						
792	7.59						
807	7.6						
822	7.61						
837	7.61						
852	7.62						
867	7.62						
882	7.63						
897	7.64						
912	7.65						
927	7.66						
942	7.67						
957	7.68						
972	7.68						
987	7.69						
1002	7.7						
1017	7.71						
1032	7.73						
1047	7.73						
1062	7.74						
1077	7.74						
1092	7.77						
1107	7.78						
1122	7.78						
1137	7.79						
1152	7.79						
1167	7.79						
1182	7.8						
1197	7.81						
1212	7.78						
1227	7.8						
1242	7.75						
1257	7.77						
1272	7.76						
1287	7.77						
1302	7.74						
1317	7.71						
1332	7.71						

Date:	12/7/96			Initial pH:	7.97			
Solid:	Fisher Scientific Talcum			Flow Rate:	0.25ml/min			
Weight:	5.00 g			Run Time:	1437 min			
<b>Time</b>	<b>pH</b>							
1347	7.69							
1362	7.69							
1377	7.68							
1392	7.68							
1407	7.68							
1422	7.68							
1437	7.69							