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Appendix

Table 1A Conditions and Results of Each Experiment

Exp. no.	Type of mercury	Type of adsorbent	Adsorbent weight(g)	Ini. conc. (ug/L)	Temp. (oC)	Pressure (psig)	Time (min)	Remaining Hg (ug/L)
1	HgCl2	alumina	0.25	1000.0	30	200	60	286.0
2	HgCl2	alumina	0.50	1000.0	30	200	60	135.9
3	HgCl2	alumina	0.75	1000.0	30	200	60	94.3
4	HgCl2	alumina	1.00	1000.0	30	200	60	66.8
5	HgCl2	alumina	1.25	1000.0	30	200	60	51.3
6	HgCl2	alumina	1.50	1000.0	30	200	60	44.7
7	HgCl2	alumina	1.00	1000.0	30	0	60	66.0
8	HgCl2	alumina	1.00	1000.0	30	100	60	64.4
9	HgCl2	alumina	1.00	1000.0	30	200	60	66.8
10	HgCl2	alumina	1.00	1000.0	50	0	60	240.8
11	HgCl2	alumina	1.00	1000.0	50	100	60	248.3
12	HgCl2	alumina	1.00	1000.0	50	200	60	252.9
13	HgCl2	alumina	1.00	1000.0	75	0	60	483.2
14	HgCl2	alumina	1.00	1000.0	75	100	60	500.7
15	HgCl2	alumina	1.00	1000.0	75	200	60	497.2
16	HgCl2	alumina	1.00	1000.0	30	200	15	98.4
17	HgCl2	alumina	1.00	1000.0	30	200	30	76.3
18	HgCl2	alumina	1.00	1000.0	30	200	45	68.4
19	HgCl2	alumina	1.00	1000.0	30	200	75	70.6
20	HgCl2	alumina	1.00	1000.0	30	200	90	96.5
21	HgCl2	alumina	1.00	1000.0	30	200	120	108.5
22	PMA	2.5 Cu	1.00	1000.0	30	200	15	353.4
23	PMA	2.5 Cu	1.00	1000.0	30	200	30	191.3
24	PMA	2.5 Cu	1.00	1000.0	30	200	45	113.6
25	PMA	2.5 Cu	1.00	1000.0	30	200	60	104.9
26	PMA	2.5 Cu	1.00	1000.0	30	200	75	102.4
27	PMA	2.5 Cu	1.00	1000.0	30	200	90	106.3
28	PMA	2.5 Cu	1.00	1000.0	30	200	120	99.7
29	DPM	2.5 Cu	1.00	1000.0	30	200	15	733.6
30	DPM	2.5 Cu	1.00	1000.0	30	200	30	481.8

Table 1A (continue)

Exp. no.	Type of mercury	Type of adsorbent	Adsorbent weight(g)	Ini. conc. (ug/L)	Temp. (oC)	Pressure (psig)	Time (min)	Remaining Hg (ug/L)
31	DPM	2.5 Cu	1.00	1000.0	30	200	45	367.8
32	DPM	2.5 Cu	1.00	1000.0	30	200	60	344.8
33	DPM	2.5 Cu	1.00	1000.0	30	200	75	345.2
34	DPM	2.5 Cu	1.00	1000.0	30	200	90	338.7
35	DPM	2.5 Cu	1.00	1000.0	30	200	120	335.4
36	HgCl2	-	1.00	1000.0	30	200	60	956.1
37	HgCl2	-	1.00	1000.0	50	200	60	945.6
38	HgCl2	-	1.00	1000.0	75	200	60	972.8
39	PMA	-	1.00	1000.0	30	200	60	971.2
40	PMA	-	1.00	1000.0	50	200	60	983.9
41	PMA	-	1.00	1000.0	75	200	60	978.6
42	DPM	-	1.00	1000.0	30	200	60	953.0
43	DPM	-	1.00	1000.0	50	200	60	972.4
44	DPM	-	1.00	1000.0	75	200	60	975.8
45	HgCl2	alumina	1.00	1000.0	30	200	60	58.5
46	HgCl2	alumina	1.00	1000.0	30	200	60	80.3
47	HgCl2	alumina	1.00	1000.0	30	200	60	75.7
48	HgCl2	alumina	1.00	1000.0	30	200	60	62.4
49(desorb)	HgCl2	alumina	1.00	0.0	30	200	60	60.1
50	HgCl2	alumina	1.00	1000.0	50	200	60	282.4
51	HgCl2	alumina	1.00	1000.0	50	200	60	285.4
52	HgCl2	alumina	1.00	1000.0	50	200	60	215.7
53	HgCl2	alumina	1.00	1000.0	50	200	60	242.5
54(desorb)	HgCl2	alumina	1.00	0.0	50	200	60	133.1
55	HgCl2	alumina	1.00	1000.0	75	200	60	591.7
56	HgCl2	alumina	1.00	1000.0	75	200	60	606.4
57	HgCl2	alumina	1.00	1000.0	75	200	60	483.7
58	HgCl2	alumina	1.00	1000.0	75	200	60	493.4
59(desorb)	HgCl2	alumina	1.00	0.0	75	200	60	195.4
60	PMA	alumina	1.00	1000.0	30	200	60	490.9

Table 1A (continue)

Exp. no.	Type of mercury	Type of adsorbent	Adsorbent weight(g)	Ini. conc. (ug/L)	Temp. (oC)	Pressure (psig)	Time (min)	Remaining Hg (ug/L)
61	PMA	alumina	1.00	1000.0	30	200	60	452.3
62	PMA	alumina	1.00	1000.0	30	200	60	636.9
63	PMA	alumina	1.00	1000.0	30	200	60	567.5
64	PMA	alumina	1.00	1000.0	30	200	60	487.6
65(desorb)	PMA	alumina	1.00	0.0	30	200	60	34.5
66	PMA	alumina	1.00	1000.0	50	200	60	578.8
67	PMA	alumina	1.00	1000.0	50	200	60	648.2
68	PMA	alumina	1.00	1000.0	50	200	60	561.4
69	PMA	alumina	1.00	1000.0	50	200	60	510.7
70	PMA	alumina	1.00	1000.0	50	200	60	509.4
71(desorb)	PMA	alumina	1.00	0.0	50	200	60	38.0
72	PMA	alumina	1.00	1000.0	75	200	60	633.3
73	PMA	alumina	1.00	1000.0	75	200	60	527.2
74	PMA	alumina	1.00	1000.0	75	200	60	690.1
75	PMA	alumina	1.00	1000.0	75	200	60	618.5
76	PMA	alumina	1.00	1000.0	75	200	60	557.2
77(desorb)	PMA	alumina	1.00	0.0	75	200	60	40.5
78	DPM	alumina	1.00	1000.0	30	200	60	547.8
79	DPM	alumina	1.00	1000.0	30	200	60	490.9
80	DPM	alumina	1.00	1000.0	30	200	60	518.5
81	DPM	alumina	1.00	1000.0	30	200	60	528.5
82	DPM	alumina	1.00	1000.0	30	200	60	600.8
83(desorb)	DPM	alumina	1.00	0.0	30	200	60	49.2
84	DPM	alumina	1.00	1000.0	50	200	60	460.8
85	DPM	alumina	1.00	1000.0	50	200	60	519.0
86	DPM	alumina	1.00	1000.0	50	200	60	439.3
87	DPM	alumina	1.00	1000.0	50	200	60	575.2
88	DPM	alumina	1.00	1000.0	50	200	60	523.9
89(desorb)	DPM	alumina	1.00	0.0	50	200	60	44.7
90	DPM	alumina	1.00	1000.0	75	200	60	557.5

Table 1A (continue)

Exp. no.	Type of mercury	Type of adsorbent	Adsorbent weight(g)	Ini. conc. (ug/L)	Temp. (oC)	Pressure (psig)	Time (min)	Remaining Hg (ug/L)
91	DPM	alumina	1.00	1000.0	75	200	60	622.2
92	DPM	alumina	1.00	1000.0	75	200	60	497.6
93	DPM	alumina	1.00	1000.0	75	200	60	520.7
94	DPM	alumina	1.00	1000.0	75	200	60	573.6
95(desorb)	DPM	alumina	1.00	0.0	75	200	60	49.8
95	HgC12	2.5 Cu	1.00	1000.0	30	200	60	12.4
96	HgC12	2.5 Cu	1.00	1000.0	50	200	60	15.9
97	HgC12	2.5 Cu	1.00	1000.0	75	200	60	12.4
98	HgC12	5.0 Cu	1.00	1000.0	30	200	60	6.9
99	HgC12	5.0 Cu	1.00	1000.0	50	200	60	7.8
100	HgC12	5.0 Cu	1.00	1000.0	75	200	60	7.1
101	HgC12	2.5 Zn	1.00	1000.0	30	200	60	74.1
102	HgC12	2.5 Zn	1.00	1000.0	50	200	60	72.5
103	HgC12	2.5 Zn	1.00	1000.0	75	200	60	83.0
104	HgC12	5.0 Zn	1.00	1000.0	30	200	60	94.2
105	HgC12	5.0 Zn	1.00	1000.0	50	200	60	108.0
106	HgC12	5.0 Zn	1.00	1000.0	75	200	60	122.9
107	HgCl2	CuZn	1.00	1000.0	30	200	60	58.6
108	HgCl2	CuZn	1.00	1000.0	50	200	60	34.9
109	HgCl2	CuZn	1.00	1000.0	75	200	60	30.4
110	PMA	alumina	1.00	1000.0	30	200	60	490.9
111	PMA	alumina	1.00	1000.0	50	200	60	578.8
112	PMA	alumina	1.00	1000.0	75	200	60	633.3
113	PMA	2.5 Cu	1.00	1000.0	30	200	60	104.9
114	PMA	2.5 Cu	1.00	1000.0	50	200	60	47.8
115	PMA	2.5 Cu	1.00	1000.0	75	200	60	25.3
116	PMA	5.0 Cu	1.00	1000.0	30	200	60	67.2
117	PMA	5.0 Cu	1.00	1000.0	50	200	60	43.2
118	PMA	5.0 Cu	1.00	1000.0	75	200	60	14.1
119	PMA	2.5 Zn	1.00	1000.0	30	200	60	265.4
120	PMA	2.5 Zn	1.00	1000.0	50	200	60	169.7

Table 1A (continue)

Exp. no.	Type of mercury	Type of adsorbent	Adsorbent weight (g)	Ini. conc. (ug/L)	Temp. (oC)	Pressure (psig)	Time (min)	Remaining Hg (ug/L)
121	PMA	2.5 Zn	1.00	1000.0	75	200	60	163.0
122	PMA	5.0 Zn	1.00	1000.0	30	200	60	159.6
123	PMA	5.0 Zn	1.00	1000.0	50	200	60	127.7
124	PMA	5.0 Zn	1.00	1000.0	75	200	60	114.2
125	PMA	CuZn	1.00	1000.0	30	200	60	131.0
126	PMA	CuZn	1.00	1000.0	50	200	60	57.7
127	PMA	CuZn	1.00	1000.0	75	200	60	53.0
128	DPM	alumina	1.00	1000.0	30	200	60	547.8
129	DPM	alumina	1.00	1000.0	50	200	60	460.8
130	DPM	alumina	1.00	1000.0	75	200	60	557.5
131	DPM	2.5 Cu	1.00	1000.0	30	200	60	344.8
132	DPM	2.5 Cu	1.00	1000.0	50	200	60	213.2
133	DPM	2.5 Cu	1.00	1000.0	75	200	60	80.9
134	DPM	5.0 Cu	1.00	1000.0	30	200	60	249.0
135	DPM	5.0 Cu	1.00	1000.0	50	200	60	95.5
136	DPM	5.0 Cu	1.00	1000.0	75	200	60	79.8
137	DPM	2.5 Zn	1.00	1000.0	30	200	60	419.6
138	DPM	2.5 Zn	1.00	1000.0	50	200	60	373.0
139	DPM	2.5 Zn	1.00	1000.0	75	200	60	431.5
140	DPM	5.0 Zn	1.00	1000.0	30	200	60	468.0
141	DPM	5.0 Zn	1.00	1000.0	50	200	60	545.4
142	DPM	5.0 Zn	1.00	1000.0	75	200	60	460.0
143	DPM	CuZn	1.00	1000.0	30	200	60	357.8
144	DPM	CuZn	1.00	1000.0	50	200	60	139.5
145	DPM	CuZn	1.00	1000.0	75	200	60	85.4

Table 2A Surface Area of Fresh and Spent Adsorbents in Study of Mercuric Chloride Removal

Adsorbent	Surface Area (sq.m/g)			
	Fresh	30/200	50/200	75/200
alumina	168.35	161.07	162.16	157.50
2.5Cu	164.66	154.25	153.94	153.87
5.0Cu	157.72	147.92	144.43	145.13
2.5Zn	162.18	152.37	153.19	151.38
5.0Zn	147.76	140.13	143.54	141.57
CuZn	149.99	142.19	142.00	142.72

Table 3A Pore Volume of Fresh and Spent Adsorbents in Study of Mercuric Chloride Removal

Adsorbent	Pore Volume (cc/g)			
	Fresh	30/200	50/200	75/200
alumina	0.241	0.234	0.235	0.228
2.5Cu	0.236	0.224	0.221	0.221
5.0Cu	0.227	0.218	0.213	0.212
2.5Zn	0.237	0.225	0.228	0.227
5.0Zn	0.219	0.212	0.216	0.214
CuZn	0.224	0.210	0.211	0.215

Table 4A Surface Area of Fresh and Spent Adsorbents in Study of Phenylmercuric Acetate Removal

Adsorbent	Surface Area (sq.m/g)			
	Fresh	30/200	50/200	75/200
alumina	168.35	157.56	161.36	157.78
2.5Cu	164.66	157.65	159.32	156.19
5.0Cu	157.72	143.26	144.86	143.30
2.5Zn	162.18	155.51	151.68	147.72
5.0Zn	147.76	135.37	138.70	140.67
CuZn	149.99	142.34	138.71	141.72

Table 5A Pore Volume of Fresh and Spent Adsorbents in Study of Phenylmercury Acetate Removal

Adsorbent	Pore Volume (cc/g)			
	Fresh	30/200	50/200	75/200
alumina	0.241	0.228	0.233	0.228
2.5% Cu	0.236	0.227	0.229	0.227
5.0% Cu	0.227	0.209	0.212	0.209
2.5% Zn	0.237	0.230	0.226	0.218
5.0% Zn	0.219	0.202	0.210	0.215
CuZn	0.224	0.208	0.204	0.210

Table 6A Surface Area of Fresh and Spent Adsorbents in Study of Diphenylmercury Removal

Adsorbent	Surface Area (sq.m/g)			
	Fresh	30/200	50/200	75/200
alumina	168.35	155.34	152.24	158.92
2.5Cu	164.66	148.71	150.27	152.71
5.0Cu	157.72	137.52	135.74	139.61
2.5Zn	162.18	152.69	150.77	152.33
5.0Zn	147.76	134.79	138.54	140.77
CuZn	149.99	140.00	135.30	138.87

Table 7A Pore Volume of Fresh and Spent Adsorbents in Study of Diphenylmercury Removal

Adsorbent	Pore Volume (cc/g)			
	Fresh	30/200	50/200	75/200
alumina	0.2405	0.2307	0.2289	0.2375
2.5Cu	0.2363	0.2178	0.2231	0.2240
5.0Cu	0.2266	0.2055	0.2042	0.2104
2.5Zn	0.2367	0.2263	0.2234	0.2230
5.0Zn	0.2194	0.2047	0.2121	0.2120
CuZn	0.2243	0.2078	0.2047	0.2100

Table 8A Pore Size Distribution of Fresh and Spent Alumina in Study of Mercuric Chloride Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.024576	8.681	0.022925	8.456	0.023166	8.469	0.022675	8.534
27.5	0.020122	7.108	0.018771	6.923	0.018968	6.934	0.018565	6.987
32.5	0.035906	12.684	0.034697	12.797	0.035213	12.873	0.034208	12.875
37.5	0.029943	10.577	0.027490	10.139	0.028272	10.336	0.027201	10.237
42.5	0.023476	8.293	0.021544	7.946	0.022170	8.105	0.021323	8.025
47.5	0.023307	8.233	0.020931	7.720	0.020457	7.479	0.020326	7.650
52.5	0.019904	7.031	0.018515	6.829	0.018007	6.583	0.017896	6.735
57.5	0.016451	5.811	0.015298	5.642	0.014873	5.437	0.014785	5.565
62.5	0.013750	4.857	0.012782	4.714	0.012422	4.541	0.012351	4.648
67.5	0.011688	4.129	0.010861	4.006	0.010552	3.858	0.010494	3.950
72.5	0.010079	3.560	0.009362	3.453	0.009092	3.324	0.009044	3.404
77.5	0.008743	3.088	0.008119	2.995	0.007881	2.881	0.007842	2.951
82.5	0.003989	1.409	0.002290	0.845	0.004388	1.604	0.003326	1.252
87.5	0.001701	0.601	0.001899	0.700	0.001808	0.661	0.001839	0.692

Table 9A Pore Size Distribution of Fresh and Spent 2.5Cu in Study of Mercuric Chloride Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.024174	8.685	0.023044	8.779	0.023532	9.036	0.023098	8.891
27.5	0.019794	7.110	0.018865	7.187	0.019261	7.396	0.018909	7.278
32.5	0.035292	12.677	0.035020	13.342	0.035546	13.650	0.035147	13.528
37.5	0.029155	10.473	0.028017	10.674	0.028327	10.878	0.027730	10.674
42.5	0.022855	8.210	0.021991	8.378	0.022244	8.542	0.021762	8.376
47.5	0.022417	8.053	0.019399	7.390	0.019343	7.428	0.020016	7.704
52.5	0.018847	6.770	0.016696	6.361	0.016452	6.318	0.017149	6.601
57.5	0.015569	5.593	0.013790	5.254	0.013589	5.218	0.014170	5.454
62.5	0.013004	4.671	0.011516	4.387	0.011349	4.358	0.011839	4.557
67.5	0.011047	3.968	0.009782	3.727	0.009640	3.702	0.010061	3.873
72.5	0.009520	3.420	0.008428	3.211	0.008307	3.190	0.008673	3.338
77.5	0.008253	2.965	0.007305	2.783	0.007200	2.765	0.007521	2.895
82.5	0.007173	2.577	0.004557	1.736	0.005017	1.927	0.004196	1.615
87.5	0.002331	0.837	0.001722	0.656	0.001703	0.654	0.001702	0.655

Table 10A POre Size Distribution of Fresh and Spent 5.0Cu in Study of Mercuric Chloride Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.022722	8.544	0.022464	8.861	0.020651	8.771	0.021696	8.789
27.5	0.019331	7.269	0.018382	7.251	0.016905	7.180	0.017757	7.194
32.5	0.035062	13.184	0.033279	13.127	0.031717	13.471	0.032587	13.201
37.5	0.026912	10.119	0.026857	10.594	0.025481	10.822	0.026178	10.605
42.5	0.021087	7.929	0.021082	8.316	0.020014	8.500	0.020549	8.325
47.5	0.020802	7.822	0.018080	7.132	0.016765	7.120	0.017778	7.202
52.5	0.018716	7.038	0.015561	6.138	0.014076	5.978	0.015262	6.183
57.5	0.015469	5.817	0.012847	5.067	0.011621	4.936	0.012602	5.105
62.5	0.012929	4.862	0.010724	4.230	0.009699	4.119	0.010520	4.262
67.5	0.010990	4.132	0.009105	3.591	0.008235	3.498	0.008934	3.619
72.5	0.009476	3.563	0.007842	3.093	0.007091	3.012	0.007695	3.117
77.5	0.008220	3.091	0.006794	2.680	0.006143	2.609	0.006667	2.701
82.5	0.004917	1.849	0.005518	2.177	0.004771	2.026	0.004670	1.892
87.5	0.001745	0.656	0.001695	0.669	0.001570	0.667	0.001651	0.669

Table 11A Pore Size Distribution of Fresh and Spent 2.5Zn in Study of Mercuric Chloride Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.022164	7.999	0.021820	8.319	0.021835	8.242	0.020936	7.939
27.5	0.019760	7.131	0.017870	6.813	0.017886	6.752	0.017162	6.508
32.5	0.036414	13.142	0.033512	12.776	0.033853	12.779	0.033872	12.844
37.5	0.027944	10.085	0.026745	10.196	0.027234	10.280	0.027548	10.446
42.5	0.021890	7.900	0.020960	7.991	0.021348	8.058	0.021598	8.190
47.5	0.022042	7.955	0.020060	7.648	0.019975	7.540	0.019845	7.525
52.5	0.018904	6.822	0.017825	6.796	0.017755	6.702	0.017632	6.686
57.5	0.015617	5.636	0.014726	5.614	0.014666	5.536	0.014563	5.522
62.5	0.013045	4.708	0.012301	4.690	0.012249	4.624	0.012161	4.611
67.5	0.011083	4.000	0.010452	3.985	0.010406	3.928	0.010330	3.917
72.5	0.009551	3.447	0.009008	3.434	0.008966	3.384	0.008900	3.375
77.5	0.008281	2.989	0.007810	2.977	0.007772	2.934	0.007714	2.925
82.5	0.005335	1.925	0.003221	1.228	0.004008	1.513	0.004612	1.749
87.5	0.001853	0.669	0.001857	0.708	0.001782	0.673	0.001808	0.686

Table 12A Pore Size Distribution of Fresh and Spent 5.0Zn in Study of Mercuric Chloride Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.020116	7.857	0.018892	7.761	0.019782	7.932	0.019687	7.968
27.5	0.017085	6.673	0.015479	6.359	0.016209	6.499	0.016123	6.526
32.5	0.033518	13.092	0.028603	11.750	0.030819	12.357	0.029126	11.789
37.5	0.025715	10.044	0.023414	9.618	0.024903	9.985	0.023745	9.611
42.5	0.020139	7.866	0.018310	7.522	0.019501	7.819	0.018572	7.517
47.5	0.020107	7.854	0.020106	8.260	0.018846	7.556	0.020265	8.202
52.5	0.017882	6.985	0.017342	7.124	0.017360	6.961	0.017375	7.033
57.5	0.014774	5.771	0.014342	5.892	0.014340	5.750	0.014353	5.809
62.5	0.012342	4.821	0.011980	4.921	0.011978	4.803	0.011989	4.853
67.5	0.010487	4.096	0.010178	4.181	0.010176	4.080	0.010185	4.122
72.5	0.009039	3.531	0.008771	3.603	0.008769	3.516	0.008777	3.553
77.5	0.007837	3.061	0.007604	3.124	0.007602	3.048	0.007609	3.080
82.5	0.005419	2.117	0.003493	1.435	0.003226	1.293	0.003441	1.393
87.5	0.001085	0.424	0.001713	0.704	0.001746	0.700	0.001735	0.702

Table 13A Pore Size Distribution of Fresh and Spent CuZn in Study of Mercuric Chloride Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.020902	7.984	0.021125	8.557	0.021401	8.640	0.021196	8.424
27.5	0.017137	6.546	0.017301	7.008	0.017525	7.075	0.017365	6.893
32.5	0.033841	12.927	0.032887	13.321	0.033137	13.378	0.033665	13.364
37.5	0.027327	10.439	0.026202	10.613	0.027740	11.199	0.027412	10.881
42.5	0.021419	8.182	0.020561	8.328	0.021020	8.486	0.021524	8.544
47.5	0.020427	7.803	0.018630	7.546	0.018161	7.332	0.018305	7.266
52.5	0.018461	7.052	0.016021	6.489	0.015659	6.322	0.015619	6.200
57.5	0.015256	5.828	0.013234	5.361	0.012932	5.221	0.012896	5.119
62.5	0.012748	4.870	0.011053	4.477	0.010799	4.360	0.010765	4.273
67.5	0.010834	4.138	0.009390	3.803	0.009172	3.703	0.009141	3.629
72.5	0.009340	3.568	0.008092	3.278	0.007901	3.190	0.007873	3.125
77.5	0.008100	3.094	0.007015	2.841	0.006848	2.765	0.006821	2.708
82.5	0.004904	1.873	0.003562	1.443	0.004826	1.948	0.005819	2.310
87.5	0.001731	0.661	0.001623	0.657	0.001637	0.661	0.001676	0.665

Table 14A Pore Size Distribution of Fresh and Spent Alumina in Study of Phenylmercuric Acetate Removal

Pore	Fresh		30/200		50/200		75/200	
Diameter (A)	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.024576	8.681	0.023658	8.956	0.024373	9.002	0.023964	9.026
27.5	0.020122	7.108	0.019343	7.322	0.019927	7.360	0.019593	7.380
32.5	0.035906	12.684	0.032924	12.463	0.033949	12.539	0.033334	12.555
37.5	0.029943	10.577	0.027804	10.525	0.028401	10.490	0.027069	10.195
42.5	0.023476	8.293	0.021574	8.167	0.022250	8.218	0.021198	7.984
47.5	0.023307	8.233	0.020780	7.866	0.021133	7.805	0.020361	7.669
52.5	0.019904	7.031	0.018291	6.924	0.018490	6.829	0.017651	6.648
57.5	0.016451	5.811	0.015102	5.717	0.015265	5.638	0.014433	5.436
62.5	0.013750	4.857	0.012607	4.772	0.012742	4.706	0.012052	4.539
67.5	0.011688	4.129	0.010704	4.052	0.010818	3.995	0.010236	3.855
72.5	0.010079	3.560	0.009219	3.490	0.009316	3.441	0.008819	3.322
77.5	0.008743	3.088	0.007988	3.024	0.008071	2.981	0.007643	2.879
82.5	0.003989	1.409	0.006939	2.627	0.007011	2.589	0.005716	2.153
87.5	0.001701	0.601	0.002157	0.817	0.002427	0.896	0.001743	0.656

Table 15A Pore Size Distribution of Fresh and Spent 2.5Cu in Study of Phenylmercuric Acetate Removal

Pore	Fresh		30/200		50/200		75/200	
Diameter (A)	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.024179	8.685	0.023705	8.853	0.023831	8.819	0.022476	8.765
27.5	0.019794	7.110	0.019408	7.248	0.019511	7.220	0.018407	7.178
32.5	0.035292	12.677	0.036328	13.567	0.036187	13.392	0.035024	13.658
37.5	0.029155	10.473	0.028692	10.715	0.028494	10.545	0.027501	10.724
42.5	0.022855	8.210	0.022520	8.410	0.022352	8.272	0.021584	8.417
47.5	0.022417	8.053	0.020514	7.661	0.021146	7.826	0.019950	7.780
52.5	0.018847	6.770	0.017536	6.549	0.018214	6.740	0.016924	6.600
57.5	0.015569	5.593	0.014489	5.411	0.015052	5.570	0.013985	5.454
62.5	0.013004	4.671	0.012105	4.521	0.012578	4.655	0.011685	4.557
67.5	0.011047	3.968	0.010286	3.841	0.010690	3.956	0.009930	3.872
72.5	0.009520	3.420	0.008866	3.311	0.009217	3.411	0.008561	3.338
77.5	0.008253	2.965	0.007688	2.871	0.007993	2.958	0.007424	2.895
82.5	0.007173	2.577	0.003158	1.179	0.002464	0.912	0.002349	0.916
87.5	0.002331	0.837	0.001750	0.654	0.001838	0.680	0.001753	0.684

Table 16A Pore Size Distribution of Fresh and Spent 5.0Cu in Study of Phenylmercuric Acetate

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.022722	8.544	0.021688	8.908	0.021664	8.763	0.021545	8.844
27.5	0.019331	7.269	0.017746	7.289	0.017731	7.172	0.017631	7.237
32.5	0.035062	13.184	0.031878	13.094	0.032304	13.067	0.031919	13.103
37.5	0.026912	10.119	0.025495	10.472	0.025921	10.485	0.025511	10.472
42.5	0.021087	7.929	0.020003	8.216	0.020335	8.225	0.020014	8.216
47.5	0.020802	7.822	0.017803	7.312	0.018241	7.378	0.017975	7.379
52.5	0.018716	7.038	0.015588	6.403	0.015985	6.466	0.015772	6.474
57.5	0.015469	5.817	0.012874	5.288	0.013202	5.340	0.013027	5.348
62.5	0.012929	4.862	0.010751	4.416	0.011025	4.460	0.010879	4.466
67.5	0.010990	4.132	0.009132	3.751	0.009365	3.788	0.009241	3.793
72.5	0.009476	3.563	0.007867	3.231	0.008069	3.264	0.007963	3.269
77.5	0.008220	3.091	0.006819	2.801	0.006993	2.829	0.006902	2.833
82.5	0.004917	1.849	0.004062	1.668	0.004286	1.734	0.003929	1.613
87.5	0.001745	0.656	0.001685	0.692	0.001714	0.693	0.001689	0.693

Table 17A Pore Size Distribution of Fresh and Spent 2.5Zn in Study of Phenylmercuric Acetate

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.022164	7.999	0.021918	8.123	0.021549	8.158	0.021470	8.386
27.5	0.019760	7.131	0.017960	6.656	0.017655	6.684	0.017584	6.868
32.5	0.036414	13.142	0.034424	12.758	0.033848	12.814	0.032954	12.872
37.5	0.027944	10.085	0.027480	10.185	0.027395	10.371	0.026102	10.196
42.5	0.021890	7.900	0.021530	7.979	0.021478	8.131	0.020456	7.990
47.5	0.022042	7.955	0.021209	7.860	0.019834	7.509	0.019956	7.795
52.5	0.018904	6.822	0.018903	7.006	0.017644	6.680	0.017554	6.857
57.5	0.015617	5.636	0.015620	5.789	0.014573	5.517	0.014504	5.665
62.5	0.013045	4.708	0.013051	4.837	0.012170	4.607	0.012118	4.733
67.5	0.011083	4.000	0.011091	4.111	0.010338	3.914	0.010298	4.022
72.5	0.009551	3.447	0.009561	3.543	0.008907	3.372	0.008876	3.467
77.5	0.008281	2.989	0.008292	3.073	0.007721	2.923	0.007697	3.006
82.5	0.005335	1.925	0.002513	0.931	0.004748	1.797	0.002241	0.875
87.5	0.001853	0.669	0.001921	0.712	0.001796	0.680	0.001817	0.710

Table 18A Pore Size Distribution of Fresh and Spent 5.0Zn in Study of Phenylmercuric Acetate

Pore	Fresh		30/200		50/200		75/200	
Diameter	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore
(A)	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume
22.5	0.020116	7.857	0.018892	8.112	0.019782	8.165	0.019687	7.965
27.5	0.017085	6.673	0.015479	6.647	0.016209	6.690	0.016123	6.523
32.5	0.033518	13.092	0.028603	12.282	0.030819	12.721	0.029126	11.783
37.5	0.025715	10.044	0.023414	10.054	0.024903	10.279	0.023745	9.606
42.5	0.020139	7.866	0.018310	7.862	0.019501	8.049	0.018572	7.514
47.5	0.020107	7.854	0.020106	8.634	0.018846	7.779	0.020265	8.198
52.5	0.017882	6.985	0.017342	7.447	0.017360	7.165	0.017375	7.029
57.5	0.014774	5.771	0.014342	6.159	0.014340	5.919	0.014353	5.807
62.5	0.012342	4.821	0.011980	5.144	0.011978	4.944	0.011989	4.850
67.5	0.010487	4.096	0.010178	4.370	0.010176	4.200	0.010185	4.120
72.5	0.009039	3.531	0.008771	3.766	0.008769	3.619	0.008777	3.551
77.5	0.007837	3.061	0.007604	3.265	0.007602	3.138	0.007609	3.078
82.5	0.005419	2.117	0.003493	1.500	0.003226	1.332	0.003441	1.392
87.5	0.001085	0.424	0.001713	0.736	0.001746	0.721	0.001735	0.702

Table 19A Pore Size Distribution of Fresh and Spent CuZn in Study of Phenylmercuric Acetate

Pore	Fresh		30/200		50/200		75/200	
Diameter	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore
(A)	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume
22.5	0.020902	7.984	0.021920	8.984	0.021405	8.943	0.021916	8.917
27.5	0.017137	6.546	0.017932	7.349	0.017511	7.316	0.017931	7.296
32.5	0.033841	12.927	0.031970	13.103	0.031224	13.046	0.032276	13.132
37.5	0.027327	10.439	0.025315	10.375	0.024812	10.367	0.025926	10.549
42.5	0.021419	8.182	0.019860	8.139	0.019465	8.133	0.020349	8.279
47.5	0.020427	7.803	0.017895	7.334	0.017524	7.322	0.017639	7.177
52.5	0.018461	7.052	0.015534	6.366	0.015218	6.358	0.015259	6.208
57.5	0.015256	5.828	0.012830	5.258	0.012568	5.251	0.012600	5.127
62.5	0.012748	4.870	0.010714	4.391	0.010494	4.385	0.010519	4.280
67.5	0.010834	4.138	0.009100	3.730	0.008913	3.724	0.008932	3.634
72.5	0.009340	3.568	0.007840	3.213	0.007679	3.208	0.007693	3.130
77.5	0.008100	3.094	0.006795	2.785	0.006655	2.781	0.006666	2.712
82.5	0.004904	1.873	0.003842	1.575	0.003829	1.600	0.005014	2.040
87.5	0.001731	0.661	0.001621	0.664	0.001595	0.666	0.001651	0.672

Table 20A Pore Size distributiion of Fresh and Spent Alumina in Study of Diphenylmercury Removal

Pore	Fresh		30/200		50/200		75/200	
Diameter	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore
(A)	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume
22.5	0.024576	8.681	0.022905	8.496	0.021211	7.850	0.022172	7.930
27.5	0.020122	7.108	0.018751	6.955	0.017396	6.438	0.018178	6.502
32.5	0.035906	12.684	0.034328	12.733	0.034984	12.948	0.036534	13.067
37.5	0.029943	10.577	0.027400	10.163	0.027961	10.348	0.028652	10.248
42.5	0.023476	8.293	0.021507	7.977	0.021910	8.109	0.022451	8.030
47.5	0.023307	8.233	0.020303	7.531	0.021673	8.021	0.022158	7.925
52.5	0.019904	7.031	0.018096	6.712	0.019190	7.102	0.018957	6.780
57.5	0.016451	5.811	0.014948	5.544	0.015859	5.869	0.015658	5.600
62.5	0.013750	4.857	0.012486	4.631	0.013253	4.905	0.013077	4.677
67.5	0.011688	4.129	0.010607	3.934	0.011264	4.169	0.011109	3.973
72.5	0.010079	3.560	0.009141	3.390	0.009712	3.594	0.009572	3.424
77.5	0.008743	3.088	0.007925	2.939	0.008423	3.117	0.008298	2.968
82.5	0.003989	1.409	0.003708	1.375	0.002222	0.822	0.005664	2.026
87.5	0.001701	0.601	0.001787	0.663	0.001889	0.699	0.001866	0.667

Table 21A Pore Size distributiion of Fresh and Spent 2.5Cu in Study of Diphenylmercury Removal

Pore	Fresh		30/200		50/200		75/200	
Diameter	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore	Pore Vol.	% Pore
(A)	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume	(cc/g)	Volume
22.5	0.024179	8.685	0.022548	8.775	0.022851	8.703	0.023248	8.807
27.5	0.019794	7.110	0.018463	7.185	0.018710	7.126	0.019034	7.210
32.5	0.035292	12.677	0.034782	13.536	0.035415	13.488	0.035820	13.569
37.5	0.029155	10.473	0.027649	10.760	0.028065	10.688	0.028280	10.713
42.5	0.022855	8.210	0.021703	8.446	0.022031	8.390	0.022201	8.410
47.5	0.022417	8.053	0.019392	7.547	0.019525	7.436	0.019808	7.504
52.5	0.018847	6.770	0.016580	6.452	0.016582	6.315	0.016767	6.352
57.5	0.015569	5.593	0.013697	5.330	0.013696	5.216	0.013851	5.247
62.5	0.013004	4.671	0.011441	4.452	0.011438	4.356	0.011569	4.383
67.5	0.011047	3.968	0.009720	3.783	0.009716	3.700	0.009828	3.723
72.5	0.009520	3.420	0.008376	3.260	0.008372	3.188	0.008469	3.208
77.5	0.008253	2.965	0.007262	2.826	0.007257	2.764	0.007342	2.781
82.5	0.007173	2.577	0.003801	1.479	0.003622	1.379	0.003328	1.261
87.5	0.002331	0.837	0.001714	0.667	0.001742	0.663	0.001744	0.661

Table 22A Pore Size distributiion of Fresh and Spent 5.0Cu in Study of Diphenylmercury Removal

Pore	Fresh		30/200		50/200		75/200	
Diameter (A)	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.022722	8.544	0.021598	9.004	0.021285	8.866	0.022053	8.976
27.5	0.019331	7.269	0.017663	7.363	0.017418	7.255	0.018036	7.341
32.5	0.035062	13.184	0.030423	12.682	0.031700	13.205	0.031212	12.704
37.5	0.026912	10.119	0.024719	10.305	0.025357	10.562	0.025380	10.330
42.5	0.021087	7.929	0.019389	8.083	0.019904	8.291	0.019909	8.103
47.5	0.020802	7.822	0.017798	7.419	0.017285	7.200	0.018152	7.388
52.5	0.018716	7.038	0.014882	6.204	0.014860	6.190	0.015190	6.182
57.5	0.015469	5.817	0.012286	5.122	0.012270	5.111	0.012540	5.104
62.5	0.012929	4.862	0.010255	4.275	0.010244	4.267	0.010467	4.260
67.5	0.010990	4.132	0.008707	3.630	0.008699	3.624	0.008887	3.617
72.5	0.009476	3.563	0.007498	3.126	0.007493	3.121	0.007653	3.115
77.5	0.008220	3.091	0.006496	2.708	0.006492	2.704	0.006629	2.698
82.5	0.004917	1.849	0.005580	2.326	0.004398	1.832	0.005758	2.344
87.5	0.001745	0.656	0.001653	0.689	0.001664	0.693	0.001749	0.712

Table 23A Pore Size distributiion of Fresh and Spent 2.5Zn in Study of Diphenylmercury Removal

Pore	Fresh		30/200		50/200		75/200	
Diameter (A)	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.022164	7.999	0.022414	8.471	0.022064	8.467	0.022294	8.546
27.5	0.019760	7.131	0.018134	6.853	0.018068	6.934	0.018254	6.997
32.5	0.036414	13.142	0.034166	12.912	0.033869	12.997	0.033699	12.917
37.5	0.027944	10.085	0.027323	10.326	0.027289	10.472	0.027014	10.355
42.5	0.021890	7.900	0.021419	8.095	0.021404	8.214	0.021180	8.119
47.5	0.022042	7.955	0.020184	7.628	0.019266	7.393	0.019656	7.535
52.5	0.018904	6.822	0.017832	6.739	0.017003	6.525	0.017430	6.681
57.5	0.015617	5.636	0.014731	5.567	0.014043	5.389	0.014398	5.519
62.5	0.013045	4.708	0.012304	4.650	0.011727	4.500	0.012026	4.610
67.5	0.011083	4.000	0.010454	3.951	0.009960	3.822	0.010217	3.916
72.5	0.009551	3.447	0.009009	3.405	0.008581	3.293	0.008804	3.375
77.5	0.008281	2.989	0.007810	2.952	0.007437	2.854	0.007632	2.925
82.5	0.005335	1.925	0.003674	1.389	0.004846	1.860	0.004169	1.598
87.5	0.001853	0.669	0.001795	0.678	0.001769	0.679	0.001783	0.683

Table 24A Pore Size distributiion of Fresh and Spent 5.0Zn in Study of Diphenylmercury Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.020116	7.857	0.019166	8.082	0.019569	7.948	0.019554	8.001
27.5	0.017085	6.673	0.015696	6.619	0.016036	6.513	0.016016	6.553
32.5	0.033518	13.092	0.028486	12.013	0.031001	12.591	0.029241	11.964
37.5	0.025715	10.044	0.023190	9.779	0.025159	10.218	0.023954	9.801
42.5	0.020139	7.866	0.018147	7.653	0.019718	8.008	0.018745	7.670
47.5	0.020107	7.854	0.019267	8.125	0.018141	7.368	0.019665	8.046
52.5	0.017882	6.985	0.016514	6.964	0.016283	6.613	0.016945	6.933
57.5	0.014774	5.771	0.013641	5.753	0.013446	5.461	0.013995	5.726
62.5	0.012342	4.821	0.011393	4.805	0.011226	4.559	0.011688	4.782
67.5	0.010487	4.096	0.009679	4.082	0.009534	3.872	0.009928	4.062
72.5	0.009039	3.531	0.008340	3.517	0.008212	3.335	0.008554	3.500
77.5	0.007837	3.061	0.007230	3.049	0.007116	2.890	0.007415	3.034
82.5	0.005419	2.117	0.003696	1.559	0.004333	1.760	0.004575	1.872
87.5	0.001085	0.424	0.001698	0.716	0.001746	0.709	0.001738	0.711

Table 25A Pore Size distributiion of Fresh and Spent CuZn in Study of Diphenylmercury Removal

Pore Diameter (A)	Fresh		30/200		50/200		75/200	
	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume	Pore Vol. (cc/g)	% Pore Volume
22.5	0.020902	7.984	0.019705	8.208	0.020101	8.301	0.020182	8.222
27.5	0.017137	6.546	0.016145	6.725	0.016461	6.798	0.016536	6.737
32.5	0.033841	12.927	0.031044	12.931	0.030096	12.429	0.031889	12.992
37.5	0.027327	10.439	0.025005	10.416	0.024405	10.079	0.025731	10.483
42.5	0.021419	8.182	0.019603	8.166	0.019116	7.894	0.020180	8.222
47.5	0.020427	7.803	0.018267	7.609	0.019656	8.117	0.018362	7.481
52.5	0.018461	7.052	0.016381	6.823	0.016527	6.825	0.016322	6.650
57.5	0.015256	5.828	0.013533	5.637	0.013653	5.638	0.013482	5.493
62.5	0.012748	4.870	0.011305	4.709	0.011404	4.710	0.011260	4.587
67.5	0.010834	4.138	0.009605	4.001	0.009689	4.001	0.009565	3.897
72.5	0.009340	3.568	0.008279	3.449	0.008350	3.448	0.008242	3.358
77.5	0.008100	3.094	0.007178	2.990	0.007239	2.990	0.007144	2.911
82.5	0.004904	1.873	0.003556	1.481	0.003800	1.569	0.004256	1.734
87.5	0.001731	0.661	0.001614	0.672	0.001656	0.684	0.001668	0.680

VITA

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