

Chapter IV

EXPERIMENTAL RESULTS



All the data obtained are shown in table 1 to table 7, temperatures during the experiments from 26<sup>o</sup> - 32<sup>o</sup> C. (normal condition)

Figure 7 shows the reducing rate of BOD of the samples

Figure 8 shows the reducing rate of COD of the samples

Figure 9 shows the variation of residual dissolved oxygen of the samples

Figure 10 shows the variation of suspended solid of the samples

Figure 11 shows the relationship between BOD and COD removal rate

Figure 12 shows the percent reduction of COD of the samples

However, only one curve to be shown, since the curve shown the result of experiments of various samples appeared to be similar

Nitrates at first day of the samples were found from following sources

1. Death of plant and bacteria decomposition
2. Nitrogen in the atmosphere by the action of electrical discharge and nitrogen fixing bacteria and algae
3. Ground water

Table 1

Shows changes of properties and characteristics of sample 1

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	28	0.2	5760	3120	180
2	29	0.5	4980	-	470
3	27	0.5	3115	-	580
4	30	0.6	2080	-	490
5	29	1.1	1145	-	230
6	31	2.6	680	-	189
7	29	4.2	410	213	126

NO<sub>3</sub> at first day is about 307 ppm.

Table 2

Shows changes of properties and characteristics of sample 2

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	30	0.2	5864	3176	240
2	31	0.4	4936	-	520
3	30	0.5	3080	-	700
4	29	0.8	2950	-	635
5	29	1.6	1200	-	463
6	32	3.0	718	-	318
7	26	4.7	430	236	205

<sup>a</sup>  
NO<sub>3</sub> at first day is about 273 ppm.



Table 3

Shows changes of properties and characteristics of sample 3

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	30	0.2	6250	3346	236
2	26	0.4	5574	-	533
3	29	0.5	4053	-	698
4	31	0.9	2734	-	591
5	31	1.7	1634	-	440
6	30	3.2	827	-	293
7	31	4.5	502	285	184

NO<sub>3</sub> at first day is about 305 ppm.

Table 4

Shows changes of properties and characteristics of sample 4

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	32	0.2	6530	3510	296
2	31	0.5	5973	-	578
3	32	0.6	4316	-	698
4	30	0.6	2965	-	630
5	31	1.0	1870	-	464
6	30	3.2	1134	-	327
7	29	4.3	606	329	201

NO<sub>3</sub> at first day is about 310 ppm.

Table 5

Shows changes of properties and characteristics of sample 5

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	28	0.2	6726	3651	295
2	29	0.4	6199	-	567
3	30	0.6	4877	-	709
4	31	0.7	2965	-	641
5	31	1.3	1994	-	462
6	30	2.9	1136	-	310
7	29	4.1	597	321	199

NO<sub>3</sub> at first day is about 317 ppm.

Table 6

Shows changes of properties and characteristics of sample 6

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	27	0.2	6954	3742	347
2	26	0.5	6594	-	496
3	26	0.5	5916	-	676
4	29	0.7	3687	-	729
5	31	1.2	2392	-	534
6	31	2.1	1455	-	365
7	30	3.2	801	443	248
8	31	4.5	656	362	178

NO<sub>3</sub> at first day is about 312 ppm.

Table 7

Shows changes of properties and characteristics of sample 7

Time in days	Temp °C	D.O mg/L	C O D mg/L	B O D mg/L	SS mg/L
1	32	0.2	7370	3920	298
2	32	0.4	6904	-	547
3	31	0.5	5981	-	693
4	30	0.7	4059	-	546
5	30	1.1	2463	-	349
6	31	2.0	1416	-	218
7	30	3.9	653	364	201

NO<sub>3</sub> at first day is about 340 ppm.













