RESULTS

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The microbial communities of nine soil, sludge and water samples were able to grow on 7 different chloroaromatic compounds. Growth of these microbial communities on 1mM of 1,4-dichlorobenzene was determined periodically by measuring optical density (O.D) at 600 nm as indicated in Table (2) and Fig. (6). The results revealed that indigenous populations of soils 1, 2, 3 and 9 gave the best growth. Microbial community of soil "3" showed the highest growth on 1,4-dichlorobenzene. As the incubation time increase the microbial growth increased to be 2.454 after 28 days.

These microbial communities were capable to grow on 1mM of 4-chloroaniline as indicated in Table (3) and Fig. (7). The best grown indigenous microbial populations have been recorded by soils 1, 2, 3 and 9. Also soil "3" revealed the highest growth. Growth of these microbial populations was increased gradually.

Growth on 1mM of 4-chlorophenol indicated that soils 1, 2, 4 and 8 gave the best results as shown in Table (4) and Fig. (8).

Growth of the eight microbial communities on 1mM of chlorobenzene was indicated in Table (5) and Fig. (9).The results revealed that the best grown communities were that of soils and sludge 1, 3, 4 and 8.

Microbial populations of soil "3" recorded the best growth on 1mM of 2-chloroaniline as indicated in Table (6) and Fig. (10). The eight microbial populations were capable of growing on 2-chloroaniline.

Indigenous populations of soils 8, 1 and 4 revealed the best growth on 1mM of 1,2-dichlorobenzene respectively as shown in Table (7) and Fig. (11). The results revealed that all microbial populations were capable to grow on 1,2-dichlorobenzene to some extent.

O. D (600nm)				
Source	Zero time	After 7 days	After 15 days	After 28 days
1	0.100	0.202	0.705	1.351
2	0.115	0.390	1.109	2.152
3	0.109	0.204	1.195	2.454
4	0.150	0.200	0.223	0.280
5	0.050	0.046	0.079	0.099
6	0.050	0.050	0.087	0.097
7	0.050	0.065	0.091	0.119
8	0.100	0.114	0.130	0.139
9	0.100	0.363	0.360	0.365

Table (2): Growth of different microbial communities on 1mM of 1,4 -dichlorobenzene

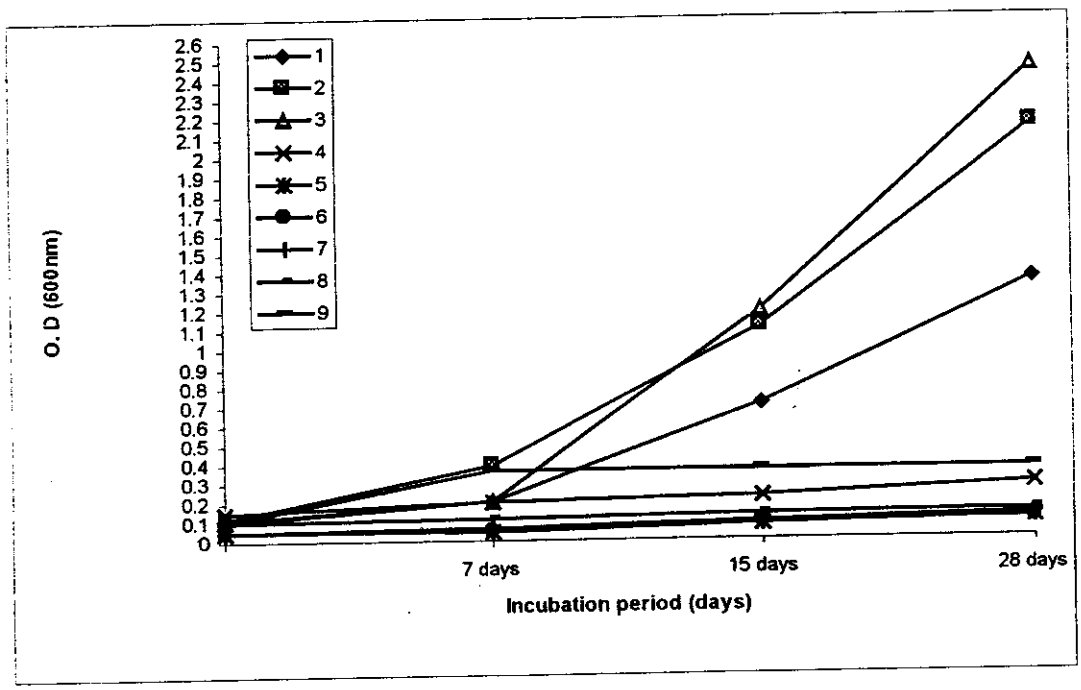

Fig. (6): Growth of different microbial communities on 1mM of 1,4 -dichlorobenzene

O. D (600nm)				
Source	Zero time	After 7 days	After 15 days	After 28 days
1	0.15	0.369	0.650	1.242
2	0.16	0.448	0.620	1.083
3	0.15	0.215	0.605	1.362
4	0.15	0.170	0.190	0.208
5	0.05	0.059	0.089	0.098
6	0.05	0.049	0.068	0.087
7	0.05	0.072	0.098	0.115
8	0.10	0.175	0.210	0.230
9	0.10	0.307	0.360	0.381

Table (3): Growth of different microbial communities on 1mM of 4-chloroaniline

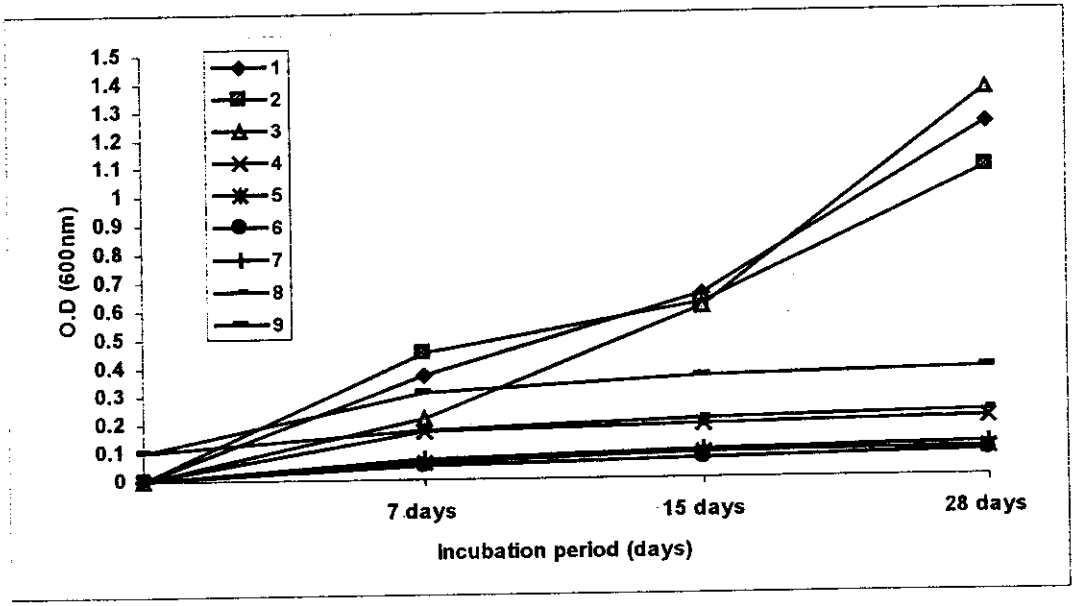

Fig. (7): Growth of different microbial communities on 1mM of 4-chloroaniline

O. D (600nm)				
Source	**Zero time**	**After 7 days**	**After 15 days**	**After 28 days**
1	0.10	0.173	0.240	0.360
2	0.12	0.238	0.270	0.330
3	0.10	0.221	0.240	0.291
4	0.11	0.163	0.220	0.322
5	0.09	0.127	0.160	0.185
6	0.07	0.091	0.092	0.098
7	0.08	0.120	0.155	0.185
8	0.12	0.175	0.260	0.389

Table (4): Growth of different microbial communities on 1mM of 4-chlorophenol

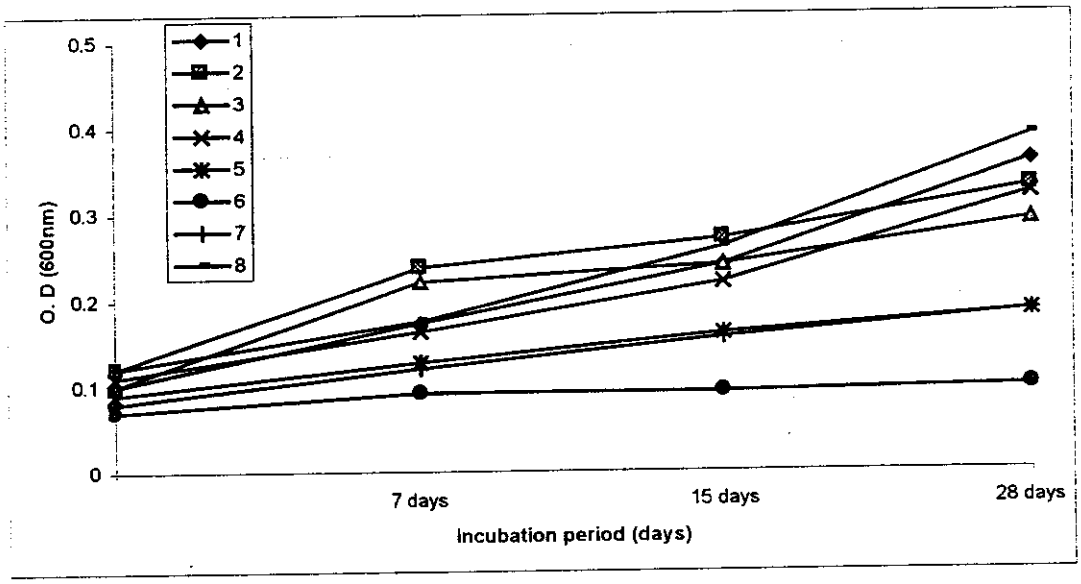

Fig. (8): Growth of different microbial communities on 1mM of 4-chlorophenol