RESULTS

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I- Physicochemical properties of different water samples collected from different sites at Suez Canal:

Water temperature (Table 1) varied between 15 and 20°C. The temperature was highly fluctuated among different sites. The difference was one to two degrees. The oxygen content of the water generally fluctuated between 6.1and 8.4-mg.l^{-1}. Exception was found at Faied and EL-Ballah where the oxygen decreased 6.3 and 6.6-mg.l^{-1}, respectively. The bottom at these two sites was black due to excess of organic matters that could be responsible for lower oxygen. The recoded pH values were slightly alkaline, fluctuated between 7.7 and 8.7.

The seawater salinity showed greater variations among sites (Table 1).In EL-Ballah, the salinity was 26‰, being due to slow flow of Nile water. In Kabrit and Deversoir, the salinity was 42-43‰, decreased again to 26-30‰ in EL-Ballah (No-6), then increased again to 43‰. This fluctuation could be attributed to fresh water introduction at Timsah and to evaporation at the southern part of the canal **(El-Manawy, 1992).**

Turbidity in a water body is due to suspended matter in a finely divided state. Clay, silt, organic matter, microscopic organisms and similar materials contribute to turbidity level **(Misra and Yadov, 1978).** The measured turbidity ranged from 2.1 to 14.6 NTU (Nephlometric turbidity units). Wave action disturbs the bottom debris along the shore of Mediterranean, meanwhile the sewage effluents at Faied may be the cause of high turbidity.

Nutrient status of the water is an important factor for the algal growth. Nitrogen and phosphorus showed small variations among sites and table (1) shows high N/P ratios in all sites. Nitrite ranged from 1.58 N (NO_3)µg.l^{-1} at Kabrit to 9.81

$N(NO_3)$ $\mu g.l^{-1}$ at Faied. Orthophosphate varied between 0.06 P (PO_4) $\mu g.l^{-1}$at Kabrit and 2.10 $P(PO_4)$ $\mu g.l^{-1}$ at Faied .

In the Red Sea, sites 13-15, the surface water temperature during February was 15-17°C. The oxygen content was between 6.1and 8.3 -$mg.l^{-1}$. The recoded pH values were between 7.8 and 8.6. Salinity ranged between 26 and 42 ‰. The measured turbidity was low, from 2.1to 14.6 NTU. Nitrate ranged from 1.58 to 9.81 N (NO_3) $\mu g.l^{-1}$. Phosphate varied between 0.06 and 2.10 P (PO_4) $\mu g.l$-1.

Table (1): Measurements of water temperature, turbidity, salinity, pH, oxygen, nitrate, and phosphate at different sites

	Temperature °C			**Turbidity NTU**		
Sites	Feb	Mar	Apr	Feb	Mar	Apr
El-Ballah	16	17	19	5	2.2	6.0
El-Ferdan	15	18	20	2.1	2.1	2.4
No-6	17	18	20	4.6	4.5	4.7
Deversoir	15	18	19	4.5	6.5	4.5
Faied	16.5	17.5	19	14.6	11.8	10.2
Kabrit	17	18	20	6.5	5.6	4.6
	Salinity ‰			**pH**		
Sites	Feb	Mar	Apr	Feb	Mar	Apr
El-Ballah	26	27	30	8.5	8.5	8.2
El-Ferdan	42	42	42	7.8	7.8	7.7
No-6	29	31	31	8.0	7.8	7.8
Deversoir	42	43	43	8.1	8.3	8.3
Faied	40	40	42	8.6	8.2	8.2
Kabrit	42	43	43	8.6	8.7	8.3
	Oxygen $mg.l^{-1}$			**Nitrate $N(NO_3)\mu g.l^{-1}$**		
Sites	Feb	Mar	Apr	Feb	Mar	Apr
El-Ballah	7.6	6.6	7.4	2.51	2.14	1.94
El-Ferdan	7.6	7.8	6.9	3.31	3.08	2.14
No-6	7.6	8.1	6.6	4.31	3.51	3.10
Deversoir	8.0	8.3	8.4	2.33	3.50	2.31
Faied	6.1	6.3	6.6	9.81	8.93	8.48
Kabrit	8.3	8.2	6.9	1.58	4.37	6.58
	Phosphate $P(PO_4)\mu g.l^{-1}$					
Sites	Feb	Mar	Apr			
El-Ballah	1.10	1.32	0.95			
El-Ferdan	0.79	0.83	0.67			
No-6	0.96	0.84	0.92			
Deversoir	0.82	1.2	0.85			
Faied	2.10	1.35	1.40			
Kabrit	0.06	0.20	0.34			