

Table 2 Seasonal variations of physical and chemical parameters in Shatt AL-Arab Estuary

	Station	Summer	Autumn	Winter	Spring		Station	Summer	Autumn	Winter	Spring
Water temperature (°C)	1	30.00	19.00	9.00	22.00	Ca	1	104.00	152.00	226.60	128.00
	2	31.00	18.00	10.00	23.00		2	128.00	125.30	154.60	109.30
	3	32.00	20.00	10.00	23.00		3	88.00	141.30	157.30	106.60
	4	33.00	21.00	11.00	24.00		4	112.00	101.30	181.30	98.60
	5	33.00	22.00	12.00	24.00		5	104.00	125.30	210.60	112.00
	6	34.00	22.00	14.00	25.00		6	114.60	144.00	173.30	98.60
D.O mg/L	1	5.30	6.30	9.30	8.40	Mg	1	50.58	217.18	304.56	50.22
	2	5.90	7.80	8.50	8.30		2	45.31	93.96	445.86	55.08
	3	6.20	6.50	8.70	7.60		3	63.36	176.58	437.76	56.70
	4	6.80	6.80	8.10	8.50		4	36.77	165.20	289.98	69.66
	5	6.90	7.90	8.30	8.90		5	58.34	126.36	233.28	57.22
	6	7.10	8.10	8.50	8.40		6	81.62	105.26	265.68	110.16
PH	1	7.99	7.33	8.21	8.41	Cl	1	368.68	1035.51	673.55	335.71
	2	7.48	7.20	7.98	8.18		2	626.28	1059.46	508.11	524.66
	3	7.99	7.33	8.10	8.16		3	337.93	572.45	496.30	371.04
	4	7.98	7.36	8.32	8.29		4	268.50	624.41	555.38	333.68
	5	7.95	7.36	8.55	8.24		5	361.92	551.46	590.83	354.50
	6	7.96	7.43	8.36	8.30		6	363.95	539.35	562.08	369.70
E.C mS/cm	1	1.58	2.26	2.71	1.90	HCO3	1	153.60	272.46	528.66	183.00
	2	2.72	2.57	2.85	2.00		2	186.14	250.00	597.80	195.20
	3	1.72	2.42	2.72	1.95		3	138.96	252.13	536.80	174.80
	4	1.75	2.43	2.80	1.98		4	133.30	207.40	553.06	166.73
	5	1.74	2.40	2.88	1.96		5	152.02	227.70	488.00	154.53
	6	1.73	2.42	2.84	1.98		6	149.57	223.60	622.20	158.60
TUR FTU	1	60.60	27.60	14.20	15.32	SO4	1	208.63	431.55	1921.88	251.50
	2	41.60	38.30	13.70	12.39		2	276.77	485.49	1852.89	230.75
	3	32.50	72.30	9.06	16.28		3	295.40	474.63	506.46	271.49
	4	27.49	55.60	9.50	6.05		4	509.66	538.71	545.62	305.49
	5	41.90	36.60	7.80	7.77		5	658.19	430.01	618.49	253.40
	6	47.14	38.30	9.20	9.16		6	807.60	456.03	593.56	337.28
TSS mg/l	1	100.00	68.60	38.00	55.30	NO3	1	24.34	9.93	31.04	53.57
	2	59.60	64.60	34.00	83.30		2	20.07	8.89	24.78	54.01
	3	61.60	73.30	36.00	46.00		3	48.23	11.83	25.13	55.50
	4	98.60	92.60	30.60	39.30		4	57.43	9.91	23.90	54.19
	5	41.30	79.30	30.60	56.60		5	49.85	9.75	26.68	51.74
	6	78.60	57.30	28.60	64.60		6	46.13	10.35	28.15	53.85
TDS mg/l	1	1432.00	2222.00	1640.60	1290.00	PO4	1	3.03	2.16	2.29	2.12
	2	1740.00	2057.30	1616.00	1978.00		2	13.45	5.63	4.41	5.19
	3	1082.00	1433.30	1852.60	1976.00		3	5.11	2.62	3.12	3.90
	4	1046.00	1677.30	1697.30	2092.00		4	4.45	2.87	2.37	2.30
	5	1062.00	1925.30	1873.30	2918.60		5	3.67	1.77	2.93	3.34
	6	1034.00	1885.30	1740.00	2538.60		6	2.06	3.79	2.91	3.12