

Calculation of sub-indices, WQI and class for water samples

Sample Code	\bar{X} Wiqi	WQI	Class
LX-1	122.657	123.27336683	Unsuitable for drinking
LX-2	125.6	126.23115578	Unsuitable for drinking
LX-3	104.18	104.70351759	Unsuitable for drinking
LX-4	161.885	162.69849246	Unsuitable for drinking
LX-5	136.121	136.80502513	Unsuitable for drinking
LX-6	32.008	32.16884422	Good
LX-7	40.842	41.04723618	Good
LX-8	26.151	26.28241206	Good
LX-9	25.228	25.35477387	Good
LX-10	50.054	50.30552764	Poor
LX-11	59.835	60.13567839	Poor
LX-12	59.009	59.30552764	Poor
LX-13	47.775	48.01507538	Good
LX-14	58.813	59.10854271	Poor
LX-15	35.75	35.92964824	Good
LX-16	55.694	55.97386935	Poor
LX-17	45.83	46.06030151	Good
LX-18	93.106	93.57386935	Very poor
RX- 19	145.056	145.78492462	Unsuitable for drinking
RX- 20	146.078	146.8120603	Unsuitable for drinking
RX- 21	150.099	150.85326633	Unsuitable for drinking
RX- 22	210.827	211.88643216	Unsuitable for drinking
RX- 23	142.784	143.50150754	Unsuitable for drinking
RX- 24	199.982	200.98693467	Unsuitable for drinking
RX-25	183.398	184.31959799	Unsuitable for drinking

Ionic ratio values

SAMPLES	$(ca + mg) / (hco_3 + so_4)$	na / cl	hco ₃ / cl	cl / hco ₃	so ₄ / cl	cl / so ₄	ca / mg	ca / (ca + so ₄)
LX-1	1.07652	4.16151	2.37182	0.42161	1.73685	0.57575	4.37617	0.67457
LX-2	0.96167	3.7701	2.11098	0.47371	1.99666	0.50083	4.49808	0.61811
LX-3	1.16248	3.35426	2.02502	0.49382	1.33266	0.75037	4.25294	0.70338
LX-4	2.91501	11.19447	2.65827	0.37618	3.79102	0.26378	5.57245	0.80785
LX-5	0.88734	14.09825	2.27692	0.43918	3.06423	0.32634	27.26587	0.59871
LX-6	0.7253	0.91115	1.30837	0.7643	0.27955	3.57705	2.04382	0.73448
LX-7	0.71819	1.13283	1.71128	0.58435	0.30781	3.24865	2.00984	0.75878
LX-8	0.46052	1.60849	2.80353	0.35669	0.44545	2.24487	1.06459	0.63396
LX-9	0.45776	1.1384	2.08831	0.47885	0.289	3.4601	0.66117	0.59979
LX-10	0.36101	1.06143	2.37009	0.42192	0.30536	3.27474	0.886	0.59773
LX-11	0.80128	2.47558	2.29447	0.43583	0.86225	1.15975	1.709	0.6492
LX-12	0.4371	1.65896	2.69565	0.37096	0.71306	1.4024	1.15056	0.52784
LX-13	0.89267	2.29925	2.39854	0.41691	0.93719	1.067	2.31362	0.68928
LX-14	1.13628	3.10931	2.62874	0.3804	1.13622	0.8801	3.39402	0.74413
LX-15	0.70702	2.95118	2.74179	0.36472	0.63826	1.56674	1.32815	0.68111
LX-16	0.75822	1.31745	1.25768	0.79511	0.34108	2.93181	1.64373	0.68844
LX-17	0.50602	1.07173	1.29884	0.76991	0.25212	3.96627	1.08218	0.618
LX-18	1.19334	3.09073	1.63704	0.61085	1.47633	0.67735	4.42102	0.67238
RX- 19	0.74832	3.73659	2.01967	0.49512	2.55087	0.39202	4.86624	0.52657
RX- 20	0.86375	3.53929	2.02574	0.49364	2.12571	0.47042	3.74047	0.571
RX- 21	0.89709	8.63227	2.37613	0.42085	2.52617	0.39585	4.34882	0.58599
RX- 22	3.76569	10.83365	1.89915	0.52655	3.46056	0.28897	6.09491	0.83361
RX- 23	1.22311	6.85226	1.76338	0.56709	1.88942	0.52926	4.94369	0.66293
RX- 24	3.77872	12.93692	2.37254	0.42148	4.42093	0.22619	5.67363	0.83155
RX-25	3.85753	3.51525	1.5838	0.63139	2.77575	0.36026	5.05512	0.83492

Result of Irrigation Use

SAMPLES	%Na	SAR	KR	RSBC	SSP	PI
LX-1	41.11364	2.90677	0.94086	-1.32556	56.30229	0.65747
LX-2	41.00922	2.88778	0.9544	-1.29876	57.03146	0.66315
LX-3	39.65845	2.5428	0.85934	-1.27318	53.85059	0.64732
LX-4	36.20359	3.67281	0.59545	-13.43846	39.20033	0.42725
LX-5	69.32803	8.91215	2.97464	-2.17316	76.69369	0.83072
LX-6	40.40521	1.40859	0.7911	0.73634	48.92591	0.91432
LX-7	38.80137	1.46591	0.7812	0.90203	50.33124	0.89822
LX-8	47.32422	1.50376	1.07501	1.32867	55.97803	1.185
LX-9	45.80478	1.41141	1.04609	1.38436	56.21351	1.2209
LX-10	47.27833	1.60571	1.09892	2.11797	56.97747	1.24589
LX-11	45.12109	2.08686	0.9787	0.62797	53.89709	0.81386
LX-12	48.12744	1.9681	1.1134	1.99062	56.77462	1.03601
LX-13	39.36142	1.69518	0.77214	0.25853	49.02357	0.76194
LX-14	37.55438	1.84674	0.72679	-0.5099	48.32889	0.67354
LX-15	50.51603	2.2126	1.23491	0.92585	59.09368	0.93084
LX-16	47.37635	2.15873	1.08679	0.82015	56.40747	0.86831
LX-17	53.24342	2.12832	1.36558	1.37875	61.0104	1.07072
LX-18	40.79445	2.50184	0.83188	-1.69549	50.96138	0.6245
RX- 19	43.86123	3.24315	1.09248	-1.05325	59.8518	0.69704
RX- 20	42.14318	3.01718	0.98701	-1.04716	57.30247	0.67173
RX- 21	58.64794	6.17355	1.96284	-1.34905	70.1209	0.77403
RX- 22	33.86286	3.66937	0.53676	-17.87373	36.91361	0.39057
RX- 23	55.65853	5.34308	1.5337	-2.65228	63.70966	0.70597
RX- 24	32.22538	3.4982	0.50395	-18.25538	36.05527	0.37627
RX-25	16.42979	1.37625	0.20902	-16.05401	21.3991	0.2274

Result of geochemical indices for analyzed water samples

Sample Code	BEI	MGI
LX-1	1.82025	2.70541
LX-2	1.38736	2.12508
LX-3	1.76657	2.66729
LX-4	2.6891	2.93353
LX-5	4.27456	4.76338
LX-6	-0.31781	0.3695
LX-7	0.43153	1.52511
LX-8	1.36599	2.02629
LX-9	0.4789	1.37401
LX-10	0.20118	0.91427
LX-11	1.71131	2.26972
LX-12	0.92412	1.34214
LX-13	1.38631	1.98854
LX-14	1.85641	2.64153
LX-15	3.05702	3.84214
LX-16	0.93071	1.66701
LX-17	0.28452	0.90462
LX-18	1.41617	1.93792
RX- 19	1.0728	1.60684
RX- 20	1.19456	1.79347
RX- 21	3.02128	3.68975
RX- 22	2.84163	3.12367
RX- 23	3.09737	3.62197
RX- 24	2.70008	3.04786
RX-25	0.90615	1.28918

Result of Industriail Use

Sample Code	LMS	CAI 1	CAI 2
LX-1	0.61391	-4.69891	-0.75851
LX-2	0.70933	-4.24308	-0.68203
LX-3	0.54417	-3.55461	-0.63257
LX-4	0.96363	-11.12108	-1.26912
LX-5	0.88813	-14.5961	-1.91038
LX-6	0.41443	-0.10329	-0.03067
LX-7	0.46571	-0.46945	-0.15065
LX-8	0.33409	-0.90262	-0.18915
LX-9	0.2381	-0.3971	-0.06963
LX-10	0.28888	-0.27918	-0.05787
LX-11	0.4038	-1.95707	-0.35751
LX-12	0.28794	-0.95703	-0.14364
LX-13	0.40003	-1.86366	-0.32244
LX-14	0.4236	-3.00138	-0.48572
LX-15	0.24924	-2.4523	-0.34006
LX-16	0.4977	-0.56859	-0.1873
LX-17	0.46978	-0.22807	-0.07817
LX-18	0.7296	-2.86102	-0.58743
RX- 19	0.95858	-4.09885	-0.65527
RX- 20	0.73465	-3.81241	-0.59752
RX- 21	0.74178	-9.32095	-1.28039
RX- 22	1.17864	-10.80966	-1.492
RX- 23	0.78795	-6.84345	-1.23163
RX- 24	1.03178	-13.47443	-1.39272
RX-25	1.17311	-3.57847	-0.59697