

بسمه تعالی

نتایج کنترل کیفی سال 96 به شرح زیر ارائه می گردد. با استفاده از راهنمای زیر کدهای دریافتی خود را یافته و نتایج را ملاحظه فرمایید. جدول زیر نشان می دهد که هر آزمایشگاه چه خاکی را تحویل گرفته است. برای پی گیری نتایج مربوط به آزمایشگاه خود ابتدا کد مربوط به دو نمونه خاکی که دریافت کرده اید را از جدول زیر بیابید و سپس در صفحات بعدی نتایج مربوط به هر یک از پارامترهای تجزیه شده توسط آزمایشگاه خود را در مقایسه با سایر نتایج مشاهده نمایید. در قسمت نتایج، sat. مخفف کلمه satisfy به معنای رضایتبخش، unsat. مخفف unsatisfy به معنای غیر رضایتبخش و critical به معنای بحرانی می باشد. داده های با درجه غیر رضایتبخش و بحرانی به ترتیب داده های پرت و بسیار پرت هستند.

	کد آزمایشگاه ها								
soil 1	3	17	22	29	39	49	60	70	122
	4	64	24	30	42	50	53		123
	5	74	25	34	46	57	66		130
	13	21	28	36	48	152	69		136
	138	142							95
soil 2	155	4	6	7	5	8	9	14	19
	150	32	40	39	42	151	43	44	52
	54	55	56	61	62	64	68	71	154
	73	75	157	80	81	87	91	94	99
	103	104	106	112	113	118	121	126	129
	78	82	97						
	131	132	135	137	139	158	141	142	143
soil 3	1	8	10	11	14	17	20	23	24
	27	29	33	37	41	44	45	46	48
	49	52	54	58	63	64	67	69	153
	72	76	156	79	84	86	89	93	94
	99	104	107	110	113	115	116	119	120
	106	108							
soil 4	125	128	133	143	146	42	98	100	103
	2	12	15	74	23	25	26	150	31
	33	34	38	42	43	151	45	47	50
	53	55	56	57	58	59	60	62	65
	66	71	154	82	83	85	90	92	96
	101	109	111	115	118	119	122	125	127
	130	132	134	135	139	158	144	147	75
soil 5	76	88	91	120	123				
	1	6	11	12	15	18	64	149	22
	26	28	32	35	36	37	41	51	152
	59	62	67	68	72	77	156	121	79
	80	84	85	88	89	90	92	96	97
	101	102	105	111	117	42	123	124	127
soil 6	131	134	140	141	144				
	3	7	9	10	13	18	19	149	20
	21	27	30	31	35	38	40	47	51
	61	65	70	153	155	73	77	157	78
	81	86	93	95	100	102	105	107	108
	109	110	112	116	117	124	126	128	129
	133	137	138	140	146	42	98	83	87
	147								

SOIL 1

میانگین گزارش شده، مربوط به داده های باقی مانده بعد از حذف داده های پرت می باشد.

کد آزمایشگاه	pH		کد آزمایشگاه	EC (ds/m)	
3	7.34	sat.	3	5.23	critical
4	7.39	sat.	4	4.82	sat.
5	7.9	unsat.	5	3.13	critical
29	7.84	sat.	29	3.94	sat.
30	7.6	sat.	30	3.6	sat.
34	7.45	sat.	34	4.28	sat.
42	7.7	sat.	42	4.46	sat.
46	7.73	sat.	46	4.17	sat.
48	7.7	sat.	48	4.05	sat.
46	7.73	sat.	49	4	sat.
49	7.7	sat.	50	4.1	sat.
50	7.74	sat.	53	4.41	sat.
53	7.54	sat.	57	4.34	sat.
57	7.4	sat.	66	3.7	sat.
66	7.5	sat.	74	1380	critical
74	7.62	sat.	82	1.02	critical
82	7.98	sat.	97	1.99	critical
97	7.58	sat.	103	9.1	critical
103	8	sat.	130	0.91	critical
130	7.98	sat.	152	4.6	sat.
152	7.57	sat.			
		mean	7.67		
				mean	4.19

کد آزمایشگاه	SP(%)		کد آزمایشگاه	TNV (%)					
3	27.8	sat.	3	42.5	sat.				
4	26.6	sat.	4	41.62	sat.				
5	28	sat.	5	37.89	sat.				
29	31	sat.	29	32	sat.				
30	28.6	sat.	mean	28.17	30	41.5	sat.	mean	35.39
34	29	sat.	34	33.56	sat.				
42	27	sat.	42	29.9	sat.				
46	31	sat.	46	33.5	sat.				
49	27	sat.	48	37.3	sat.				
53	28	sat.	50	37.2	sat.				
57	29.3	sat.	53	39	sat.				
74	38	critical	57	39.25	sat.				
82	38	critical	66	40.5	sat.				
97	53	critical	74	22.58	unsat.				
103	57	critical	82	20.5	unsat.				
130	45	critical	97	20.3	unsat.				
152	24.76	sat.	103	22.5	unsat.				
			130	20	unsat.				
			152	81.02	critical				

کد آزمایشگاه	OC (%)		کد آزمایشگاه	Pav. (mg/kg)	
3	0.87	sat.	3	2.9	sat.
4	0.93	sat.	4	4.03	sat.
5	0.74	sat.	5	3.71	sat.
29	0.8	sat.	29	4.4	sat.
30	0.7	sat.	30	6.28	sat.
34	0.65	sat.	34	4.7	sat.
42	0.46	sat.	42	4.4	sat.
46	0.81	sat.	46	10.9	unsat.
48	0.67	sat.	48	18.4	critical
49	0.57	sat.	49	16	critical
50	0.71	sat.	50	31	critical
53	0.68	sat.	53	5.4	sat.
57	0.717	sat.	66	4.5	sat.
66	0.6	sat.	57	6.1	sat.
74	0.66	sat.	74	5.63	sat.
82	1.8	critical	82	9.58	sat.
97	1.79	critical	97	28.4	critical
103	1.42	critical	103	64.1	critical
130	1.64	critical	130	86.6	critical
152	0.53	sat.	152	5.25	sat.
		mean= 0.69			mean= 5.56

کد آزمایشگاه	Kav. (mg/kg)		کد آزمایشگاه	Cuav. (mg/kg)	
3	690	sat.	3	2.28	sat.
4	724	sat.	4	2.33	unsat.
5	469	unsat.	29	2.16	sat.
29	622	sat.	30	1.27	critical
30	750	sat.	34	1.42	critical
34	535	sat.	42	2.1	sat.
42	635	sat.	46	2.54	critical
46	396	critical	49	2.12	sat.
48	626	sat.	50	1.9	critical
49	260	critical	53	2.6	critical
50	576	sat.	57	2.2	
53	599	sat.	57	5.68	critical
57	610	sat.	66	2.14	sat.
66	610	sat.	97	4.66	critical
74	600	sat.	103	5.5	critical
82	583.96	sat.	130	12.11	critical
97	358	critical	152	2.17	sat.
103	348	critical			
130	235	critical			
152	709	sat.			
		mean= 622.60			mean= 2.19

کد آزمایشگاه Znav. (mg/kg)

3	2.11	sat.
4	2.18	sat.
29	2.28	sat.
30	2.78	critical
34	1.75	critical
42	2.2	sat.
46	2.08	unsat.
49	2.026	unsat.
50	2.22	sat.
53	2.23	sat.
57	2.36	unsat.
66	2.19	sat.
97	5.72	critical
103	6.2	critical
130	9.85	critical
152	2.28	sat.

mean= 2.20

کد آزمایشگاه Feav. (mg/kg)

3	8.47	sat.
4	8.38	sat.
29	9.37	sat.
30	0.85	critical
34	1.19	critical
42	9.1	sat.
46	2.97	critical
49	13.676	critical
50	13.312	critical
53	9.4	sat.
57	11.2	
57	11.2	unsat.
66	10.2	sat.
97	17.94	critical
103	11.6	unsat.
130	29.32	critical
152	8.76	sat.

mean= 9.56

کد آزمایشگاه Mnav. (mg/kg)

3	16.06	sat.
4	15.96	sat.
29	14.16	sat.
30	12.26	unsat.
34	14.52	sat.
42	18	sat.
46	8.72	critical
49	23.96	critical
50	24.85	critical
53	16.25	sat.
57	20.4	
66	16.4	sat.
97	20.5	critical
103	14.2	sat.
130	16.34	sat.
152	14.43	sat.

mean= 15.42

کد آزمایشگاه Ca++ (mg/kg)

3	464.89	sat.
4	15	critical
5	380.76	sat.
29	464.9	sat.
30	274	unsat.
34	601.2	unsat.
42	570	sat.
46	388.77	sat.
48	561.12	sat.
49	3607.2	critical
50	408.8	sat.
53	501	sat.
57	400.8	
57	400.8	sat.
97	150.3	critical
130	121.44	critical
152	661.32	unsat.

mean= 451.42

کد آزمایشگاه Mg++ (mg/kg)

3	329	critical	
4	27.8	critical	
5	279.45	critical	
29	184.68	sat.	mean= 158.48
30	152.4	sat.	
34	194.4	sat.	
42	142	sat.	
46	137.53	sat.	
48	145.8	sat.	
49	143.1	sat.	
50	206.5	sat.	
53	194.4	sat.	
57	121.5	sat.	
97	72.9	unsat.	
130	20.53	critical	
152	206.55	sat.	

کد آزمایشگاه Na+ (mg/kg)

3	232.76	sat.	
4	0.45	unsat.	
5	318.55	sat.	
29	273.7	sat.	mean= 232.39
30	253	sat.	
34	299	sat.	
42	274	sat.	
46	293.02	sat.	
48	119.6	sat.	
49	4255	critical	
50	234.6	sat.	
53	69	sat.	
57	432.4		
57	432.4	unsat.	
82	216.2	sat.	
97	97.98	sat.	
130	119.14	sat.	
152	52.9	unsat.	

کد آزمایشگاه	K+ (mg/kg)		کد آزمایشگاه	HCO3 (mg/kg)	
5	157.53	sat.	3	805.3	sat.
29	4573.5	critical	4	11.6	critical
30	74.1	critical	5	579.59	sat.
42	144	sat.	29	207.4	unsat.
46	129.42	sat.	30	335.5	sat.
49	29.7	critical	34	579.5	sat.
53	125.08	sat.	42	549	sat.
57	117.27	sat.	46	654.02	sat.
97	23.06	critical	48	305.05	unsat.
130	242.64	critical	49	719.91	sat.
152	160.31	sat.	53	762.62	sat.
			57	600.1	sat.
			74	73.82	critical
			82	128.1	critical
			97	732.12	sat.
			130	463.67	sat.
			152	427.07	sat.

کد آزمایشگاه	Cl (mg/kg)	
3	248.15	sat.
4	12	critical
5	398.81	critical
29	284.15	unsat.
30	213	sat.
34	221.56	sat.
42	213	sat.
46	567.2	critical
48	223.3	sat.
49	957.15	critical
53	354.5	critical
57	265.87	sat.
74	85.08	critical
82	288.26	unsat.
97	124.07	critical
130	184.34	unsat.
152	44.31	critical

Soil 2

میانگین گزارش شده، مربوط به داده های باقی مانده بعد از حذف داده های پرت می باشد.

کد آزمایشگاه	pH		کد آزمایشگاه	EC (ds/m)	
4	7.66	sat.	4	2.29	
5	8.1	sat.	5	1.65	sat.
6	7.67	sat.	6	2.44	sat.
7	7.81	sat.	7	1.09	sat.
8	7.88	sat.	8	2.47	unsat.
19	8.12	sat.	19	1.89	sat.
40	8.12	sat.	40	1.7	sat.
42	8	sat.	42	2.08	sat.
44	7.5	sat.	44	1.57	sat.
54	8.08	sat.	54	2	sat.
55	7.97	sat.	55	1.66	sat.
62	7.94	sat.	62	2.04	sat.
64	7.78	sat.	64	2.1	sat.
68	8.02	sat.	68	1.8	sat.
78	7.31	unsat.	78	1.54	sat.
80	7.8	sat.	80	1.981	sat.
91	7.59	sat.	91	2	sat.
94	8.03	sat.	94	2.004	sat.
95	7.5	sat.	95	1.57	sat.
97	7.58	sat.	97	1.99	sat.
103	8	sat.	103	1.5	sat.
104	7.6	sat.	104	1.62	sat.
106	7.6	sat.	106	2.2	sat.
112	8.07	sat.	112	0.814	sat.
113	7.66	sat.	113	1.54	critical
118	7.92	sat.	118	2.1	sat.
121	7.48	sat.	121	2.46	sat.
135	7.7	sat.	135	0.86	sat.
137	8.03	sat.	137	2.57	critical
138	7.73	sat.	138	1.98	unsat.
139	7.55	sat.	139	2.08	sat.
141	7.42	sat.	141	1.878	sat.
142	8.33	unsat.	142	2.1	sat.
157	7.68	sat.	157	1.91	sat.
158	7.73	sat.	158	2.81	sat.
			158	2.81	unsat.

mean= 7.80

mean= 1.96

کد آزمایشگاه	SP (%)		کد آزمایشگاه	TNV (%)	
4	43	sat.	4	23.87	sat.
5	46	sat.	5	22.21	sat.
6	48.47	sat.	6	24	sat.
7	47	sat.	7	17	unsat.
8	44	sat.	8	20.2	sat.
19	57	critical	19	21.7	sat.
40	44.45	sat.	40	29.64	critical
42	41	unsat.	42	20.8	sat.
54	38.46	critical	44	20.44	sat.
55	51.75	critical	54	22.56	sat.
62	44.8	sat.	55	18.12	sat.
64	43	sat.	62	21.4	sat.
68	46	sat.	64	22.3	sat.
78	46	sat.	68	20.7	sat.
91	47.43	sat.	78	23.5	sat.
94	42.28	sat.	80	23.25	sat.
95	44.2	sat.	91	26	unsat.
97	53	critical	94	17.5	sat.
103	38	critical	95	20.44	sat.
104	46	sat.	97	20.3	sat.
106	44.5	sat.	103	24	sat.
112	45.09	sat.	104	21.25	sat.
113	49	sat.	106	21.4	sat.
121	46.26	critical	113	11.9	critical
141	49.13	sat.	118	21.6	sat.
158	30.16	critical	121	24.5	sat.
			135	21	sat.
			137	24.3	sat.
			138	25.26	sat.
			139	21	sat.
			141	18.64	sat.
			142	51.7	critical
			157	20.25	sat.
			158	17.88	sat.

mean= 26.16

mean= 21.53

کد آزمایشگاه	OC (%)		کد آزمایشگاه	Pav. (mg/kg)	
4	1.89	sat.	4	41.2	sat.
5	1.71	sat.	5	49.15	sat.
6	2.72	critical	6	43	sat.
7	1.23	unsat.	7	47	sat.
8	1.61	sat.	8	64.7	sat.
19	1.58	sat.	19	56.5	sat.
40	3.45	critical	40	50.98	sat.
42	1.7	sat.	42	49.4	sat.
44	1.38	unsat.	44	33.2	unsat.
54	4.5	critical	54	80	unsat.
55	1.81	sat.	55	60	sat.
62	1.81	sat.	62	73	sat.
64	1.65	sat.	64	60	sat.
68	1.69	sat.	68	50.8	sat.
78	1.72	sat.	78	58	sat.
80	1.786	sat.	80	64	sat.
91	1.87	sat.	91	73	sat.
94	1.56	sat.	94	81.6	unsat.
95	1.38	unsat.	95	33.2	unsat.
97	1.79	sat.	97	38.4	sat.
103	2.02	unsat.	103	76	unsat.
104	1.677	sat.	104	61.7	sat.
106	1.72	sat.	106	60.7	sat.
112	1.48	sat.	112	54.32	sat.
113	1.4	sat.	113	61.1	sat.
118	1.83	sat.	118	9.4	critical
121	3.06	critical	121	67	sat.
135	1.7	sat.	135	48.7	sat.
137	1.83	sat.	137	64.4	sat.
138	1.75	sat.	138	60.4	sat.
139	1.751	sat.	139	68.22	sat.
141	1.58	sat.	141	42.6	sat.
142	1.55	sat.	142	97.5	critical
157	1.6	sat.	157	50	sat.
158	1.814	sat.	158	46.5	sat.
		mean= 17.24			mean= 43.00

كد آزمایشگاه Kav. (mg/kg)

4	472	unsat.
5	349	unsat.
6	416	sat.
7	252	critical
8	40.7	critical
19	363	sat.
40	374.5	sat.
42	390	sat.
44	480	unsat.
54	400	sat.
55	362	sat.
62	427	sat.
64	367	sat.
68	425	sat.
78	460	unsat.
80	440	sat.
91	450	sat.
94	402.6	sat.
95	480	unsat.
97	358	sat.
103	358	sat.
104	409	sat.
106	352	sat.
112	376.9	sat.
113	376	sat.
118	395	sat.
121	406.8	sat.
135	240	critical
137	557	critical
138	415.55	sat.
139	476	unsat.
141	271.1	critical
142	401	sat.
157	444	sat.
158	414.4	sat.

mean= 144.12

كد آزمایشگاه Cuav. (mg/kg)

4	5.43	sat.
7	8.4	critical
8	8.37	critical
40	4.8	sat.
42	5.3	sat.
44	8.08	critical
54	3.48	critical
55	5.73	sat.
62	5.84	unsat.
64	5.4	sat.
68	2.926	critical
78	5.3	sat.
80	4.55	unsat.
94	3.31	critical
95	8.08	critical
97	4.66	sat.
104	4.52	unsat.
106	5.6	sat.
112	0.65	critical
113	6.4	critical
121	5.76	sat.
137	2.4746	critical
138	4.44	unsat.
141	3.94	critical
142	3.26	critical
158	5.44	sat.

mean= 8.37

کد آزمایشگاه Znav. (mg/kg)

4	6.54	unsat.
7	10.1	unsat.
8	8.06	sat.
40	4.8	critical
42	8.4	sat.
44	12	critical
54	5.75	critical
55	9.04	sat.
62	7.8	sat.
64	10.7	critical
68	9.561	unsat.
78	8.8	sat.
80	8.09	sat.
94	4.7	critical
95	12	critical
97	5.72	critical
104	8.74	sat.
106	8.4	sat.
112	3.22	critical
113	9.5	unsat.
121	7.71	sat.
137	2.6688	critical
138	6.72	unsat.
141	7.63	sat.
142	5.44	critical
158	8.55	sat.

mean= 12.13

کد آزمایشگاه Feav. (mg/kg)

4	21	sat.
7	19.3	sat.
8	40.65	unsat.
40	26.4	sat.
42	29.4	sat.
44	64	critical
54	11.74	unsat.
55	39.05	unsat.
62	37.7	unsat.
64	14.5	sat.
68	41.168	unsat.
78	30.8	sat.
80	7.18	unsat.
94	25.1	sat.
95	64	critical
97	17.94	sat.
104	26.31	sat.
106	25.8	sat.
112	1.15	unsat.
113	35.9	sat.
121	33.53	sat.
137	7.121	unsat.
138	10.5	unsat.
141	11.71	unsat.
142	2.08	unsat.
158	33.67	sat.

mean= 19.30

کد آزمایشگاه Mn^{av.} (mg/kg)

4	24.83	sat.
7	7.8	critical
8	52.77	critical
40	31.9	sat.
42	32.5	sat.
44	137	critical
54	18.36	unsat.
55	44.88	unsat.
62	31.8	sat.
64	34.8	sat.
68	30.199	sat.
78	33	sat.
80	20.72	unsat.
94	20.6	unsat.
95	137	critical
97	20.5	unsat.
104	26.31	sat.
106	31.8	sat.
112	6.7	critical
113	43.5	unsat.
121	41.07	unsat.
137	10.343	critical
138	22.6	sat.
141	11.09	critical
142	9.68	critical
158	36.92	sat.

mean= 29.49

کد آزمایشگاه Ca⁺⁺ (mg/kg)

4	6.2	critical
5	168.33	sat.
6	160.32	sat.
7	120	unsat.
8	176	sat.
19	180.36	sat.
40	163.2	sat.
42	224	critical
44	63.4	critical
55	176.35	sat.
62	208.41	unsat.
64	300.6	critical
68	136.27	sat.
78	80.16	critical
80	160	sat.
91	240.48	critical
94	200.4	unsat.
95	63.52	critical
97	150.3	sat.
104	160.32	sat.
106	184.4	sat.
112	40.08	critical
113	176.35	sat.
121	160.32	sat.
137	100.2	critical
138	481.76	critical
139	128	unsat.
141	192.38	sat.
142	7.6	critical
157	160.32	sat.
158	220.44	critical

mean= 164.09

کد آزمایشگاه Mg++ (mg/kg)

4	10.8	critical
5	87.48	sat.
6	63.18	sat.
7	36	critical
8	89.91	sat.
19	75.33	sat.
40	63.1	sat.
42	57	sat.
44	38.14	unsat.
55	58.32	sat.
62	99.63	unsat.
64	182.25	critical
68	92.34	sat.
78	46	sat.
80	90	sat.
91	72.9	sat.
94	72.9	sat.
95	38.51	unsat.
97	72.9	sat.
104	91.12	sat.
106	60.7	sat.
112	53.46	sat.
113	93.55	sat.
121	85.05	sat.
137	48.6	sat.
138	63.3	sat.
139	81.6	sat.
141	58.32	sat.
142	4.8	critical
157	43.74	sat.
158	97.2	sat.

mean= 138.19

کد آزمایشگاه Na+ (mg/kg)

4	5.82	critical
5	207.69	sat.
6	345.4	critical
7	93.15	unsat.
8	358.8	critical
19	186.4	sat.
40	169.7	sat.
42	191	sat.
44	107.87	unsat.
55	126.5	sat.
62	186.3	sat.
64	303.6	critical
68	202.4	sat.
78	195.5	sat.
80	195.5	sat.
91	281.75	critical
94	226.78	unsat.
95	107.87	unsat.
97	97.98	unsat.
104	172.5	sat.
106	276	critical
112	39.1	critical
113	135.24	sat.
121	211.6	sat.
137	3358	critical
138	284.74	critical
139	179.4	sat.
141	129.95	sat.
142	12.5	critical
157	151.34	sat.
158	195.5	sat.

mean= 345.40

كد آزمایشگاه K+ (mg/kg)			كد آزمایشگاه HCO3(mg/kg)			
5	19.93	unsat.	4	14.6	critical	
6	713.39	critical	5	768.72	sat.	
7	10.92	critical	6	456.3	sat.	
8	1092.9	critical	7	390.4	critical	
19	33.25	unsat.	8	829.7	sat.	
42	29	sat.	19	854.14	sat.	mean= 768.72
44	9.98	critical	40	475.8	sat.	
55	1088.2	critical	42	573	sat.	
62	26.19	sat.	44	634.4	sat.	
68	6.176	critical	55	439.27	unsat.	
78	26.58	sat.	62	939.5	unsat.	
80	27.3	sat.	64	854.14	sat.	
94	23.84	sat.	68	640.6	sat.	
95	10.21	critical	78	268.4	unsat.	
97	23.06	sat.	80	649.65	sat.	
104	29.31	sat.	91	274.54	unsat.	
106	27.3	sat.	94	488.1	sat.	
112	125.08	critical	95	634.5	sat.	
113	24.23	sat.	97	732.12	sat.	
121	25.24	sat.	104	793.13	sat.	
137	840.65	critical	106	829.7	sat.	
138	38.69	critical	112	439.2	unsat.	
141	19.54	unsat.	113	610	sat.	
157	34.39	unsat.	121	320.3	unsat.	
158	28.61	sat.	137	213.53	critical	
			138	896.84	unsat.	
			139	756.4	sat.	
			141	805.33	sat.	
			142	12.5	critical	
			157	732.12	sat.	
			158	488.08	sat.	

mean= 495.70

کد آزمایشگاه	CI (mg/kg)		
4	6	critical	
5	319.05	critical	
6	460.8	critical	
7	142	sat.	
8	496.3	critical	
19	155.98	sat.	
40	142	sat.	mean= 460.80
42	195	sat.	
44	198.8	sat.	
55	354.5	critical	
62	202	sat.	
64	265.87	unsat.	
68	212.7	sat.	
78	141.8	sat.	
80	159.75	sat.	
91	443.12	critical	
94	177.25	sat.	
95	198.52	sat.	
97	124.07	unsat.	
104	443.12	critical	
106	297.8	critical	
113	198.5	sat.	
121	450.21	critical	
137	124.07	unsat.	
138	271.19	unsat.	
139	220.1	sat.	
141	212.7	sat.	
142	6.5	critical	
157	212.7	sat.	
158	443.12	critical	

Soil 3

میانگین گزارش شده، مربوط به داده های باقی مانده بعد از حذف داده های پرت می باشد.

کد آزمایشگاه	pH		کد آزمایشگاه	EC (ds/m)	
8	7.73	sat.	8	11.64	sat.
27	7.9	sat.	27	8.8	sat.
29	7.84	sat.	29	10.18	sat.
37	7.4	sat.	37	8.7	sat.
41	7.67	sat.	41	11.8	sat.
42	7.6	sat.	42	12.6	sat.
46	7.92	sat.	44	8.27	sat.
44	7.3	unsat.	45	10.46	sat.
45	7.92	sat.	46	12.58	sat.
48	7.7	sat.	48	11.08	sat.
49	7.9	sat.	49	9.8	sat.
54	7.78	sat.	54	13	unsat.
64	7.5	sat.	64	9.6	sat.
67	7.58	sat.	67	9.1	sat.
69	7.77	sat.	69	9.88	sat.
72	7.52	sat.	72	10.14	sat.
84	7.85	sat.	84	8.2	unsat.
86	7.76	sat.	86	10	sat.
89	7.91	sat.	89	10.94	sat.
93	7.87	sat.	93	11.5	sat.
94	7.91	sat.	94	10.34	sat.
95	7.3	unsat.	95	8.27	sat.
104	7.5	sat.	104	11	sat.
106	7.4	sat.	106	9.9	sat.
108	7.73	sat.	108	10.34	sat.
113	7.62	sat.	113	8.47	sat.
115	7.6	sat.	115	12.96	unsat.
116	7.74	sat.	116	11.42	sat.
119	7.8	sat.	119	12.62	unsat.
120	7.7	sat.	120	8	unsat.
156	7.95	sat.	156	10.5	sat.

mean= 7.70

mean= 10.39

کد آزمایشگاه	SP (%)		کد آزمایشگاه	TNV (%)	
8	46	sat.	8	18.7	sat.
27	49	sat.	27	19	sat.
29	49	sat.	29	16	unsat.
37	47.7	sat.	41	21.95	sat.
41	42.65	sat.	42	19.9	sat.
42	44	sat.	44	19.69	sat.
44	46.1	sat.	45	19.7	sat.
45	34.55	critical	46	17	unsat.
46	46	sat.	48	19.6	sat.
49	39	critical	54	22.25	sat.
54	40.3	unsat.	64	18.9	sat.
64	46	sat.	67	20.9	sat.
67	47.6	sat.	69	19.2	sat.
69	48	sat.	72	19.4	sat.
72	33	critical	84	21.87	sat.
84	48.14	sat.	86	22	sat.
86	45.4	sat.	89	19.6	sat.
89	50	sat.	93	22	sat.
93	45.3	sat.	94	17.5	sat.
94	41.14	unsat.	95	19.69	sat.
95	46.1	sat.	104	20	sat.
104	47	sat.	106	20.5	sat.
106	47	sat.	108	20.35	sat.
108	48	sat.	113	10.5	critical
113	48	sat.	115	21.23	sat.
115	44.8	sat.	116	20.5	sat.
116	33.33	critical	119	18.68	sat.
119	48.5	sat.	120	18	sat.
120	45.5	sat.	156	30	critical
156	45	sat.			

mean= 46.48

mean= 19.93

کد آزمایشگاه	OC (%)		کد آزمایشگاه	Pav. (mg/kg)	
8	1.3	sat.	8	50.8	sat.
27	1.46	unsat.	27	55.2	sat.
29	1.29	sat.	29	35.6	unsat.
41	1.29	sat.	37	8.6	critical
42	1.2	sat.	41	51.56	sat.
44	1.05	critical	42	49	sat.
45	1.21	sat.	44	28	critical
48	1.33	sat.	45	62.7	unsat.
49	1.14	unsat.	46	40.6	sat.
46	1.248	sat.	48	45.2	sat.
54	1.21	sat.	49	90	critical
64	1.3	sat.	54	64	critical
67	1.32	sat.	64	45	sat.
69	1.25	sat.	67	38	sat.
72	1.25	sat.	69	36.5	sat.
84	1.15	sat.	72	19.5	critical
86	1.35	sat.	84	46.35	sat.
89	0.99	critical	86	21.04	critical
93	0.98	critical	89	49.7	sat.
94	1.26	sat.	93	43	sat.
95	1.05	critical	94	62.4	unsat.
104	1.248	sat.	95	28	critical
106	1.3	sat.	104	53.8	sat.
108	1.373	sat.	106	49.3	sat.
113	1.05	critical	108	14.8	critical
115	1.31	sat.	113	47.3	sat.
116	1.38	sat.	115	52	sat.
119	1.55	critical	116	60	unsat.
120	1.2	sat.	119	45.1	sat.
156	1.5	critical	120	40	sat.
			156	34	unsat.

mean= 1.27

mean= 46.10

کد آزمایشگاه Kav. (mg/kg)

8	397	sat.	
27	356	sat.	
29	364	sat.	
41	336.26	sat.	
42	372	sat.	mean= 364.20
44	500	critical	
45	400	unsat.	
46	236	critical	
48	354	sat.	
49	430	critical	
54	390	sat.	
64	355	sat.	
67	335	sat.	
69	424	critical	
72	348	sat.	
84	353.1	sat.	
86	379	sat.	
89	355	sat.	
93	409	unsat.	
94	367.56	sat.	
95	500	critical	
104	389	sat.	
106	333	sat.	
108	330	sat.	
113	351	sat.	
115	330.8	sat.	
116	350.8	sat.	
119	365	sat.	
120	384.6	sat.	
156	400	unsat.	

کد آزمایشگاه Cuav. (mg/kg)

8	8.11	critical	
27	5.8	sat.	
29	6.28	sat.	
41	5.365	unsat.	
42	5.8	sat.	mean= 6.24
44	9.1	critical	
45	8.31	critical	
46	5.04	unsat.	
49	5.96	sat.	
54	4.07	critical	
64	6	sat.	
67	6.9	sat.	
69	7.45	unsat.	
72	6.9	sat.	
89	6.39	sat.	
93	1.85	critical	
94	3.77	critical	
95	9.1	critical	
104	5.13	unsat.	
106	6.2	sat.	
108	6.3	sat.	
113	6.6	sat.	
115	3.92	critical	
116	6.3	sat.	
119	5.51	sat.	
120	7.86	critical	
156	7.18	unsat.	

کد آزمایشگاه Znav. (mg/kg)

8	5.57	sat.
27	7.1	unsat.
29	5.96	sat.
41	5.532	sat.
42	5.4	sat.
44	7	unsat.
45	13.7	critical
46	3.91	unsat.
49	5.24	sat.
54	3.99	unsat.
64	7.4	unsat.
67	5.8	sat.
69	6.35	sat.
72	6.6	sat.
89	5.12	sat.
93	2.65	critical
94	3.65	unsat.
95	7	unsat.
104	5.26	sat.
106	5.7	sat.
108	0.8	critical
113	6.5	sat.
115	3.8	unsat.
116	5.64	sat.
119	4.68	sat.
120	2.93	critical
156	7.79	unsat.

mean= 5.60

کد آزمایشگاه Feav. (mg/kg)

8	16.6	critical
27	19.5	critical
29	13.6	unsat.
41	9.52	sat.
42	10.5	sat.
44	27	critical
45	45	critical
46	4.32	critical
49	13.376	unsat.
54	7.35	unsat.
64	10.4	sat.
67	8.2	unsat.
69	8.43	unsat.
72	10.8	sat.
89	11.4	sat.
93	1.16	critical
94	8.06	unsat.
95	27	critical
104	8.2	unsat.
106	10.5	sat.
108	10.8	sat.
113	10.6	sat.
115	7.28	unsat.
116	12.8	unsat.
119	11.25	sat.
120	15.96	critical
156	12.1	sat.

mean= 10.62

کد آزمایشگاه Mnav. (mg/kg)

8	18.59	unsat.
27	16	unsat.
29	12.34	sat.
41	9.749	sat.
42	11.8	sat.
44	68	critical
45	57.8	critical
46	4.52	critical
49	14.34	sat.
54	9.79	sat.
64	16.8	unsat.
67	10.8	sat.
69	13.55	sat.
72	12.05	sat.
89	13.45	sat.
93	5.9	critical
94	10.5	sat.
95	68	critical
104	8.7	unsat.
106	12.7	sat.
108	14.2	sat.
113	16.1	unsat.
115	8.64	unsat.
116	15.96	sat.
119	11.61	sat.
120	17.28	unsat.
156	13.3	sat.

mean= 12.84

کد آزمایشگاه Ca++ (mg/kg)

8	793.6	sat.
27	741.48	sat.
29	745.4	sat.
37	1282.56	critical
41	871.74	critical
42	786	sat.
44	73	critical
45	994	critical
46	588.77	critical
48	761.52	sat.
49	7515	critical
64	641.28	critical
67	801.6	sat.
72	645.3	critical
86	740	sat.
89	579.7	critical
93	742.5	sat.
94	801	sat.
95	73.14	critical
104	761.5	sat.
106	851.7	critical
108	501	critical
113	791.58	sat.
115	741.48	sat.
116	805.6	sat.
119	781.5	sat.
156	701.4	unsat.

mean= 766.41

کد آزمایشگاه Mg⁺⁺ (mg/kg)

8	554.04	sat.
27	437.4	sat.
29	456.84	sat.
37	182.25	critical
41	522.45	sat.
42	460	sat.
44	54.96	critical
45	500	sat.
46	180.3	critical
48	571.05	unsat.
49	643.9	critical
64	364.5	unsat.
67	364.5	unsat.
72	428.9	sat.
86	498	sat.
89	434.5	sat.
93	650	critical
94	388.8	sat.
95	55.64	critical
104	461.7	sat.
106	516.4	sat.
108	285.52	critical
113	443.47	sat.
115	507.87	sat.
116	512.73	sat.
119	571	unsat.
156	303.75	critical

mean= 473.38

کد آزمایشگاه Na⁺ (mg/kg)

8	1547.9	unsat.
27	1179.9	sat.
29	1085.6	sat.
37	1288	sat.
41	1342.3	sat.
42	1348	sat.
44	641.7	critical
45	1600	unsat.
46	1007.63	sat.
48	680.8	unsat.
49	12650	critical
64	1315.6	sat.
67	1290.3	sat.
69	732.32	unsat.
72	1124.7	sat.
84	946.4	sat.
86	172.5	critical
89	1050	sat.
93	588.8	critical
94	1263.8	sat.
95	641.7	critical
104	1127	sat.
106	1421	sat.
108	1842.3	critical
113	12.19	critical
115	1201.75	sat.
116	1472	sat.
119	1219	sat.
120	920	sat.
156	966	sat.

mean= 1183.30

کد آزمایشگاه	K+ (mg/kg)		کد آزمایشگاه	HCO3(mg/kg)	
8	1959.6	critical	8	561.3	critical
27	44.17	sat.	27	219.63	critical
29	1407.24	critical	29	134.2	critical
37	46.9	sat.	37	305.05	sat.
41	43.78	sat.	41	280.64	unsat.
42	90	critical	42	305	sat.
44	15.72	critical	44	292.8	sat.
45	35	unsat.	45	683	critical
46	32.45	critical	46	414.86	critical
49	105.54	critical	48	152.52	critical
69	57.83	critical	49	341.65	unsat.
72	19.54	critical	64	488.08	critical
86	60.84	critical	67	396.56	critical
89	71.9	critical	69	488	critical
93	42.99	sat.	72	325.5	sat.
94	46.91	sat.	84	146.4	critical
95	15.75	critical	86	457.5	critical
104	43.78	sat.	89	357.8	unsat.
106	46.9	sat.	93	427.07	critical
108	36.31	unsat.	94	146.42	critical
113	37.91	unsat.	95	292.84	sat.
115	1132.43	critical	104	305.05	sat.
116	20639	critical	106	396.5	critical
119	42.99	sat.	108	381.31	critical
156	46.908	sat.	113	341.65	unsat.
			115	342.87	unsat.
			116	305.05	sat.
			119	305	sat.
			120	305	sat.
			156	292.84	sat.

mean= 43.60

mean= 313.25

کد آزمایشگاه	CI (me/l)		
8	2694	critical	
27	1878.85	sat.	
29	2027.7	sat.	
37	2127	sat.	
41	4342.6	critical	
42	2145	sat.	mean= 2057.21
44	880.4	critical	
45	2120	sat.	
46	2286.5	sat.	
48	1641.3	unsat.	
49	7621.75	critical	
64	1861.12	sat.	
67	1861.1	sat.	
69	2232.95	sat.	
72	1737	unsat.	
84	2481.5	unsat.	
86	2955.375	critical	
89	20.54	critical	
93	2173.08	sat.	
94	1985.2	sat.	
95	879.16	critical	
104	2215.6	sat.	
106	233.1	critical	
108	2144.7	sat.	
113	2410.6	unsat.	
115	2038.37	sat.	
116	2261.7	sat.	
119	1807.95	unsat.	
120	1772.5	unsat.	
156	1418	critical	

Soil 4

میانگین گزارش شده، مربوط به داده های باقی مانده بعد از حذف داده های پرت می باشد.

کد آزمایشگاه	pH		کد آزمایشگاه	EC (ds/m)	
26	7.42	sat.	26	4.15	sat.
31	7.13	sat.	31	2.57	critical
34	7.29	sat.	34	3.93	sat.
38	7.3	sat.	38	3.83	sat.
42	7.6	sat.	42	4.65	sat.
45	8.01	critical	45	4.11	sat.
47	7.45	sat.	47	3.9	sat.
50	7.44	sat.	50	4.5	sat.
53	7.33	sat.	53	4.78	sat.
55	7.35	sat.	55	3.05	unsat.
57	7.2	sat.	57	4.65	sat.
62	7.29	sat.	62	4.37	sat.
65	7.8	unsat.	65	3.6	sat.
66	7.6	sat.	66	3.85	sat.
69	7.74	sat.	69	3.73	sat.
74	7.53	sat.	74	2.38	critical
82	7.96	critical	82	2.59	critical
88	7.7	sat.	88	3.66	sat.
90	7.1	sat.	90	4.21	sat.
91	7.26	sat.	91	3.82	sat.
92	8.08	critical	92	4.1	sat.
96	7.18	sat.	96	4.81	sat.
101	7.2	sat.	101	4.56	sat.
109	7.41	sat.	109	1	critical
115	7.54	sat.	115	5	sat.
118	7.24	sat.	118	2.5	critical
119	7.5	sat.	119	4.61	sat.
120	7.3	sat.	120	3.8	sat.
127	7.35	sat.	127	3.53	sat.
130	7.46	sat.	130	3.85	sat.
135	7.3	sat.	135	3.12	unsat.
139	7.29	sat.	139	4.11	sat.
142	7.75	sat.	142	4.5	sat.
144	7.7	sat.	144	4.3	sat.
147	7.58	sat.	147	4.36	sat.
158	7.25	sat.	158	6.39	critical

mean= 7.41

mean= 4.15

کد آزمایشگاه	SP (%)		کد آزمایشگاه	TNV (%)	
26	51	sat.	26	25.8	critical
31	55.4	sat.	31	25	unsat.
34	50.89	sat.	34	22.4	sat.
38	50	sat.	38	21.5	sat.
42	46	sat.	42	21.3	sat.
45	36.7	critical	45	22.8	sat.
47	52.1	sat.	47	20.2	sat.
53	46	sat.	50	23.2	sat.
55	51.49	sat.	53	21	sat.
57	49.4	sat.	55	20.41	sat.
62	44.5	sat.	57	21.75	sat.
65	43.3	sat.	62	22.4	sat.
69	54	sat.	65	6.94	critical
74	56	sat.	66	24	sat.
82	43	sat.	69	21.3	sat.
88	46.45	sat.	74	35.55	critical
90	31.4	critical	82	20.5	sat.
91	51.7	sat.	88	26	critical
92	47	sat.	90	23	sat.
96	51	sat.	91	22	sat.
101	52	sat.	92	22.12	sat.
109	50.23	sat.	96	20.8	sat.
115	50	sat.	101	22.2	sat.
118	35	critical	109	23	sat.
119	52.5	sat.	115	22.79	sat.
120	44.6	sat.	118	21.1	sat.
127	46.45	sat.	119	20.68	sat.
130	47	sat.	120	21	sat.
139	49.18	sat.	127	29.26	critical
144	49	sat.	130	24	sat.
147	54.75	sat.	135	23	sat.
158	31.44	critical	139	22.25	sat.
			142	52.64	critical
			144	23.3	sat.
			147	18.3	critical
			158	18.36	critical

mean= 49.46

mean= 22.11

کد آزمایشگاه	OC (%)		کد آزمایشگاه	Pav. (mg/kg)		کد آزمایشگاه	Pav. (mg/kg)
26	0.95	sat.	26	16	sat.		
31	1.07	sat.	31	11.2	unsat.		
34	0.89	sat.	34	8.6	critical		
38	0.87	sat.	42	14	sat.		
42	1	sat.	45	20.7	critical	mean=	14.56
45	0.897	sat.	47	16	sat.		
47	1.084	sat.	50	17.6	unsat.		
50	1.004	sat.	53	15.8	sat.		
53	1.01	sat.	55	15	sat.		
55	0.98	sat.	57	13.7	sat.		
57	1.057	sat.	62	15.8	sat.		
62	0.99	sat.	65	9.8	critical		
65	0.94	sat.	66	15.9	sat.		
66	0.95	sat.	69	12	sat.		
69	0.92	sat.	74	11.94	sat.		
74	1.04	sat.	82	9.58	critical		
82	1.16	sat.	88	16.7	sat.		
88	0.95	sat.	90	13.01	sat.		
90	0.7	critical	91	12	sat.		
91	1.59	critical	92	21.6	critical		
92	0.86	sat.	96	12.4	sat.		
96	1.1	sat.	101	13.2	sat.		
101	1.1	sat.	115	16	sat.		
109	0.9	sat.	118	54	critical		
115	1.08	sat.	119	14.6	sat.		
118	1.05	sat.	120	15.7	sat.		
119	1.2	unsat.	127	18	unsat.		
120	0.93	sat.	130	16.4	sat.		
127	0.82	sat.	135	13.7	sat.		
130	1.08	sat.	139	14.44	sat.		
135	0.92	sat.	142	43.7	critical		
139	0.92	sat.	144	23.2	critical		
142	0.997	sat.	147	20.2	critical		
144	0.88	sat.	158	12.8	sat.		
147	0.833	sat.					
158	0.97	sat.					

کد آزمایشگاه Kav. (mg/kg)

کد آزمایشگاه Cuav. (mg/kg)

26	540	sat.		34	0.62	critical	
31	558	sat.		38	0.5106	critical	
34	420	unsat.		42	1.1	sat.	
38	515	sat.		45	1.33	unsat.	
42	538	sat.	mean= 505.46	47	1.212	sat.	mean= 1.08
45	540	sat.		50	1.19	sat.	
47	440	sat.		53	1.6	critical	
50	480	sat.		55	1.29	unsat.	
53	491	sat.		57	0.95	sat.	
55	462	sat.		62	0.84	unsat.	
57	475	sat.		65	0.09	critical	
62	510	sat.		66	0.99	sat.	
65	580	sat.		69	1.22	sat.	
66	488	sat.		88	1.06	sat.	
69	550	sat.		90	1.01	sat.	
74	411	unsat.		92	0.385	critical	
82	583.96	unsat.		96	1.06	sat.	
88	323.7	critical		101	1.06	sat.	
90	540.6	sat.		109	2.2	critical	
91	620	unsat.		115	0.37	critical	
92	434.5	sat.		119	0.78	critical	
96	470	sat.		120	1.61	critical	
101	470	sat.		127	0.34	critical	
109	447	sat.		130	2.14	critical	
115	449	sat.		142	1.06	sat.	
118	487	sat.		144	1.2	sat.	
119	510	sat.		147	1.08	sat.	
120	543.4	sat.		158	0.9	unsat.	
127	538	sat.					
130	478	sat.					
135	350	critical					
139	671	critical					
142	496	sat.					
144	576	sat.					
147	581	sat.					
158	572.2	sat.					

کد آزمایشگاه Znav. (mg/kg)

34	2.35	critical
42	3	sat.
45	6.5	critical
47	3.49	sat.
50	3.33	sat.
53	2.86	sat.
55	3.5	sat.
57	3.18	sat.
62	2.8	sat.
65	0.18	critical
66	3.1	sat.
69	3.53	unsat.
88	0.4	critical
90	2.7	unsat.
92	1.06	critical
96	2.74	unsat.
101	2.97	sat.
109	4.4	critical
115	2.37	critical
119	2.8	sat.
120	3.77	unsat.
127	1.72	critical
130	3.35	sat.
142	3.5	sat.
144	3.43	sat.
147	3.065	sat.
158	3.35	sat.

mean= 3.15

کد آزمایشگاه Feav. (mg/kg)

34	2.51	critical
38	1.1521	critical
42	30.9	sat.
45	47.5	unsat.
47	39.17	sat.
50	40.45	unsat.
53	17.5	sat.
55	39.93	unsat.
57	31.45	sat.
62	27.7	sat.
65	16.3	sat.
66	28.8	sat.
69	14.1	unsat.
88	3.64	critical
90	33	sat.
92	12.95	unsat.
96	22.78	sat.
101	28	sat.
109	32.4	sat.
115	8.11	unsat.
119	26.93	sat.
120	15.5	sat.
127	15.38	sat.
130	25.38	sat.
142	1.56	critical
144	39.8	unsat.
147	21.94	sat.
158	32.53	sat.

mean= 27.02

کد آزمایشگاه Mnav. (mg/kg)

34	31.29	sat.
42	34.4	sat.
45	69.4	critical
47	48.59	critical
50	45.77	critical
53	19.5	critical
55	45.93	critical
57	37.8	unsat.
62	27.6	sat.
65	1.17	critical
66	27	sat.
69	32.21	sat.
88	6.9	critical
90	36.4	sat.
92	27.9	sat.
96	25	unsat.
101	13.8	critical
109	45	critical
115	15.78	critical
119	31.82	sat.
120	49.24	critical
127	20.8	critical
130	26.78	sat.
142	14.78	critical
144	38.1	unsat.
147	31.2	sat.
158	36.57	sat.

mean= 31.72

کد آزمایشگاه Ca++ (mg/kg)

26	320.6	critical
31	408.81	unsat.
34	641.28	sat.
38	761.52	sat.
42	702	sat.
45	710	sat.
47	460.92	sat.
50	421.4	unsat.
53	641.28	sat.
55	40.08	critical
57	521.04	sat.
62	753.5	sat.
65	355.71	unsat.
88	368.73	unsat.
90	642.88	sat.
91	621.2	sat.
92	573.58	sat.
96	745.4	sat.
101	702	sat.
109	180.36	critical
115	629.25	sat.
119	661.3	sat.
127	405	unsat.
130	637.27	sat.
139	328	critical
142	29.6	critical
144	730	sat.
147	726.24	sat.
158	541.08	sat.

mean= 619.86

کد آزمایشگاه Mg⁺⁺(mg/kg)

26	388.8	critical
31	116.64	unsat.
34	170.1	sat.
38	121.5	sat.
42	175	sat.
45	180	sat.
47	145.8	sat.
50	136.08	sat.
53	182.25	sat.
55	53.46	critical
57	157.95	sat.
62	206.5	unsat.
65	92.1	unsat.
88	44.95	critical
90	177.14	sat.
91	218	unsat.
92	158.58	sat.
96	107.4	unsat.
101	130.8	sat.
109	60.75	critical
115	177.39	sat.
119	230.8	unsat.
127	80.26	critical
130	153.94	sat.
139	326.4	critical
142	14	critical
144	172.8	sat.
147	183.19	sat.
158	230.85	unsat.

mean= 161.63

کد آزمایشگاه Na⁺ (mg/kg)

26	200	sat.
31	119.6	critical
34	184	sat.
38	874	critical
42	170	unsat.
45	200	sat.
47	133.4	critical
50	8	critical
53	73.6	critical
55	195.5	sat.
57	322	critical
62	186.3	sat.
65	259.9	critical
69	131.56	critical
82	209.3	sat.
88	333.5	critical
90	190.67	sat.
91	218.5	sat.
92	178.3	sat.
96	177.1	sat.
101	184	sat.
109	124.2	critical
115	138	critical
119	191.59	sat.
120	207	sat.
127	421.59	critical
130	214.36	sat.
139	218.5	sat.
142	11.7	critical
144	223.1	unsat.
147	250.01	critical
158	499	critical

mean= 196.95

کد آزمایشگاه	K+(mg/kg)		کد آزمایشگاه	HCO3(mg/kg)	
26	42.99	sat.	26	366.06	sat.
38	1417.01	critical	31	305.05	sat.
42	51	sat.	34	396.5	sat.
45	33	sat.	38	244.04	unsat.
47	31.27	sat.	42	439	sat.
53	41.82	sat.	45	610	unsat.
55	1381.4	critical	47	549.09	sat.
57	39.09	sat.	53	549.09	sat.
62	36.35	sat.	55	341.6	sat.
65	2110.86	critical	57	549.09	sat.
69	57.83	unsat.	62	640.6	unsat.
90	39.48	sat.	65	498.45	sat.
92	44	sat.	69	586.82	sat.
96	44.56	sat.	74	76.26	critical
101	47.19	sat.	82	176.9	unsat.
115	1035.49	critical	88	213.53	unsat.
119	35.96	sat.	90	472.8	sat.
127	24.4	unsat.	91	274.54	unsat.
130	39.88	sat.	92	543	sat.
158	54.3	unsat.	96	427.07	sat.
			101	457.5	sat.
			109	610.1	unsat.
			115	228.78	unsat.
			119	183	unsat.
			120	366.06	sat.
			127	366.06	sat.
			130	610.1	unsat.
			139	561.2	sat.
			142	10	critical
			144	475.8	sat.
			147	854.14	critical
			158	396.56	sat.

mean= 42.58

mean= 447.35

کد آزمایشگاه	CI (mg/kg)	
26	354.5	critical
31	301.32	critical
34	398.81	sat.
38	425.4	sat.
42	408	sat.
45	390	unsat. mean= 434.22
47	425.4	sat.
53	620.37	critical
55	440.28	sat.
57	458.66	sat.
62	478.5	unsat.
65	496.3	unsat.
69	457.96	sat.
74	269.42	critical
82	479.25	unsat.
88	1028.05	critical
90	382.8	unsat.
91	354.5	critical
92	432.5	sat.
96	531.75	critical
101	461.5	sat.
109	194.97	critical
115	376.47	unsat.
119	425.4	sat.
120	460.85	sat.
127	283.6	critical
130	467.94	sat.
139	433.1	sat.
142	11.5	critical
144	482.8	unsat.
147	496.3	unsat.
158	398.81	sat.

Soil 5

میانگین گزارش شده، مربوط به داده های باقی مانده بعد از حذف داده های پرت می باشد.

کد آزمایشگاه	pH		کد آزمایشگاه	EC (ds/m)	
6	7.89	sat.	6	6.39	sat.
26	7.55	sat.	26	7.05	sat.
37	7.6	sat.	41	8.09	sat.
41	7.63	sat.	42	8.55	unsat.
42	7.7	sat.	51	7.25	sat.
51	7.77	sat.	67	6.1	unsat.
67	7.68	sat.	68	7.25	sat.
68	7.82	sat.	72	7.49	sat.
72	7.47	sat.	77	7.38	sat.
77	7.63	sat.	80	7.6	sat.
80	7.73	sat.	84	5.92	unsat.
84	7.8	sat.	88	2.34	critical
88	7.3	sat.	89	7.82	sat.
89	7.71	sat.	90	7.6	sat.
90	7.61	sat.	92	6.9	sat.
92	7.82	sat.	95	7.8	sat.
95	7.35	sat.	96	7.33	sat.
96	7.34	sat.	97	7.8	sat.
97	7.35	sat.	101	7.87	sat.
101	7.42	sat.	117	6.59	sat.
97	7.35	sat.	121	7.6	sat.
117	7.66	sat.	124	6.52	sat.
121	7.6	sat.	127	5.42	critical
124	7.83	sat.	140	7.56	sat.
127	7.43	sat.	141	7.1	sat.
140	7.45	sat.	144	7.5	sat.
141	7.49	sat.	149	6.66	sat.
144	7.5	sat.	156	7.1	sat.
149	7.68	sat.			
156	8.1	unsat.			

mean= 7.61

mean= 7.26

کد آزمایشگاه	SP (%)		کد آزمایشگاه	TNV (%)	
6	49.14	critical	6	32.25	critical
26	43.9	sat.	26	27.8	sat.
37	42.7	sat.	41	27.31	sat.
41	42.8	sat.	42	24.1	unsat.
42	40	critical	51	27.81	sat.
67	43.9	sat.	67	27.7	sat.
68	42	sat.	68	25.8	sat.
72	31.2	critical	72	26	sat.
77	44	sat.	77	26.3	sat.
80	45.5	sat.	80	29.5	unsat.
84	44.52	sat.	84	24.25	unsat.
88	53.96	critical	88	20	critical
89	44	sat.	89	26.5	sat.
90	29.96	critical	90	24.7	sat.
92	28.66	critical	92	27	sat.
95	48	critical	95	23.5	unsat.
96	49	critical	96	26.2	sat.
97	48	critical	97	23.5	unsat.
101	46	sat.	101	26.3	sat.
121	43.42	sat.	117	35.7	critical
124	45.2	sat.	121	27.67	sat.
127	41.78	unsat.	124	30	unsat.
140	43.3	sat.	127	31.25	critical
141	47.63	unsat.	140	25.22	sat.
144	43	sat.	141	22.72	critical
149	53	critical	144	28.5	sat.
156	44	sat.	149	27.75	sat.
			156	35.5	critical

mean= 43.98

mean= 26.65

کد آزمایشگاه	OC (%)		کد آزمایشگاه	Pav. (mg/kg)	
6	1.66	critical	6	17	sat.
26	0.97	sat.	26	22	unsat.
41	0.97	sat.	37	3	critical
42	0.98	sat.	41	20.01	sat.
51	0.961	sat.	42	16.5	sat.
67	0.98	sat.	51	20	sat.
68	0.95	sat.	67	16.9	sat.
72	0.94	sat.	68	18.2	sat.
77	0.94	sat.	72	11.2	critical
80	0.98	sat.	77	20.2	sat.
84	0.76	critical	80	18.1	sat.
88	1.11	critical	84	19.22	sat.
89	0.67	critical	88	12.1	unsat.
90	0.75	critical	89	17	sat.
92	0.84	unsat.	90	21.5	sat.
95	1.07	unsat.	92	31.2	critical
96	1	sat.	95	15.4	sat.
97	1.07	unsat.	96	15.4	sat.
101	1.01	sat.	97	15.4	sat.
117	0.91	sat.	101	15.9	sat.
121	1.76	critical	117	15	sat.
124	0.83	unsat.	121	20.8	sat.
127	0.78	critical	124	23	unsat.
140	0.93	sat.	127	24	unsat.
141	0.81	unsat.	140	17	sat.
144	0.9	sat.	141	17.4	sat.
149	0.9	sat.	144	26.7	critical
156	1.26	critical	149	117	critical
			156	16.76	sat.

mean= 0.95

mean= 17.86

کد آزمایشگاه Kav. (mg/kg)

6	260	sat.
26	320	unsat.
41	266.94	sat.
42	260	sat.
51	234	sat.
67	251	sat.
68	295	sat.
72	250	sat.
77	276	sat.
80	320	unsat.
84	250.7	sat.
88	449.8	critical
89	276	sat.
90	290.6	sat.
92	263	sat.
95	238	sat.
96	238	sat.
97	238	sat.
101	230	sat.
117	285	sat.
121	260	sat.
124	267	sat.
127	281	sat.
140	200	unsat.
141	209.3	unsat.
144	293	sat.
149	270	sat.
156	304	sat.

mean= 266.41

کد آزمایشگاه Cuav. (mg/kg)

41	1.221	sat.
42	1.2	sat.
51	0.94	sat.
67	1.5	sat.
68	0.689	unsat.
72	1.44	sat.
77	1.32	sat.
80	1.2	sat.
88	0.86	unsat.
89	1.48	sat.
90	1.28	sat.
92	0.59	unsat.
95	1.26	sat.
96	1.2	sat.
97	1.26	sat.
101	1.12	sat.
117	0.98	sat.
121	0.92	sat.
124	1.7	unsat.
127	0.42	critical
140	1.32	sat.
141	0.89	sat.
144	1.36	sat.
149	1.77	unsat.
156	1.48	sat.

mean= 1.21

کد آزمایشگاه Znav. (mg/kg)

41	0.689	unsat.
42	6	critical
51	0.48	critical
67	1.2	critical
68	0.945	critical
72	1.08	critical
77	0.74	sat.
80	0.78	sat.
88	2.4	critical
89	0.72	sat.
90	0.68	unsat.
92	0.37	critical
95	0.82	sat.
96	0.72	sat.
97	0.82	sat.
101	0.79	sat.
117	0.36	critical
121	0.4	critical
124	0.74	sat.
127	0.88	unsat.
140	0.85	sat.
141	0.92	unsat.
144	0.75	sat.
149	0.59	critical
156	1.03	critical

mean= 0.78

کد آزمایشگاه Feav. (mg/kg)

41	10.008	sat.
42	9.9	sat.
51	3.5	critical
67	5.6	unsat.
68	10.947	unsat.
72	8.5	sat.
77	10.28	sat.
80	1.08	critical
88	5.76	unsat.
89	9.09	sat.
90	8.01	sat.
92	5	critical
95	7.32	sat.
96	7	sat.
97	7.32	sat.
101	9	sat.
117	8.8	sat.
121	8.58	sat.
124	7	sat.
127	8.94	sat.
140	10.02	sat.
141	0.22	critical
144	10.55	unsat.
149	12.66	critical
156	8.54	sat.

mean= 8.56

کد آزمایشگاه Mnav. (mg/kg)

41	12.96	sat.
42	12.1	sat.
51	5.04	critical
67	9	unsat.
68	8.947	unsat.
72	12.5	sat.
77	14.58	unsat.
80	9.36	unsat.
88	18.22	critical
89	13.17	sat.
90	12.6	sat.
92	1.07	critical
95	10.86	sat.
96	10.16	unsat.
97	10.86	sat.
101	9.8	unsat.
117	12.08	sat.
121	13.3	sat.
124	12.02	sat.
127	11.74	sat.
140	10.4	sat.
141	7.33	critical
144	14.9	critical
149	17.02	critical
156	11.93	sat.

mean= 11.79

کد آزمایشگاه Ca++ (mg/kg)

6	521.04	sat.
26	400.8	unsat.
37	921.84	critical
41	661.32	unsat.
42	552	sat.
51	128.25	critical
67	581.16	sat.
68	488.97	sat.
72	470.9	sat.
77	550	sat.
80	500	sat.
88	380.76	unsat.
89	407.7	unsat.
90	534.4	sat.
92	426	sat.
95	340.68	critical
96	569.1	sat.
97	340.68	critical
101	546	sat.
121	440.88	sat.
124	1047.6	critical
127	244	critical
140	550.29	sat.
141	581.16	sat.
144	606	sat.
149	820.89	critical
156	541.08	sat.

mean= 522.57

کد آزمایشگاه Mg⁺⁺ (mg/kg)

6	281.8	sat.
26	352	sat.
37	145.8	critical
41	340.2	sat.
42	323	sat.
51	80.19	critical
67	243	sat.
68	318.3	sat.
72	321.97	sat.
77	216	unsat.
80	336	sat.
88	42.52	critical
89	305.4	sat.
90	288.5	sat.
92	257	sat.
95	170.1	unsat.
96	347.5	sat.
97	170.1	unsat.
101	344.4	sat.
121	340.2	sat.
124	262.44	sat.
127	97.28	critical
140	284.4	sat.
141	281.88	sat.
144	307.2	sat.
149	352.3	sat.
156	267.3	sat.

mean= 291.78

کد آزمایشگاه Na⁺ (mg/kg)

6	694.6	sat.
26	800.4	sat.
37	897	sat.
41	890.1	sat.
42	805	sat.
51	1313.76	critical
67	929.2	unsat.
68	736	sat.
72	816.5	sat.
77	634.8	sat.
80	816.5	sat.
84	664.7	sat.
88	25.3	critical
89	636.5	sat.
90	788.9	sat.
92	655	sat.
95	469.2	unsat.
96	460	unsat.
97	469.2	unsat.
101	446.2	unsat.
121	717.6	sat.
124	692.3	sat.
127	1668.88	critical
140	821	sat.
141	586.04	sat.
144	825.7	sat.
149	632.5	sat.
156	467.82	unsat.

mean= 694.11

کد آزمایشگاه	K+ (mg/kg)		کد آزمایشگاه	HCO3 (mg/kg)	
6	18.73	sat.	6	214.75	sat.
26	20.32	sat.	26	213.5	sat.
37	35.18	unsat.	37	427.07	critical
41	27.12	sat.	41	207.43	sat.
42	109	critical	42	171	critical
68	26.03	sat.	67	259.29	sat.
72	15.63	unsat.	68	278.2	unsat.
77	32.37	unsat.	72	244	sat.
80	27.3	sat.	77	201.3	sat.
89	38.4	critical	80	250.1	sat.
90	22.28	sat.	84	244	sat.
92	25.54	sat.	88	396.56	critical
95	24.23	sat.	89	207.7	sat.
96	24.23	sat.	90	213.5	sat.
97	24.23	sat.	92	226	sat.
101	25.74	sat.	95	213.53	sat.
121	15.94	unsat.	96	244.04	sat.
124	31	sat.	97	213.53	sat.
127	15.53	unsat.	101	259.25	sat.
140	23.3	sat.	121	152.52	critical
141	18.37	sat.	124	170.82	critical
149	934.2	critical	127	292.84	critical
156	25.799	sat.	140	237.9	sat.
			141	305.05	critical
			144	231.8	sat.
			149	244.04	sat.
			156	195.23	unsat.

mean= 24.87

mean= 229.95

کد آزمایشگاه	CI (mg/kg)		
6	1240.7	sat.	
26	10989.5	critical	
37	1329.3	sat.	mean= 1280.09
41	1661.54	critical	
42	1383	sat.	
51	251.69	critical	
67	1152.12	unsat.	
68	1223.02	sat.	
72	1169.8	unsat.	
77	1491	critical	
80	1313.5	sat.	
84	1639.5	critical	
88	336.77	critical	
89	1269	sat.	
90	1312.3	sat.	
92	1223	sat.	
95	1240.7	sat.	
96	1254.9	sat.	
97	1240.7	sat.	
101	1285.1	sat.	
121	1500.5	critical	
124	1382.5	sat.	
127	957.15	critical	
140	1279.7	sat.	
141	1329.37	sat.	
144	1412.9	unsat.	
149	177.2	critical	
156	567.2	critical	

Soil 6

میانگین گزارش شده، مربوط به داده های باقی مانده بعد از حذف داده های پرت می باشد.

کد آزمایشگاه	pH		کد آزمایشگاه	EC (ds/m)	
3	7.57	unsat.	3	1.05	sat.
7	7.78	sat.	7	1.93	critical
19	8.22	unsat.	19	1	sat.
27	7.95	sat.	27	0.82	unsat.
30	8	sat.	30	0.95	sat.
31	7.73	sat.	31	0.85	sat.
38	7.7	sat.	38	0.88	sat.
40	8.17	sat.	40	0.99	sat.
42	8.4	critical	42	1.03	sat.
47	7.88	sat.	47	1.1	sat.
51	7.87	sat.	51	1.1	sat.
65	8	sat.	65	0.89	sat.
77	7.96	sat.	77	0.99	sat.
78	7.43	critical	78	0.77	unsat.
86	7.9	sat.	86	1.02	sat.
93	7.9	sat.	93	1.1	sat.
108	7.85	sat.	108	1.11	sat.
109	7.83	sat.	109	3.7	critical
112	8.03	sat.	112	0.38	critical
116	7.89	unsat.	116	1.28	critical
117	8.07	sat.	117	1.81	critical
124	7.85	sat.	124	1	sat.
137	7.78	sat.	137	1.35	critical
138	7.72	sat.	138	1.04	sat.
140	8.01	sat.	140	1.01	sat.
147	7.93	sat.	147	1.088	sat.
149	7.46	critical	149	1.01	sat.
157	7.83	sat.	157	1.02	sat.

mean= 7.90

mean= 1.00

کد آزمایشگاه	SP (%)		کد آزمایشگاه	TNV (%)	
3	47.9	sat.	3	19	sat.
7	44	sat.	7	20.5	sat.
19	52	sat.	19	18.5	sat.
27	51	sat.	27	16	sat.
30	48.69	sat.	30	19.5	sat.
31	54.4	unsat.	31	18.5	sat.
38	49	sat.	38	16.5	sat.
40	47.98	sat.	40	24.34	critical
42	44	sat.	42	18	sat.
47	50	sat.	47	18.3	sat.
65	32.6	critical	51	13.27	unsat.
77	50	sat.	65	6.14	critical
78	48	sat.	77	16.6	sat.
86	46	sat.	78	20.5	sat.
93	48.9	sat.	86	19.125	sat.
108	44.47	sat.	93	19.5	sat.
109	45.48	sat.	108	15.54	sat.
112	44.3	sat.	109	18	sat.
116	53.63	sat.	116	18.67	sat.
124	50.4	sat.	117	9.5	critical
140	47.45	sat.	124	20	sat.
147	50.6	sat.	137	21.3	sat.
149	67	critical	138	21.69	sat.
			140	16.81	sat.
			147	14.98	sat.
			149	18.5	sat.
			157	16.25	sat.

mean= 48.49

mean= 18.15

کد آزمایشگاه	OC (%)		کد آزمایشگاه	Pav. (mg/kg)	
3	1.31	sat.	3	47.5	critical
7	1.86	critical	7	43	critical
19	1.03	sat.	19	61.2	sat.
27	1.23	sat.	27	78.5	critical
30	1.12	sat.	30	86.5	critical
31	1.25	sat.	31	45	critical
38	0.93	unsat.	40	56.63	sat.
40	2.28	critical	42	64.2	sat.
42	1.1	sat.	47	67	sat.
47	1.225	sat.	51	92	critical
51	1.11	sat.	65	60	sat.
65	1.03	sat.	77	59.3	sat.
77	1.1	sat.	78	62	sat.
78	1.14	sat.	86	28.44	critical
86	1.19	sat.	93	65	sat.
93	1.05	sat.	108	32.4	critical
108	1.214	sat.			sat.
109	1.3	sat.	112	56.8	sat.
112	0.94	sat.	116	70	sat.
116	1.19	sat.	117	54	unsat.
117	1.08	sat.	124	94	critical
124	0.97	sat.	137	87.6	critical
137	1.29	sat.	138	64	sat.
138	1.11	sat.	140	74.5	unsat.
140	1.148	sat.	147	64.9	sat.
147	1.12	sat.	149	295	critical
149	1.09	sat.	157	56.4	sat.
157	1.01	sat.			

mean= 1.13

mean= 62.40

كد آزمایشگاه Kav. (mg/kg)

3	271	sat.
7	382	critical
19	247	sat.
27	250	sat.
30	340	critical
31	264	sat.
38	220	sat.
40	246.8	sat.
42	234	sat.
47	220	sat.
51	254	sat.
65	280	unsat.
77	253	sat.
78	296	unsat.
86	244.2	sat.
93	270	sat.
108	216	unsat.
109	190	critical
112	230.8	sat.
116	221.4	sat.
117	245	sat.
124	236	sat.
137	355	critical
138	285.84	unsat.
140	181.8	critical
147	299	critical
149	250	sat.
157	258	sat.

mean= 247.48

كد آزمایشگاه Cuav. (mg/kg)

3	8.94	sat.
7	5.2	critical
27	8.4	sat.
30	5.23	critical
38	4.0854	critical
40	8.3	sat.
42	8.8	sat.
47	9.64	unsat.
51	5.96	critical
65	0.28	critical
77	9.2	sat.
78	8.3	sat.
93	4.35	critical
108	5	critical
109	11.2	critical
112	1.96	critical
116	8.9	sat.
117	7.7	unsat.
124	9.8	unsat.
137	4.4648	critical
138	8.42	sat.
140	9.45	sat.
147	9.36	sat.
149	17.82	critical

mean= 8.86

کد آزمایشگاه Znav. (mg/kg)

3	8.19	sat.		
7	8.8	sat.		
27	13.9	critical	mean=	9.95
30	10.8	sat.		
40	11.66	sat.		
42	11	sat.		
47	23.92	critical		
51	6.83	unsat.		
65	0.43	critical		
77	12.53	unsat.		
78	11.33	sat.		
93	5.2	critical		
108	0.8	critical		
109	10	sat.		
112	4.2	critical		
116	10.49	sat.		
117	3.2	critical		
124	7.26	unsat.		
137	4.225	critical		
140	16.14	critical		
147	10.92	sat.		
149	9.58	sat.		

کد آزمایشگاه Feav. (mg/kg)

3	26.02	sat.		
7	23.2	sat.		
27	51.2	critical	mean=	28.44
30	2.55	critical		
38	5.0843	critical		
40	27.5	sat.		
42	29.7	sat.		
47	43.25	critical		
51	20.63	unsat.		
65	14	critical		
77	37.5	unsat.		
78	28.6	sat.		
93	3.2	critical		
108	26.8	sat.		
109	35.8	unsat.		
112	5.84	critical		
116	32.73	sat.		
117	18	unsat.		
124	33.4	sat.		
137	8.5834	critical		
138	26.6	sat.		
140	58.19	critical		
147	31.66	sat.		
149	72.18	critical		

کد آزمایشگاه Mn^{av.} (mg/kg)

3	7.98	unsat.
7	30.3	critical
27	12	unsat.
30	3.38	critical
40	8.9	sat.
42	8.9	sat.
47	19.28	critical
51	4.8	critical
65	0.28	critical
77	12.16	unsat.
78	9.9	sat.
93	4.2	critical
108	10.7	sat.
109	19.8	critical
112	1.42	critical
116	10.82	sat.
117	8.16	unsat.
124	10.7	sat.
137	3.0036	critical
138	14.75	critical
140	11.46	sat.
147	10.1	sat.
149	15.7	critical

mean= 10.15

کد آزمایشگاه Ca⁺⁺ (mg/kg)

3	104.2	sat.
7	180	critical
19	80.16	sat.
27	84.16	sat.
30	68	sat.
31	56.11	sat.
38	120.24	sat.
40	96.7	sat.
42	3725	critical
47	60.12	sat.
51	6.02	critical
65	55.11	sat.
77	84	sat.
78	32.06	unsat.
86	82	sat.
93	96.19	sat.
108	50.1	sat.
109	981.96	critical
112	40.88	sat.
116	100.2	sat.
124	39.09	sat.
137	50.1	sat.
138	135.47	unsat.
140	92.18	sat.
147	109.21	sat.
149	171.99	critical
157	881.76	critical

mean= 77.92

کد آزمایشگاه Mg⁺⁺ (mg/kg)

کد آزمایشگاه Na⁺ (mg/kg)

3	29.16	sat.		3	69	unsat.	
7	84	critical		7	186.76	critical	
19	26.73	sat.		19	84.64	sat.	
27	18.22	sat.	mean= 23.54	27	85.1	sat.	mean= 92.98
30	19.2	sat.		30	69	unsat.	
31	14.58	sat.		31	89.7	sat.	
38	24.3	sat.		38	138	critical	
40	32.8	sat.		40	92.6	sat.	
42	363	critical		42	87	sat.	
47	36.45	sat.		47	85.1	sat.	
51	15.79	sat.		51	176.41	critical	
65	11.18	sat.		65	109.94	sat.	
77	19.2	sat.		77	85.1	sat.	
78	14.58	sat.		78	103.5	sat.	
86	46.8	unsat.		86	12.65	critical	
93	52.24	critical		93	55.2	critical	
108	54.67	critical		108	165.6	critical	
109	85.05	critical		109	250.7	critical	
112	24.3	sat.		112	25.3	critical	
116	41.31	unsat.		116	110.4	sat.	
124	48.6	unsat.		124	89.7	sat.	
137	6.07	unsat.		137	2249.4	critical	
138	18.71	sat.		138	184.46	critical	
140	12.15	sat.		140	112.9	sat.	
147	24.54	sat.		147	115	unsat.	
149	38.88	sat.		149	105.8	sat.	
157	19.44	sat.		157	86.25	sat.	

کد آزمایشگاه	K+ (mg/kg)		کد آزمایشگاه	HCO3 (mg/kg)	
7	25.74	critical	3	378.2	unsat.
19	14.01	sat.	7	829.6	critical
27	10.94	sat.	19	378.26	unsat.
30	11.7	sat.	27	244.04	sat.
38	361.58	critical	30	244	sat.
42	19	unsat.	31	224.04	unsat.
47	8.99	sat.	38	305.05	sat.
65	422.17	critical	40	207.4	unsat.
77	12.48	sat.	42	305	sat.
78	10.94	sat.	47	366.06	sat.
86	15.6	sat.	65	325.18	sat.
93	9.77	sat.	77	268.4	sat.
108	7.974	sat.	78	122.02	critical
112	58.63	critical	86	457.5	critical
116	471.81	critical	93	366.06	sat.
124	12.7	sat.	108	289.8	sat.
137	441.83	critical	109	640.6	critical
138	13.68	sat.	112	317.25	sat.
140	8.18	sat.	116	274.5	sat.
149	3471.2	critical	124	305	sat.
157	12.89	sat.	137	152.52	critical
			138	326.4	sat.
			140	262.3	sat.
			147	366.06	sat.
			149	219.6	unsat.
			157	341.65	sat.

mean= 12.061

mean= 305.34

کد آزمایشگاه	CI (mg/kg)		
3	99.26	sat.	
7	284	critical	
19	113.44	sat.	
27	77.99	unsat.	
30	142	sat.	mean= 114.556
31	124.07	sat.	
38	141.8	sat.	
40	62.1	unsat.	
42	106	sat.	
47	120.53	sat.	
51	38.99	critical	
65	82.6	sat.	
77	127.8	sat.	
78	42.54	critical	
86	155.31	unsat.	
93	116.98	sat.	
108	178.66	critical	
109	620.37	critical	
116	132.93	sat.	
124	141.8	sat.	
137	88.62	sat.	
138	168.38	unsat.	
140	113.4	sat.	
147	88.62	sat.	
149	88.6	sat.	
157	113.44	sat.	

در این قسمت از گزارش، رتبه بندی آزمایشگاه ها بر اساس پارامتر R ارائه شده است. برای محاسبه این پارامتر تعداد کل تجزیه های انجام شده توسط هر آزمایشگاه، تعداد پارامتر با درجه رضایتبخش (satisfy)، غیر رضایتبخش (unsatisfy) و بحرانی (critical) در نظر گرفته شده است.

ردیف	کد آزمایشگاه	sum sat.	um unsat	sum crit.	sum N	R
1	42	88	5	9.00	102	1.911764706
2	104	31	2	1.00	34	0.794117647
3	101	30	3	1.00	34	0.735294118
4	140	29	2	3.00	34	0.617647059
5	57	27	4	2.00	33	0.558823529
6	77	27	6	1.00	34	0.558823529
7	106	29	0	5.00	34	0.558823529
8	157	22	1	1.00	24	0.558823529
9	80	26	6	1.00	33	0.529411765
10	96	27	5	2.00	34	0.529411765
11	19	22	3	1.00	26	0.5
12	41	27	4	3.00	34	0.5
13	47	28	1	5.00	34	0.5
14	66	19	0	1.00	20	0.5
15	53	28	0	6.00	34	0.470588235
16	62	25	9	0.00	34	0.470588235
17	90	27	3	4.00	34	0.470588235
18	119	26	6	2.00	34	0.470588235
19	3	25	4	3.00	32	0.441176471
20	29	26	5	3.00	34	0.441176471
21	40	25	2	5.00	32	0.382352941
22	68	25	6	3.00	34	0.382352941
23	147	25	2	5.00	32	0.382352941
24	67	23	7	2.00	32	0.352941176
25	89	26	2	6.00	34	0.352941176
26	116	25	4	5.00	34	0.323529412
27	144	23	6	3.00	32	0.323529412
28	78	24	6	4.00	34	0.294117647
29	124	23	7	3.00	33	0.294117647
30	139	18	2	3.00	23	0.294117647
31	48	16	4	2.00	22	0.235294118
32	97	23	7	4.00	34	0.235294118
33	27	23	6	5.00	34	0.205882353
34	34	23	2	7.00	32	0.205882353
35	72	24	3	7.00	34	0.205882353
36	113	23	6	5.00	34	0.205882353
37	121	24	3	7.00	34	0.205882353
38	5	18	4	4.00	26	0.176470588
39	64	22	4	6.00	32	0.176470588
40	69	20	6	4.00	30	0.176470588

ردیف	کد آزمایشگاه	sum sat.	um unsai	sum crit.	sum N	R
41	94	22	8	4.00	34	0.176470588
42	152	12	2	2.00	16	0.176470588
43	26	18	3	5.00	26	0.147058824
44	120	19	4	5.00	28	0.147058824
45	158	23	4	7.00	34	0.147058824
46	6	18	0	7.00	25	0.117647059
47	84	13	4	3.00	20	0.088235294
48	50	17	3	6.00	26	0.058823529
49	30	22	3	9.00	34	0.029411765
50	55	21	6	7.00	34	0.029411765
51	92	22	3	9.00	34	0.029411765
52	118	9	0	4.00	13	0.029411765
53	135	8	1	3.00	12	0.029411765
54	141	21	6	7.00	34	0.029411765
55	31	14	6	4.00	24	0
56	38	18	2	8.00	28	0
57	138	18	8	5.00	31	0
58	91	14	5	5.00	24	-0.02941176
59	117	11	4	4.00	19	-0.02941176
60	86	16	2	8.00	26	-0.05882353
61	4	19	4	9.00	32	-0.08823529
62	115	19	8	7.00	34	-0.08823529
63	8	20	3	11.00	34	-0.14705882
64	37	10	1	7.00	18	-0.14705882
65	130	20	3	11.00	34	-0.14705882
66	108	20	2	12.00	34	-0.17647059
67	156	18	8	8.00	34	-0.17647059
68	54	9	7	6.00	22	-0.29411765
69	74	8	2	8.00	18	-0.29411765
70	93	19	1	14.00	34	-0.29411765
71	82	8	5	7.00	20	-0.32352941
72	46	17	5	12.00	34	-0.35294118
73	103	6	4	8.00	18	-0.41176471
74	112	15	2	14.00	31	-0.44117647
75	65	15	5	13.00	33	-0.47058824
76	45	14	8	12.00	34	-0.52941176
77	149	16	2	16.00	34	-0.52941176
78	51	12	3	14.00	29	-0.55882353
79	49	12	4	16.00	32	-0.70588235
80	109	12	2	17.00	31	-0.70588235
81	127	11	7	16.00	34	-0.82352941
82	137	10	4	18.00	32	-0.88235294
83	95	10	7	17.00	34	-0.91176471
84	142	9	2	19.00	30	-0.91176471
85	44	9	7	17.00	33	-0.94117647
86	7	10	4	20.00	34	-1

ردیف	کد آزمایشگاه	sum sat.	um unsai	sum crit.	sum N	R
87	88	7	6	19.00	32	-1.08823529

7.699032