

Ground water Quality Status (Tube well) of Cuttack, Bhubaneswar and Puri cities (2014)

Location → Parameter (Permissible limit, max. - IS :10500 :2012) ↓	Month	Cuttack					Bhubaneswar						Puri			
		Jagatpur Industrial area	Madhupatna- Kalyan nagar area	Bidanasi - Tulsipur area	Badambadi area	Ranihat - Mangalabag area	Khandagiri area	CapitalHospital	Samantaraypur	Jharpada	Chandrasekhar pur	Secretariat - Governor House- area	Badadanda	Mausima Mandir	Sea beach site	Baliapanda
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
pH (6.5 to 8.5)	A	7.1	7.0	7.2	6.9	7.7	6.1	7.5	6.4	7.0	7.7	7.4	7.9	8.3	8.4	8.3
	O	7.2	7.4	7.6	7.4	7.6	6.1	6.4	7.4	6.9	6.3	6.4	7.9	7.7	8.0	8.2
Conductivity, µS/cm	A	515	498	173	804	851	290	274	774	255	107	182	1017	761	1176	403
	O	842	222	163	661	248	143	245	652	427	235	149	988	855	1340	320
Biological Oxygen Demand, mg/l	A	0.4	0.1	0.2	0.3	0.2	0.5	0.5	0.4	0.3	0.1	0.4	0.3	0.6	0.1	0.2
	O	0.4	1.0	0.1	1.4	0.5	0.1	0.3	0.3	0.7	0.2	2.1	0.2	0.3	0.4	0.5
Chemical Oxygen Demand, mg/l	A	3.6	3.6	3.6	3.6	3.6	3.7	3.7	3.7	5.5	3.7	3.7	4.9	9.7	6.5	3.2
	O	3.0	5.9	3.0	5.9	4.4	3.0	1.5	1.5	1.5	3.0	3.0	2.7	6.7	5.4	2.7
Turbidity, NTU(5)	A	2.6	2.4	1.9	85.0	20.0	17.0	60.0	4.5	13.0	16.0	19.0	1.4	13.0	30.0	14.0
	O	0.9	5.0	0.9	9.5	8.4	2.5	0.7	2.8	1.0	0.3	0.6	5.4	1.2	5.2	6.5
Total Dissolved Solids, mg/l(2000)	A	282	256	104	420	444	164	156	456	144	60	108	578	450	734	214
	O	450	120	92	355	130	78	138	350	238	130	82	660	548	870	185
Total Fixed Solids, mg/l	A	260	238	82	430	420	160	152	424	140	50	102	555	420	706	188
	O	438	118	88	352	128	76	126	338	220	118	66	640	530	835	182
Total Alkalinity, mg/l (600)	A	256	126	56	226	186	8	28	120	34	12	38	222	212	152	86
	O	128.0	78.0	60.0	176.0	100.0	12.0	40.0	220.0	164.0	44.0	40.0	276.0	184.0	260.0	76.0
T. Hardness (as CaCO ₃), mg/l (600)	A	220	140	52	190	210	52	28	210	40	20	44	240	220	256	74
	O	170.0	88.0	68.0	152.0	94.0	14.0	46.0	206.0	178.0	54.0	32.0	320.0	220.0	290.0	140.0

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Ca, mg/l (200)	A	56.1	32.0	14.4	44.1	52.1	9.6	6.4	64.1	8.0	4.8	11.2	65.7	65.7	44.9	20.8
	O	40.9	18.4	16.0	33.6	22.4	3.2	9.6	51.3	48.1	12.8	6.4	77.7	72.1	42.5	20.0
Mg, mg/l(100)	A	19.4	14.6	3.9	19.4	19.4	6.8	2.9	12.2	4.9	1.9	3.9	18.5	13.6	35.0	5.3
	O	16.5	10.2	6.8	16.5	9.2	1.5	5.3	19.0	14.1	5.3	3.9	30.6	9.7	44.7	21.9
Chloride, mg/l (1000)	A	20.6	48.9	12.7	97.9	88.1	82.8	60.7	85.6	57.0	15.7	27.4	166.8	102.7	264.0	63.6
	O	142.1	6.9	6.9	78.4	8.8	23.5	42.1	56.0	13.7	32.3	14.7	162.1	162.0	284.2	14.7
Sulphate, mg/l (400)	A	3.1	25.1	10.8	32.1	52.0	3.5	9.0	110.2	1.2	1.4	9.2	53.4	35.8	91.7	12.9
	O	48.75	12.59	6.09	31.84	4.72	3.85	4.22	22.63	30.84	9.32	4.47	74.97	38.95	98.33	52.97
Nitrate as NO ₃ , mg/l (45)	A	5.504	30.467	0.932	3.505	46.968	42.854	1.638	36.421	25.351	9.855	2.566	48.502	40.994	46.075	1.117
	O	25.380	1.346	3.127	1.457	2.542	5.775	7.188	5.793	7.582	2.883	3.485	12.347	12.223	9.318	12.940
Ammonium-N, mg/l (0.5)	A	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	0.056	<0.056	<0.056	0.056
	O	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	0.056	2.184	<0.056	<0.056
Total Kjeldahl Nitrogen, mg/l	A	1.12	0.28	1.12	1.12	0.84	0.84	0.84	1.12	1.12	0.84	0.84	0.56	0.84	0.56	0.84
	O	0.28	0.28	0.56	0.28	0.28	0.56	0.28	0.56	0.56	0.28	0.28	0.56	5.04	0.56	0.56
Fluoride, mg/l (1.5)	A	0.264	0.134	0.149	0.195	0.118	0.119	0.105	0.115	0.134	0.171	0.125	0.068	0.151	0.110	0.198
	O	0.346	0.279	0.152	0.205	0.292	0.121	0.118	0.572	0.159	0.113	0.112	0.108	0.151	0.136	0.132
Phosphate-P, mg/l	A	0.194	0.248	0.164	0.093	0.460	0.172	0.223	0.078	0.219	0.050	0.084	2.391	1.278	0.046	0.196
	O	0.033	0.048	0.034	0.050	0.068	0.436	0.629	0.293	0.007	0.353	0.013	0.134	0.070	0.030	0.234
Sodium, mg/l	A	13.6	32.2	8.5	63.5	57.1	34.6	39.1	59.2	30.8	10.2	18.2	95.9	68.0	154.5	41.3
	O	83.35	4.45	4.47	51.34	5.78	15.39	27.66	30.14	9.07	21.38	9.67	92.25	91.85	188.00	9.60
Potassium, mg/l	A	2.7	5.9	1.3	12.6	12.0	9.2	10.8	12.8	10.8	2.1	4.6	21.2	15.1	20.9	11.1
	O	20.56	1.01	1.11	13.52	1.96	3.56	11.12	10.57	2.35	3.88	2.11	28.90	28.10	31.25	2.18
Boron, mg/l(1.0)	A	0.064	0.016	0.028	0.102	0.112	0.003	0.003	0.013	0.003	0.003	BDL	0.102	0.163	0.215	0.089
	O	0.105	0.07	0.073	0.115	0.086	0.044	0.032	0.118	0.032	0.041	0.051	0.279	0.186	0.131	0.121
Chromium (VI), mg/l	A	BDL	0.003	BDL	BDL	BDL	0.010	0.008	0.006	0.008	0.008	0.003	BDL	0.013	0.011	BDL
	O	0.011	0.013	0.003	0.008	0.016	0.008	0.010	0.006	0.003	0.006	0.010	0.010	0.025	0.003	0.018
Chromium, Total, mg/l (0.05)	A	0.003	0.033	0.043	0.026	0.011	0.028	0.035	0.024	0.042	0.031	0.038	0.035	0.030	0.032	0.032
	O	0.025	0.031	0.011	0.033	0.026	0.050	0.028	0.036	0.008	0.060	0.011	0.021	0.041	0.011	0.021
Iron, Total, mg/l (0.3)	A	BDL	0.076	0.372	9.078	0.418	0.056	12.590	2.780	7.090	0.857	6.248	0.117	0.398	0.066	1.545
	O	0.220	4.910	0.180	7.110	2.850	7.010	2.700	1.160	0.400	0.500	3.600	0.130	0.130	0.110	0.290
Mercury, mg/l(0.001)	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	O	0.00019	0.00076	0.00089	0.00038	0.00019	<0.00006	0.00064	0.00051	0.00045	0.00013	0.00057	0.00019	0.00070	0.00051	0.00006
Total Coliform,	A	23	<2	<2	<2	<2	<2	<2	<2	<2	<2	4	540	4	<2	<2

MPN/100ml (Absent)	O	<2	240	2	2	<2	<2	2	<2	49	23	79	<2	220	<2	2
Fecal Coliform, MPN/100ml (Absent)	A	4	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	130	<2	<2	<2
	O	<2	28	<2	<2	<2	<2	<2	<2	23	8	33	<2	13	<2	<2

BDL = Below Detection Limit

A : April

O : October