

RandWest Municipality Water Quality Report - 1 Month

21 April 2018 to 22 May 2018 Date generated: 01 June 2018

Determinand	Measurement units	Risk	Required compliance to SANS 241: 2015 standard (%)	SANS 241: 2015 standard limits (1)	No of results	Achieved Compliance to SANS 241: 2015 Spec(%)	Descriptive statistics		
							Mean	Standard Deviation	Mean + 3 standard deviations
Microbiological determinands									
<i>E. coli</i>	(mpn per 100 mL)	Acute health	99.0%	0	70	100.0%	0	0.00	0
Total Coliforms	(mpn per 100 mL)	Operational	95.0%	10	70	100.0%	0	0.00	0
Heterotrophic Plate Count	(cfu per 1 mL)	Operational	95.0%	≤1000	70	100.0%	2	3.49	15
<i>Cryptosporidium spp</i> (5)	(org / 10 Litre)	Acute health	99.0%	0	15	100.0%	0	0.00	0
<i>Giardia spp</i> (5)	(org / 10 Litre)	Acute health	99.0%	0	15	100.0%	0	0.00	0
Somatic Coliphages (5)	(count per 10 mL)	Operational	95.0%	0	79	100.0%	0	0.00	0
Physical and Aesthetic determinands									
Colour	(mg / L as Pt-Co)	Aesthetic	95.0%	≤15	3	100.0%	5.00	0.00	5.00
Conductivity	(mS / m)	Aesthetic	95.0%	≤170	70	100.0%	21.04	0.92	23.00
Total Dissolved Solids	(mg / L)	Aesthetic	95.0%	≤1200	3	100.0%	153.33	5.77	159.80
Turbidity	(NTU)	Operational	95.0%	≤1	66	100.0%	0.33	0.07	0.47
Turbidity	(NTU)	Aesthetic	95.0%	≤5	66	100.0%	0.33	0.07	0.47
pH	(pH units)	Operational	95.0%	≥ 5 to ≤ 9.7	70	100.0%	7.95	0.10	8.17
Chemical Properties									
Macro determinands									
Ammonia	(mg / L as N)	Aesthetic	95.0%	≤1.5	70	100.0%	0.35	0.05	0.45
Chloride	(mg / L as Cl)	Aesthetic	95.0%	≤300	4	100.0%	11.25	0.50	11.97
Free chlorine (2)	(mg / L as Cl ₂)	Chronic health	97.0%	≤5	70	100.0%	0.11	0.12	0.57
Monochloramine (3)	(mg / L as Cl ₂)	Chronic health	97.0%	≤4.1	70	100.0%	1.52	0.37	1.95
Fluoride	(mg / L as F)	Chronic health	97.0%	≤1.5	4	100.0%	0.19	0.00	0.19
Nitrate	(mg / L as N)	Acute health	99.0%	≤11	70	100.0%	0.44	0.00	0.44
Nitrite	(mg / L as N)	Acute health	99.0%	≤0.9	70	100.0%	0.03	0.00	0.03
Combined nitrate plus nitrite (7)	(mg / L as N)	Acute health	99.0%	≤1	69	100.0%	0.07	0.00	0.07
Residual disinfectant (4)	(mg / L)	Operational	95.0%	≥0.1 Sum of Free and Monochloramine	70	100.0%	1.64	0.31	2.15
Sodium	(mg / L as Na)	Aesthetic	95.0%	≤200	4	100.0%	9.80	0.16	9.99
Sulphate	(mg / L as SO ₄)	Aesthetic	95.0%	≤250	4	100.0%	15.25	0.50	15.97
Sulphate	(mg / L as SO ₄)	Acute health	99.0%	≤500	4	100.0%	15.25	0.50	15.97
Zinc	(mg / L as Zn)	Aesthetic	95.0%	≤5	4	100.0%	0.02	0.00	0.02
Micro determinands									
Aluminium	(µg / L as Al)	Operational	95.0%	≤300	4	100.0%	43.25	17.00	66.31
Antimony	(µg / L as Sb)	Chronic health	97.0%	≤20	3	100.0%	0.50	0.00	0.50
Arsenic	(µg / L as As)	Chronic health	97.0%	≤10	3	100.0%	0.99	0.12	1.10
Barium	(µg / L as Ba)	Chronic health	97.0%	≤700	4	100.0%	45.25	0.50	45.97
Boron	(µg / L as B)	Chronic health	97.0%	≤2400	4	100.0%	25.00	0.00	25.00
Cadmium	(µg / L as Cd)	Chronic health	97.0%	≤3	3	100.0%	2.50	0.00	2.50
Chromium (Total)	(µg / L as Cr)	Chronic health	97.0%	≤50	4	100.0%	15.00	0.00	15.00
Copper	(µg / L as Cu)	Chronic health	97.0%	≤2000	4	100.0%	10.50	1.00	11.94
Cyanide (Recoverable)	(µg / L as CN)	Acute health	99.0%	≤200	3	100.0%	5.00	0.00	5.00
Iron	(µg / L as Fe)	Chronic health	97.0%	≤2000	4	100.0%	27.03	18.42	51.25
Iron	(µg / L as Fe)	Aesthetic	95.0%	≤300	4	100.0%	27.03	18.42	51.25
Lead	(µg / L as Pb)	Chronic health	97.0%	≤10	3	100.0%	0.20	0.00	0.20
Manganese	(µg / L as Mn)	Chronic health	97.0%	≤400	4	100.0%	10.00	0.00	10.00
Manganese	(µg / L as Mn)	Aesthetic	95.0%	≤100	4	100.0%	10.00	0.00	10.00
Mercury	(µg / L as Hg)	Chronic health	97.0%	≤6	3	100.0%	0.80	0.00	0.80
Nickel	(µg / L as Ni)	Chronic health	97.0%	≤70	4	100.0%	10.00	0.00	10.00
Selenium	(µg / L as Se)	Chronic health	97.0%	≤40	3	100.0%	0.50	0.00	0.50
Uranium	(µg / L as U)	Chronic health	97.0%	≤30	3	100.0%	0.20	0.00	0.20
Organic determinands									
Total Organic Carbon	(mg / L)	Chronic health	97.0%	≤10	3	100.0%	3.30	0.10	3.40
Phenols as C ₆ H ₅ OH	(µg / L)	Aesthetic	95.0%	≤10	3	100.0%	5.00	0.00	5.00
Chloroform - CHCl ₃	(µg / L)	Chronic health	97.0%	≤300	4	100.0%	32.00	0.82	32.97
Bromoform - CHBr ₃	(µg / L)	Chronic health	97.0%	≤100	4	100.0%	0.50	0.00	0.50
Dibromochloromethane - CHBr ₂ Cl	(µg / L)	Chronic health	97.0%	≤100	4	100.0%	3.03	0.10	3.10
Bromodichloromethane - CHBrCl ₂	(µg / L)	Chronic health	97.0%	≤60	4	100.0%	14.25	0.50	14.97
Combined trihalomethanes (8)	(µg / L)	Chronic health	97.0%	≤1	4	100.0%	0.38	0.01	0.40
Total Microcystin (5)	(µg / L)	Chronic health	97.0%	≤1	16	100.0%	0.31	0.00	0.31
For monitoring/reporting purposes only (6)									
Calcium	(mg / L as Ca)	Aesthetic	not applicable	≤150	4	100.0%	17.00	0.00	17
Hardness	(mg / L as CaCO ₃)	Operational	not applicable	≥ 20 to ≤ 200	4	100.0%	67.25	0.50	67.97
Magnesium	(mg / L as Mg)	Aesthetic	not applicable	≤70	4	100.0%	7.20	0.08	7.30
Potassium	(mg / L as K)	Aesthetic	not applicable	≤50	4	100.0%	3.58	0.05	3.60
Rand Water Risk Determinands (RWRD)									
Odour	TON	RWRD	95.0%	≤2	35	100.0%	1.00	0.00	1.00
Taste	FTN	RWRD	95.0%	≤2	35	100.0%	1.00	0.00	1.00

Risk	Required compliance to SANS 241: 2015 standard	Overall Compliance-SANS 241
Acute health microbiological	99.00%	100.00%
Acute health chemical	99.00%	100.00%
Chronic health	97.00%	100.00%
Aesthetic	95.00%	100.00%
Operational	95.00%	100.00%

- Notes:**
- Specification date of effect : 1 July 2016
 - Free chlorine : Results from chloraminated system
 - Monochloramine : Results are from the chloraminated systems
 - Residual disinfectant : Results from chloraminated system
 - Measured at water treatment works exit points
 - Customer request: Results not included in the risk indices compliance calculations
 - (NO₂/0.9 + NO₃/11)
 - (CHCl₃/300 + CHBr₃/100 + CHBr₂Cl/100 + CHBrCl₂/60)