

Item	Service	Unit R/cents	2018/19 Total Excl VAT	Vat	2018/19 Total VAT Incl.	2019/20 Total Excl VAT	Vat	2019/20 Total VAT Incl.
2.9	SCIENTIFIC SERVICES							
	Analytical Parameter							
	Physical/Chemical Water Analysis							
	A minimum sample charge of R529.00 applied in 2018/19							
	A minimum sample charge of R609.00 applied in 2019/20							
	pH	R/ sample	47.19	7.08	54.27	50.49	7.57	58.06
	Electrical conductivity **	R/ sample	54.64	8.20	62.83	58.46	8.77	67.23
	Colour *	R/ sample	38.50	5.77	44.27	41.19	6.18	47.37
	Turbidity *	R/ sample	38.50	5.77	44.27	41.19	6.18	47.37
	Total dissolved solids **	R/ sample	78.23	11.73	89.97	83.71	12.56	96.27
	Total, carbonate & bicarbonate alkalinity *	R/ sample	50.91	7.64	58.55	54.48	8.17	62.65
	Total hardness + calcium & magnesium*	R/ sample	187.51	28.13	215.64	200.64	30.10	230.73
	Calcium *	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Magnesium *	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Sodium *	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Potassium *	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Chloride **	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Sulphate **	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Nitrate + nitrite *	R/ sample	116.73	17.51	134.24	124.90	18.73	143.63
	Fluoride *	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Phosphorus	R/ sample	116.73	17.51	134.24	124.90	18.73	143.63
	Silica	R/ sample	116.73	17.51	134.24	124.90	18.73	143.63
	Aluminium	R/ sample	149.01	22.35	171.37	159.45	23.92	183.36
	Free & Total Residual Chlorine	R/ sample	93.13	13.97	107.10	99.65	14.95	114.60
	Boron by ICP	R/ sample	116.73	17.51	134.24	124.90	18.73	143.63

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	Water for Potability Purposes - all *** parameters, Iron, Aluminium, Manganese & Microbiological parameters		2,046.26	306.94	2,353.20	2,189.50	328.43	2,517.93
	Water for irrigation purposes - all ** parameters includes pH, EC, TDS, TA, Cl, SO4. Extras are Na & B.		418.48	62.77	481.26	447.78	67.17	514.94
	Drinking Water to full SABS 241-2001 specification, but excluding somatic coliphages, enteric viruses & protozoan parasites.		4,063.14	609.47	4,672.61	4,347.55	652.13	4,999.69
	Water for Bottling to full SABS 1657-1996 spec. excl. organochlorinepesticides, PCB's and organophosphate pesticides.		2,857.36	428.60	3,285.96	3,057.37	458.61	3,515.98
	Sewage/Effluent/Sludge Analyses							
	Ammoniacal nitrogen		130.39	19.56	149.95	139.52	20.93	160.44
	Biochemical oxygen demand		222.28	33.34	255.62	237.84	35.68	273.52
	Chemical oxygen demand		122.94	18.44	141.38	131.54	19.73	151.27
	Methylene Blue Active Substances (Detergents)		351.43	52.71	404.14	376.03	56.40	432.43
	Moisture		47.19	7.08	54.27	50.49	7.57	58.06
	Nitrate nitrogen		116.73	17.51	134.24	124.90	18.73	143.63
	Nitrite nitrogen		116.73	17.51	134.24	124.90	18.73	143.63
	Permanganate value		68.30	10.24	78.54	73.08	10.96	84.04
	Settleable solids		38.50	5.77	44.27	41.19	6.18	47.37
	Settleable solids for SVI & DSVI		47.19	7.08	54.27	50.49	7.57	58.06
	Suspended solids		43.46	6.52	49.98	46.51	6.98	53.48
	Total & Volatile Solids		93.13	13.97	107.10	99.65	14.95	114.60
	Total Kjeldahl nitrogen		218.55	32.78	251.34	233.85	35.08	268.93
	Total/Dissolved Organic Carbon		139.08	20.86	159.94	148.82	22.32	171.14
	Miscellaneous Analyses						-	
	Boron by ICP		126.66	19.00	145.66	135.53	20.33	155.86
	Cyanide - solid & liquid samples		140.32	21.05	161.37	150.14	22.52	172.67
	Phenols		180.06	27.01	207.07	192.66	28.90	221.56
	Sulphide		136.60	20.49	157.09	146.16	21.92	168.08

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	All Metals by ICP/AA - per element		126.66	19.00	145.66	135.53	20.33	155.86
	Mercury or Arsenic or Selenium		253.33	38.00	291.32	271.06	40.66	311.72
	A suite of 8 or more Metals by ICP per element							
	Chromium (hexavalent)		116.73	17.51	134.24	124.90	18.73	143.63
	Soil Analysis - Ambic 1 - P, Na, K, Ca & Mg		702.85	105.43	808.28	752.05	112.81	864.86
	Calorific Value		546.39	81.96	628.35	584.63	87.70	672.33
	Cement content of mortars		406.07	60.91	466.97	434.49	65.17	499.66
	Compost/manure analysis - TKN, P, K etc.		781.09	117.16	898.25	835.76	125.36	961.13
	Fat - Feedstuffs		212.35	31.85	244.20	227.21	34.08	261.29
	Flash point		180.06	27.01	207.07	192.66	28.90	221.56
	Oil & Grease - petroleum ether extraction		273.19	40.98	314.17	292.32	43.85	336.16
	Pesticides - minimum		546.39	81.96	628.35	584.63	87.70	672.33
	Trihalomethanes (THM's)		136.60	20.49	157.09	146.16	21.92	168.08
	Flocculation Testing - minimum x complexity factor		1,405.71	210.86	1,616.56	1,504.11	225.62	1,729.72
	Distilled Water/ litre		8.69	1.30	10.00	9.30	1.40	10.70
	Microbiological & bacteriological Analyses							
	Milk & Dairy Samples							
	Total bacterial count		93.13	13.97	107.10	99.65	14.95	114.60
	Total coliform count		67.06	10.06	77.12	71.75	10.76	82.51
	E. coli - presence/absence		70.78	10.62	81.40	75.74	11.36	87.10
	Ethanol stability		43.46	6.52	49.98	46.51	6.98	53.48
	Phosphatase activity		64.57	9.69	74.26	69.09	10.36	79.46
	Antibiotics & Inhibitory Substances		43.46	6.52	49.98	46.51	6.98	53.48
	Coulter Count - Particle Count		70.78	10.62	81.40	75.74	11.36	87.10
	Water Samples							
	Total coliform count		109.28	16.39	125.67	116.93	17.54	134.47
	Faecal coliform count		109.28	16.39	125.67	116.93	17.54	134.47
	E. coli count		149.01	22.35	171.37	159.45	23.92	183.36
	Total bacterial count		70.78	10.62	81.40	75.74	11.36	87.10
	Enterococci		109.28	16.39	125.67	116.93	17.54	134.47
	Clostridia		148.70	22.30	171.00	159.10	23.87	182.97
	Pseudomonas		148.70	22.30	171.00	159.10	23.87	182.97