

QUALITY OF WATER SUPPLIED FROM WELBEDACHT PLANT IN CALEDON REGION

July 2019 – June 2020

Microbiological determinants

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Heterotrophic Plate Count	Count/1ml	≤1000	≥99	100	507	0	Operational
Total Coliform	Count/100ml	≤10	≥99	99.2	507	4	Operational
<i>E. coli</i>	Count/100ml	0	≥99	99.6	507	2	Acute health
Faecal Coliform	Count/100ml	0	≥99	100	507	0	Acute health

Physical and aesthetic Requirements

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Colour	mg/L Pt-Co	≤15	≥93	20	10	8	Aesthetic
Conductivity at 25°C	mS/m	≤170	≥93	100	119	0	Aesthetic
pH at 25°C	pH units	≥5.0 to ≤9.7	≥93	100	119	0	Operational
Turbidity	NTU	≤1.0	≥93	6.7	119	111	Operational
	NTU	≤5	≥93	98.3	119	2	Aesthetic
Total dissolved solids	mg/L	≤1 200	≥93	100	119	0	Aesthetic

Chemical Requirements – macro-determinants

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Free Chlorine as Cl ₂	mg/L	≤5	≥95	100	119	0	Chronic Health
Ammonia as N	mg/L	≤1.5	≥93	100	10	0	Aesthetic
Chloride as Cl ⁻	mg/L	≤300	≥93	100	119	0	Aesthetic
Fluoride as F ⁻	mg/L	≤1.5	≥95	100	119	0	Chronic health
TOC	mg/L as C	<10	≥95	100	119	0	Chronic Health
Combined trihalomethane ^h	mg/L	≤1	≥95	100	10	0	Chronic Health

Chemical Requirements – micro-determinants

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Arsenic as As	mg/L	≤0.01	≥95	100	10	0	Chronic Health
Iron as Fe	mg/L	≤2.0	≥95	100	119	0	Chronic Health
	mg/L	≤0.3	≥93	100	119	0	Aesthetic
Manganese as Mn	mg/L	≤0.4	≥95	100	119	0	Chronic Health
	mg/L	≤0.1	≥93	99.2	119	1	Aesthetic
Aluminium as Al	mg/L	≤0.3	≥93	100	119	0	Operational
Copper as Cu	mg/L	≤2	≥95	100	10	0	Chronic health

Caledon river region supply drinking water to Wepener, Dewetsdorp, Reddersburg, Edenburg and Bloemfontein. This water is analysed regularly and compared to the SANS 241.2015. Further information on the water quality is available at the following website www.bloemwater.co.za or www.dwa.gov.za/mywater

QUALITY OF WATER SUPPLIED FROM RUSTFONTEIN PLANT IN MODDER RIVER REGION

01 July 2019 – 30 June 2020

Microbiological determinants

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Heterotrophic Plate Count	Count/1ml	≤1000	≥93	100	45	0	Operational
Total Coliform	Count/100ml	≤10	≥93	100	45	0	Operational
E. Coli	Count/100ml	0	≥99	100	45	0	Acute health
Fecal Coliform	Count/100ml	0	≥99	100	45	0	Acute health

Physical and Chemical Requirements

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Free Chlorine as Cl ₂	mg/L	≤5	≥95	100	57	0	Chronic Health
Colour	mg/L Pt-Co	≤15	≥93	100	1	0	Aesthetic
Conductivity at 25°C	mS/m	≤170	≥93	100	12	0	Aesthetic
pH at 25°C	pH units	≥5.0 to ≤9.5	≥93	100	12	0	Operational
Turbidity	NTU NTU	≤1.0 ≤5	≥93 ≥93	75 100	12 12	3 0	Operational Aesthetic
Total dissolved solids	mg/L	≤1 200	≥93	100	12	0	Aesthetic

Chemical Requirements – macro-determinants

Ammonia as N	mg/L	≤1.5	≥93	100	12	0	Aesthetic
Chloride as Cl ⁻	mg/L	≤300	≥93	100	12	0	Aesthetic
Fluoride as F ⁻	mg/L	≤1.5	≥95	100	12	0	Chronic health
TOC	mg/L as C	<10	≥95	100	12	0	Chronic Health
Combined trihalomethane ^h	mg/L	≤1	≥95	100	1	0	Chronic Health

Chemical Requirements – micro-determinants

Arsenic as As	mg/L	≤0.01	≥95	100	1	0	Chronic Health
Iron as Fe	mg/L	≤2.0	≥95	100	12	0	Chronic Health
	mg/L	≤0.3	≥93	100	12	0	Aesthetic
Manganese as Mn	mg/L	≤0.4	≥95	100	12	0	Chronic Health
	mg/L	≤0.1	≥93				Aesthetic
Aluminium as Al	mg/L	≤0.3	≥93	100	12	0	Operational
Copper as Cu	mg/L	≤2	≥95	100	1	0	Chronic health

Modder River Region supply drinking water to Botshabelo, Thaba Nchu, Excelsior and partially to Bloemfontein. This water is tested regularly and is compared to the SANS 241.2015. Further information on the water quality is available at the following web site www.bloemwater.co.za or www.dwa.gov.za/mywater

QUALITY OF WATER SUPPLIED FROM GROOTHOEK PLANT IN MODDER RIVER REGION

01 July 2019 – 30 June 2020

Microbiological determinants

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Heterotrophic Plate Count	Count/1ml	≤1000	≥93	100	45	0	Operational
Total Coliform	Count/100ml	≤10	≥93	100	45	0	Operational
E. Coli	Count/100ml	0	≥99	100	45	0	Acute health
Fecal Coliform	Count/100ml	0	≥99	100	45	0	Acute health

Physical and Chemical Requirements

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Free Chlorine as Cl ₂	mg/L	≤5	≥95	100	56	0	Chronic Health
Colour	mg/L Pt-Co	≤15	≥93	100	1	0	Aesthetic
Conductivity at 25°C	mS/m	≤170	≥93	100	11	0	Aesthetic
pH at 25°C	pH units	≥5.0 to ≤9.5	≥93	100	11	0	Operational
Turbidity	NTU	≤1.0	≥93	45	11	6	Operational
	NTU	≤5	≥93	100	11	0	Aesthetic
Total dissolved solids	mg/L	≤1 200	≥93	100	11	0	Aesthetic

Chemical Requirements – macro-determinants

Ammonia as N	mg/L	≤1.5	≥93	100	11	0	Aesthetic
Chloride as Cl ⁻	mg/L	≤300	≥93	100	11	0	Aesthetic
Fluoride as F ⁻	mg/L	≤1.5	≥95	100	11	0	Chronic health
TOC	mg/L as C	<10	≥95	81	11	2	Chronic Health
Combined trihalomethane ^h	mg/L	≤1	≥95	100	1	0	Chronic Health

Chemical Requirements – micro-determinants

Arsenic as As	mg/L	≤0.01	≥95	100	1	0	Chronic Health
Iron as Fe	mg/L	≤2.0	≥95	100	11	0	Chronic Health
	mg/L	≤0.3	≥93	100	11	0	Aesthetic
Manganese as Mn	mg/L	≤0.4	≥95	100	11	0	Chronic Health
	mg/L	≤0.1	≥93				Aesthetic
Aluminium as Al	mg/L	≤0.3	≥93	100	11	0	Operational
Copper as Cu	mg/L	≤2	≥95	100	1	0	Chronic health

Modder River Region supply drinking water to Botshabelo, Thaba Nchu, Excelsior and partially to Bloemfontein. This water is tested regularly and is compared to the SANS 241.2015. Further information on the water quality is available at the following website. www.bloemwater.co.za or www.dwa.gov.za/mywater

QUALITY OF WATER SUPPLIED FROM BETHULIE PLANT IN ORANGE RIVER REGION

01 July 2019 – 30 June 2020

Microbiological determinants

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Heterotrophic Plate Count	Count/1ml	≤1000	≥93	100	46	0	Operational
Total Coliform	Count/100ml	≤10	≥93	100	46	0	Operational
E. Coli	Count/100ml	0	≥99	100	46	0	Acute health
Faecal Coliform	Count/100ml	0	≥99	100	46	0	Acute health

Physical and Chemical Requirements

Determinand	Unit	Standard Limit	Compliance Target %	Compliance Achieved %	Number of tests	Number of non-compliances	Risk
Free Chlorine as Cl ₂	mg/L	≤5	≥95	100	46	0	Chronic Health
Colour	mg/L Pt-Co	≤15	≥93	100	1 annually	0	Aesthetic
Conductivity at 25°C	mS/m	≤170	≥93	100	12	0	Aesthetic
pH at 25°C	pH units	≥5.0 to ≤9.5	≥93	100	12	0	Operational
Turbidity	NTU	≤1.0	≥93	100	12	0	Operational
	NTU	≤5	≥93	100	12	0	Aesthetic
Total dissolved solids	mg/L	≤1 200	≥93	100	12	0	Aesthetic

Chemical Requirements – macro-determinants

Ammonia as N	mg/L	≤1.5	≥93	100	12	0	Aesthetic
Chloride as Cl ⁻	mg/L	≤300	≥93	100	12	0	Aesthetic
Fluoride as F ⁻	mg/L	≤1.5	≥95	100	12	0	Chronic health
TOC	mg/L as C	<10	≥95	100	12	0	Chronic Health
Combined trihalomethane ^h	mg/L	≤1	≥95	100	1 annually	0	Chronic Health

Chemical Requirements – micro-determinants

Arsenic as As	mg/L	≤0.01	≥95	100	1 annually	0	Chronic Health
Iron as Fe	mg/L	≤2.0	≥95	100	12	0	Chronic Health
	mg/L	≤0.3	≥93	100	12	0	Aesthetic
Manganese as Mn	mg/L	≤0.4	≥95	100	12	0	Chronic Health
	mg/L	≤0.1	≥93	100	12	0	Aesthetic
Aluminium as Al	mg/L	≤0.3	≥93	100	12	0	Operational
Copper as Cu	mg/L	≤2	≥95	100	1 annually	0	Chronic health

Bethulie water plant supplies water to Bethulie, Springfontein and Trompsburg. This water is tested regularly and is compared to the SANS 241.2015. Further information on the water quality is available at the following website

www.bloemwater.co.za or www.dwa.gov.za/mywater