

## DRINKING WATER SANS 241 - 1:2015

The limits and associated risks for domestic water as determined by the South African National Standard (SANS) 241:2015 are as follows, where:

- Health risks: parameters falling outside these limits may cause acute or chronic health problems in individuals.
- Aesthetic risks: parameters falling outside these limits indicate that water is visually, aromatically or palatably unacceptable.
- Operational risks: parameters falling outside these limits may indicate that operational procedures to ensure water quality standards are met may have failed.

<b>MICROBIOLOGICAL DETERMINANDS</b>		
	Risk	Limits
<i>E.coli</i> or faecal coliforms count/100ml	Acute health	Not detected
Cryptosporidium species count/10L	Acute health	Not detected
Giardia species count/10L	Acute health	Not detected
Total coliforms count/100ml	Operational	≤10
Heterotrophic plate count count/1ml	Operational	≤1000
Somatic coliphages count/10ml	Operational	Not detected
<b>PHYSICAL, AESTHETIC, OPERATIONAL AND CHEMICAL DETERMINANDS</b>		
<b>Physical and aesthetic determinands</b>		
Colour mg/l Pt-Co	Aesthetic	≤15
Conductivity at 25°C mS/m	Aesthetic	≤170
Total dissolved solids mg/l	Aesthetic	≤1200
Turbidity NTU	Operational	≤1
	Aesthetic	≤5
pH at 25°C	Operational	≥5 to ≤9.7
<b>Chemical determinands – macro-determinands</b>		
Free Chlorine mg/l	Chronic health	≤5
Monochloramine mg/l	Chronic health	≤3
Nitrate as N mg/l	Acute health	≤11
Nitrite as N mg/l	Acute health	≤0.9
Sulphate as SO <sub>4</sub> mg/l	Acute health	≤500
	Aesthetic	≤250
Fluoride mg/l	Chronic health	≤1.5
Ammonia as N mg/l	Aesthetic	≤1.5
Chloride mg/l	Aesthetic	≤300
Sodium as Na mg/l	Aesthetic	≤200
Zinc as Zn mg/l	Aesthetic	≤5
<b>Chemical determinands – micro-determinands</b>		
Antimony as Sb µg/l	Chronic health	≤20
Arsenic as As µg/l	Chronic health	≤10



Barium as Ba µg/l	Chronic health	≤700	
Boron as B µg/l	Chronic health	≤2400	
Cadmium as Cd µg/l	Chronic health	≤3	
Chromium as Cr µg/l	Chronic health	≤50	
Copper as Cu µg/l	Chronic health	≤2000	
Cyanide µg/l	Acute health	≤200	
Iron as Fe µg/l	Chronic health	≤2000	
	Aesthetic	≤300	
Lead as Pb µg/l	Chronic health	≤10	
Manganese as Mn µg/l	Chronic health	≤400	
	Aesthetic	≤100	
Mercury as Hg µg/l	Chronic health	≤6	
Nickel as Ni µg/l	Chronic health	≤70	
Selenium as Se µg/l	Chronic health	≤40	
Uranium as U µg/l	Chronic health	≤30	
Aluminium as Al µg/l	Operational	≤300	
<b>Chemical determinands – organic determinands</b>			
Total organic carbon as C mg/l	Chronic health	≤10	
Trihalomethanes			
	Chloroform µg/l	Chronic health	≤300
	Bromoform µg/l	Chronic health	≤100
	Dibromochloromethane µg/l	Chronic health	≤100
	Bromodichloromethane µg/l	Chronic health	≤60
Combined trihalomethane	Chronic health	≤1	
Total microcystin µg/l	Chronic health	≤1	
Phenols µg/l	Aesthetic	≤10	

