

# **CERTIFICATE OF ACCREDITATION**

*In terms of section 22(2) (b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-*

**UMGENI WATER**

**Co. Reg. No.: N/A**

**UMGENI WATER LABORATORY SERVICES**

Facility Accreditation Number: **T0036**

is a South African National Accreditation System accredited facility  
provided that all conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying schedule of accreditation,  
Annexure "A", bearing the above accreditation number for

**CHEMICAL, HYDROBIOLOGY AND MICROBIOLOGICAL ANALYSIS**

The facility is accredited in accordance with the recognised International Standard

**ISO/IEC 17025:2005**

The accreditation demonstrates technical competency for a defined scope and the operation of a  
quality management system

While this certificate remains valid, the Accredited Facility named above is authorised to  
use the relevant accreditation symbol to issue facility reports and/or certificates

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**Mr R Josias**  
**Chief Executive Officer**

**Effective Date: 26 August 2013**  
**Certificate Expires: 25 August 2018**

ANNEXURE A  
**SCHEDULE OF ACCREDITATION**

Facility Number: **T0036**

**Permanent Address of Laboratory:**

Umgeni Water Laboratory Services  
 310 Burger Street  
 Pietermaritzburg  
 3201

**Technical Signatories:**

Mr TP Khumalo (All Chemistry Methods)  
 Dr T Manickum (All Chemistry and Soil Methods)  
 Mrs ZP Sithole (Chemistry Methods 1, 19, 21, 46, 30, 59, 69, 94, 102, 154, 162 & 178)  
 Ms MT Zondi (Chemistry Methods 45, 168, 169 & 171)  
 Ms Z Mcaba (Chemistry Methods 5, 59, 61 & 151)  
 Mr I Bailey (All Microbiology Methods and Hydrobiology Methods 77, 78, 103, 104 & 105)  
 Mr L Donnelly (All Microbiology Methods)  
 Ms P Magebeni (Microbiology Methods 80, 82, 83, 85 & 121)  
 Ms I Dusrath (All Hydrobiology Methods)  
 Ms ZSN Mhlambi (All Hydrobiology Methods)

**Postal Address:**

P O Box 9  
 Pietermaritzburg  
 3200

**Nominated Representative:**

Mr D Dannyeswar

**Tel:** (033) 341-1137

**Issue No.:** 33

**Fax:** (033) 341-1501

**Date of Issue:** 18 April 2018

**E-mail:** deepak.dannyeswar@umgeni.co.za

**Expiry Date:** 25 August 2018

<b>Material or Products Tested</b>	<b>Type of Tests/ Properties Measured, Range of Measurement</b>	<b>Standard Specifications, Techniques / Equipment Used</b>
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**CHEMICAL**

		Internal Specifications
Drinking water	Determination of Conductivity at 25°C	21 (Conductivity Meter)
	Determination of Trihalomethanes	67 (Gas chromatograph - ECD)
Drinking and Raw water	Determination of Alkalinity	1 (Auto-titrator)
	Determination of Anions (Chloride, Nitrite, Nitrate and Sulphate)	5 (Ion Chromatography)
	Determination of Colour	19 (UV-VIS Spectrophotometer)
	Determination of Hardness (Total)	27 (Calculation)
	Determination of pH at 25°C	46 (pH Meter)

Drinking and Raw water	Determination of Mercury	162 (ICP-MS)
	Determination of Uranium	178 (ICP-MS)
	Determination of Total Solids and Total Dissolved Solids at 105°C	61 (Gravimetric)
	Determination of Metals: Ba, B, Fe, Mn, Cu, Zn, Si, Ca, Mg, K, Na	30 (ICP-OES)
	Determination of Metals: Cd, Ni, Pb, Cr, Al, Co, Mo, V	102 (ICP-OES)
	Determination of Total As, Se, Sb	154 (ICP-MS)
	Determination of Turbidity	69 (Turbidimeter)
	Determination of Fluoride	94 (Ion-Selective Electrode)
	Determination of Total organic carbon and dissolved organic carbon (DOC)	151 (TOC-Analyser)
Drinking, Raw and Waste water	Determination of Suspended Solids at 105°C	59 (Gravimetric)
Waste water	Determination of Oxygen absorbed	45 (Titration)
Soil	Determination of % Solids by mass	164 (Gravimetry)
	Determination of % Volatile Solids	165 (Gravimetry)
	Analysis of pH	166 (Potentiometry)
	Fluorides analysis	167 (Potentiometry)
	Nitrogen - Nitrite and Nitrate	168 (Colorimetry)
	Determination of Sulphate	169 (Colorimetry)
	Soluble Reactive Phosphate	171 (Colorimetry)
	<b>HYDROBIOLOGY</b>	
Raw water	Enumeration and identification of Algae	77 (Membrane Filtration)
	Chlorophyll A	78 (UV-VIS Spectrophotometer)
Waste water	Toxicity - Algae	103 LC <sub>50</sub>
	Toxicity - Daphnia	104 LC <sub>50</sub>
	Toxicity - Guppies	105 LC <sub>50</sub>
<b>MICROBIOLOGY</b>		
Drinking, Raw and Waste water	Heterotrophic Plate Counts at 37°C and 21°C	80 (Pour Plate)

Drinking, Raw and Waste water	Detection of <i>Vibrio cholerae</i>	82 (Moore Pad)
	Detection of <i>Salmonella</i> spp.	83 (Moore Pad)
	Coliphages assay	85 (Double agar layer plaque Assay)
	Enumeration of Total Coliforms and <i>Escherichia coli</i>	121 (Colilert)

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Original Date of Accreditation: 26 August 1994

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

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**Accreditation Manager**