



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:-

AQUATICO LABORATORIES (PTY) LTD
Co. Reg. No.: 2012/065554/07

Facility Accreditation Number: **T0685**

is a South African National Accreditation System accredited Testing laboratory
provided that all SANAS 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, MICROBIOLOGICAL AND ENVIRONMENTAL 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
laboratory quality management system

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

Mr R Josias
Chief Executive Officer

Effective Date: 25 March 2015
Certificate Expires: 24 March 2020



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ANNEXURE A

SCHEDULE OF ACCREDITATION

Facility Number: T0685

<p><u>Permanent Address of Laboratory:</u> Aquatico Laboratories (Pty) Ltd 89 Regency Drive Route 21 Corporate Park Irene Ext. 72 Centurion 0178</p> <p><u>Postal Address:</u> P O Box 905008 Garsfontein 0042</p> <p>Tel: (012) 450 3800 Fax: (012) 450 3851 E-mail: hermie@aquatigo.co.za</p>	<p><u>Technical Signatories:</u> Ms H Holtzhausen (All Methods) Ms M Swanepoel (All methods) Ms C van der Westhuizen (All methods)</p> <p><u>Nominated Representative:</u> Ms H Holtzhausen</p> <p>Issue No.: 01 Date of Issue: 25 March 2015 Expiry Date: 24 March 2020</p>	
Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Technique Used
<p><u>CHEMISTRY</u> Water (including waste and process)</p>	<p>Automated photometric analysis:</p> <ul style="list-style-type: none"> Total Alkalinity Chloride (Cl) Sulphate (SO₄) Orthophosphate (PO₄) Ammonium (NH₄) Nitrate (NO₃) Nitrite (NO₂) Fluoride (F) Hexavalent chromium (Cr⁶⁺) <p>Determination of dissolved metals by ICP- OES:</p> <ul style="list-style-type: none"> Calcium (Ca) Magnesium (Mg) Sodium (Na) Potassium (K) Iron (Fe) Manganese (Mn) Aluminium (Al) Chromium (Cr) Copper (Cu) 	<ul style="list-style-type: none"> ALM 01 ALM 02 ALM 03 ALM 04 ALM 05 ALM 06 ALM 07 ALM 08 ALM 09 ALM 30 ALM 30 ALM 30 ALM 30 ALM 31 ALM 31 ALM 31 ALM 31 ALM 31

Original Date of Accreditation: 25 March 2015

Page 1 of 3

Field Manager

ANNEXURE A

Facility No.: T0685
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Expiry Date: 24 March 2020

Materials / Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Equipment / Technique Used
Water (including waste and process)	Determination of dissolved metals by ICP-OES:	
	Nickel (Ni)	ALM 31
	Lead (Pb)	ALM 31
	Zinc (Zn)	ALM 31
	Cadmium (Cd)	ALM 31
	Cobalt (Co)	ALM 31
	Arsenic (As)	ALM 34
	Selenium (Se)	ALM 34
	Total dissolved solids (dried) @ 180°C	ALM 24
	pH and electrical conductivity @ 25°C by potentiometric determination	ALM 20
	Chemical oxygen demand (COD)	ALM 10
	Turbidity (Nephelometric method)	ALM 21
	Calculations:	ALM 26
	Total hardness	
	Magnesium hardness	
	Calcium hardness	
	Sodium adsorption ratio (SAR)	
	Total dissolved solids	
	Cations	
	Anions	
Cations & anions balance		
Bicarbonate alkalinity (HCO ₃)		
Carbonate alkalinity (CO ₃)		
Hydroxide alkalinity (OH)		
Free carbon dioxide (CO ₂)		
Total carbon dioxide		
Langlier saturation index (LSI)		
pH _s		
Converting PO ₄ as P to PO ₄		
Converting NO ₂ as N to NO ₂		
Converting NO ₃ as N to NO ₃		
Converting NH ₄ as N to NH ₄		

Field Manager

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Materials / Products Tested	Type of Tests / Properties Measured	Standard Specifications, Equipment / Technique Used
Water (including waste and process)	Determination by ICP-OES Uranium	ALM 37
<u>MICROBIOLOGY</u>		
Water (including waste and process)	Enumeration of coliforms and <i>Escherichia coli</i> by membrane filtration	ALM 40
	Heterotrophic plate count	ALM 43
	Heterotrophic plate count	ALM 45
<u>ENVIRONMENTAL</u>		
Atmospheric dust fall	Dust deposition (rate) Dust deposition (soluble) Dust deposition (insoluble)	ALM27

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Page 3 of 3

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Field Manager