



## 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:-*

### **INTEGRAL LABORATORIES (PTY) LTD**

**Co. Reg. No.: 2006/021928/07**

**Facility Accreditation Number: T0417**

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 AND MICROBIOLOGICAL ANALYSIS**

The facility is accredited in accordance with the recognised International Standard

**ISO/IEC 17025:2017**

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: 12 February 2020**  
**Certificate Expires: 11 February 2025**



**ANNEXURE A**  
**SCHEDULE OF ACCREDITATION**

Facility Number: **T0417**

**Permanent Address of Laboratory:**

Integral Laboratories  
1 Zandwyk Park  
Old Paarl Road  
Paarl  
Stellenbosch  
7646

**Technical Signatories:**

Mr N van Kooten (All Methods)  
Mr N Africa (M1, M2, M3, M5, M6, M8, M16, M20, M23, M31, M44, M54, M181 methods & Calculations only)  
Mr R Baron (M1, M4, M6 & M7 only)  
Mr P Titus (All Microbiology Methods)  
Mr B Jephtha (M54 method only)

**Postal Address:**

1 Zandwyk Park  
Old Paarl Road  
Paarl  
7646

**Nominated Representative:**

Mr N van Kooten

**Tel:** (021) 863-1238

**Issue No.:** 09

**Fax:**

**Date of Issue:** 14 July 2023

**E-mail:** neilvk@integrallabs.co.za

**Expiry Date:** 11 February 2025

Material or Products Tested	Type of Tests / Properties Measured, Range of Measurement	Standard Specifications, Techniques / Equipment Used
<b>CHEMICAL</b>		
Waters (Potable, Domestic, Raw, Waste, Surface, Effluent and Sea Water)	Determination of Ammonia as N Mg/L	M1 (Spectrophotometric)
	Determination of Chemical Oxygen Demand as O <sub>2</sub> mg/L	M2 (Spectrophotometric)
	Determination of Chloride as CL mg/L	
	Determination of Electrical Conductivity	M4 (Electrode)
	Determination of Nitrate as N mg/L	M5 (Spectrophotometric)
	Determination of pH @ 25 <sup>0</sup> C	M6 (Electrode)
	Determination of Total Alkalinity as Ca CO <sub>3</sub> mg/L	M7 (pH Titration)
	Determination of Total Suspended Solids, Volatile Suspended Solids and Total Dissolved Solids mg/L	M8 (Gravimetric)

Determination of Turbidity NTU	M12 (Nephthelometer)
Determination of Colour	M14 (Spectrophotometric)
Determination of Metals by ICP (Al, B, Ba, Be, Cd, Co, Cr, Cu, Fe, Mn, Mo, Ni, Sr, Zn, As, Hg, Pb, Sb, Se, U, V)	M16 (ICP-OES)
Detemination of Major Anions (F <sup>-</sup> , Cl <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> , SO <sub>4</sub> <sup>-</sup> , PO <sub>4</sub> <sup>-</sup> ) mg/L	M17 (Ion Chromatography)
Determination of Major Cations (Ca <sup>++</sup> , K <sup>+</sup> , Mg <sup>++</sup> , Na <sup>+</sup> )mg/L	M18 (ICP-OES)
Determination of Total Organic Carbon and Dissolved Organic Carbon mg/L	M20 (High Temperature Combustion)
Trihalomethanes (µg/L)	M31 (GC-ECD)
Determination of (NH <sub>4</sub> <sup>+</sup> -N, Cl <sup>-</sup> , CR <sup>6+</sup> , F <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> -N, NO <sub>2</sub> <sup>-</sup> -N, PO <sub>4</sub> <sup>-</sup> -P, SI, SO <sub>4</sub> <sup>2-</sup> and NO <sub>2</sub> +NO <sub>3</sub> as N mg/L by Discrete Photometric Analyser	M44 (Gallery)
Determination of Metals by ICP-MS (Al, As, Ag, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, HG, Mo, Ni, Sb, Se, Sr, V and Zn)	M181 (ICP-MS)

**Calculations:**

- Total Hardness
- Calcium Hardness
- Magnesium Hardness
- Sodium Absorption Ratio
- Langelier Saturation Index
- Ryznar Stability Index
- Bicarbonate as CaCO<sub>3</sub>
- Carbonate as CaCO<sub>3</sub>
- Total Dissolved Solids

Wine	Determination of Alcohol - Pycnometric %	M21 (Pycnometer)
	Determination of Sulphur Dioxide (free and total) mg/L	M22 (Aspiration/ titration)
	Determination of Volatile Acidity g/L	M23 (Distillation/ titration)
	Determination of pH and Titratable acidity pH units & g/L	M24 Electrometric/ titration)
	Determination of Reducing sugars - Fehling's method g/L	M26 (Titration)

Determination of (Ethanol, Total Acidity, Volatile Acidity, pH)

M27 (Fourier Transform Infrared Spectrometer - Winescan)

**MICROBIOLOGY**

Determination of Faecal coliform CFU/ 100mL M19 (Membrane Filtration)

Determination of Total coliform and *Escherichia coli* CFU/ 100mL M10 (Membrane Filtration)


Determination of Heterotrophic Plate Count M13 (Pour Plate)

Detection of *Cryptosporidium* and *Giardia Oocysts* in Water M54 (rtPCR)

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Original Date of Accreditation: 12 February 2010

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM



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Accreditation Manager