

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:-

SAPPI SOUTHERN AFRICA LTD

Co. Reg. No.: 1951/003180/07

Facility Accreditation Number: **T0080**

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 PHYSICAL 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

Mr R Josias
Chief Executive Officer

Effective Date: 30 December 2016
Certificate Expires: 31 December 2021

ANNEXURE A
SCHEDULE OF ACCREDITATION

Facility Number: **T0080**

Permanent Address of Laboratory:

Sappi Southern Africa Ltd
 The Innovation Hub
 1 Sydney Brenner Road
 Lynnwood
 Lynnwood
 0096

Technical Signatories:

Mrs H du Toit (Paper & corrugated cartons excl. M002 & M003)
 Ms R Lerumo (Paper)
 Mr A Smith (Paper)
 Ms P Mangwana (Paper)
 Mr C Pearcey (Pulp excl. M007)
 Mr R Braunstein (Pulp)
 Mr H Twayi (Pulp excl. M007)
 Mr J Mokgoatle (Pulp)
 Mrs B Twala (Pulp excl. M007)
 Mr M Baloyi (M007 & M008)
 Mr C Ngubane (M007 & M008)
 Dr N Sefara (All chemical methods)
 Mr S Maduna (Chemical excl. M101 & M102)
 Ms PE Jele (Corrugated Cartons)
 Ms K Chula (Pulp excl. M007)
 Mr KB Selokela (M002, M003, M015 & M016)
 Mr SB Lukhele (M002, M003, M015 & M016)
 Ms SS Nzaca (M002, M003, M015 & M016)
 Mr R Fisher (M002, M003, M004, M015 & M016)
 Mr JI Knock (Corrugated cartons)
 Dr EG Strey (Corrugated cartons)
 Dr B Coetzee (M053)
 Ms S Mdletshe (M053)
 Mr L Mudau (M101 & M102)

Postal Address:

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 The Innovation Hub, Lynnwood
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Nominated Representative:

Mrs M Allaway

Issue No.: 19

Date of Issue: 30 December 2016

Expiry Date: 31 December 2021

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

Potable water	pH (Electrometric)	IHM:LQM/CHEM/M001 REF:APHA 4500 H+B
Ground water Boiler water Waste water Process water	Conductivity (Conductometric)	IHM:LQM/CHEM/M002 REF:APHA 2510 B
	Chemical oxygen demand	IHM:LQM/CHEM/M003 REF:APHA 5220 B
	Anions (Ion Chromatography (Chloride, Sulphate and Nitrate)	IHM:LQM/CHEM/M006 REF:APHA 4110 B
	Total alkalinity (Titrimetric)	IHM:LQM/CHEM/M045 REF:APHA 2320 B
	Total dissolved solids	IHM:LQM/CHEM/M044 REF:SANS 5213: 2005
	Determination of phenolphthalein alkalinity (Titrimetric)	IHM:LQM/CHEM/M046 REF:APHA 2320 B
	Determination of ortho-phosphate (ANSA-Spectroscopic)	IHM:LQM/CHEM/M047 REF:APHA 4500-P D
	Determination of hardness (ICP-OES and calculation methods)	IHM:LQM/CHEM/M048 REF:APHA 2340 B
	Determination of cations Na, Ca, K, Mg, Al, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Ni, Mn, Si, Sr, Zn by ICP-OES	IHM:LQM/CHEM/M050 REF:APHA 3120 B
	Pulp	Determination of alkali solubility of Pulp - S ₁₀ and S ₁₈ (Titrimetric)
Determination of copper number of pulp - Brady's method (Titrimetric)		IHM:LQM/CHEM/M102 REF:TAPPI T430-cm, 1999
Determination of glucose mannose and xylose in pulp By ION Chromatography using pulsed amperometric detection		IHM:LQM/CHEM/M053 REF:SCAN-CM 71:2009
		Note: APHA refers to Standard Methods for the "Examination of Water and Wastewater" APHA, AWWA, WEF, 22nd Edition 2012
PAPER		
Paper and paper board	Burst	IHM:LQM/PT/M.020A REF:ISO 2758
	Brightness (ISO & D65)	IHM:LQM/PT/M.022A REF:ISO 2470-1
	Grammage	IHM:LQM/PT/M.070A REF:ISO 536
	Opacity	IHM:LQM/PT/M.151A REF:ISO 2471
	Tearing resistance	IHM:LQM/PT/M.200A REF:ISO 1974
	Tensile properties	IHM:LQM/PT/M.301A REF:ISO1924-2 and ISO1924-3
	Thickness	IHM:LQM/PT/M.202A REF:ISO 534
	Whiteness	IHM:LQM/PT/M.030A REF:ISO 11475

	Colour determination (D65/10°)	IHM:LQM/PT/M.030A REF:ISO 5361-2
	Air permeance	IHM:LQM/PT/M.010A REF:ISO 5636-3
	Ring crush	IHM:LQM/PT/M.180A REF:ISO 12192
	Roughness	IHM:LQM/PT/M.181A REF:ISO 8791-2
	Short span - compression strength	IHM:LQM/PT/M193A REF:ISO 9895
	Internal bonding strength	IHM:LQM/PT/M192A REF:TAPPI T569-pm
	Parker printsurf smoothness	IHM:LQM/PT/M161A REF:ISO 8791-4
	Bending stiffness	IHM:LQM/PT/M191A REF:ISO 2493
Corrugated Cartons	Box compression strength analysis	IHM:LQM/BT/M001 REF:TAPPI T804-om
	Edge-wise crush resistance	IHM:LQM/BT/M002 REF:ISO 3037
	Flat crush resistance	IHM:LQM/BT/M003 REF:ISO 3035
Pulp	Viscosity of Cuprammonium/Pulp dispersion	IHM:LQM/PULP/M001 REF:TAPPI T206 os-63
	Kappa number (Autotitration)	IHM:LQM/PULP/M015 REF:TAPPI T236 om-06
	Microkappa number (Manual Titration)	IHM:LQM/PULP/M004 REF:FDT 12-019 1987
	Microkappa number (Autotitration)	IHM:LQM/PULP/M015 REF:FDT 12-019 1987
	Chlorine consumption	IHM:LQM/PULP/M005 REF:ISO 3260:1982
	Viscosity of cellulose in cupriethylenediamine solution	IHM:LQM/PULP/M006 REF:ISO 5351:2010 SCAN-CM15:88 TAPPI T230 om-88
	Freeness	IHM:LQM/PULP/M007 REF:TAPPI T227om-09
	Beating of pulp - PFI mill method	IHM:LQM/PULP/M008 REF:TAPPI T2485 p-00
	Kappa number (Manual titration)	IHM:LQM/PULP/M003 REF:TAPPI T236 om-06
Pulping liquors	Analysis of alkaline and spent liquors (Manual method): White liquors – Total alkali, carbonates, active alkali, effective alkali, sulphidity, sodium sulphide Black liquors – effective alkali, active alkali, sodium sulphide, pH, specific gravity, dissolved solids	IHM:LQM/PULP/M002 REF:SCAN-N22:96 SCAN-N30:85 SCAN-N32:98 SCAN-N33:94 TAPPI T610 sp-06 TAPPI T624 cm-11 TAPPI T625 cm-14
	Analysis of alkaline and spent liquors	IHM:LQM/PULP/M016

(Autotitration method):
White liquors – Total alkali,
carbonates, active alkali, effective
alkali, sulphidity, sodium sulphide
Black liquors – Effective alkali, active
alkali, sodium sulphide

REF:SCAN-N2:88 SCAN-N30:85
SCAN-N33:94

Original Date of Accreditation: 01 January 1999

ISSUED BY THE SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM

Accreditation Manager