

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:-

SGS SOUTH AFRICA (PTY) LTD
BOOYSENS
Co. reg no: 1949/032643/07

Facility Accreditation Number: **T0169**

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 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
Acting Chief Executive Officer

Effective Date: 02 September 2009
Certificate Expires: 31 December 2012

ANNEXURE A

Laboratory No: T0169
Date of issue: 02 September 2009
Expiry date: 31 December 2012

Materials/Products Tested	Types of Tests/Properties Measured, Range of Measurement	Standard Specifications, Equipment/ Techniques Used
CHEMISTRY – MINERALS & ORES		
Metallurgical Products (oxides), Rocks, Soils & Ore grade material (Iron ore, chrome ore, Manganese ores Tantalite, Heavy mineral sands)	Determination of Major Element Oxides by Borate Fusion (XRF)	4. ME-ZA-[MINANA]-[BYZ(XRF)]AN-001
Base metal ores, Rocks, Soils & Metallurgical Products	Determination of Base Metals by Potassium Pyrosulfate Fusion (XRF)	5. ME-ZA-[MINANA]-[BYZ(XRF)]AN-002
Ores, Rocks, Soils & Metallurgical Products	Analysis of Acid Soluble Cu and Ni by Acid Digestion and Analysis by Flame Atomic Absorption Spectrophotometry	6. ME-ZA-[MINANA]-[BYZ(AAS)]AN-001
	Determination of Total Sulphur and Carbon by Combustion and Infrared Analysis (LECO)	7. ME-ZA-[MINANA]-[BYZ(LEC)]AN-001
	Determination of Uranium oxide by pressed powder analysis using an XRF-spectrometer	23. ME-ZA-[MINANA]-[BYZ(XRF)]AN-003
Ores, Rocks & Metallurgical Products	Determination of Rhodium by Palladium Collection followed by ICP-OES	24. ME-ZA-[MINANA]-[BYZ(FAS)]AN-005
CHEMISTRY – WATER		
Drinking water, surfaces & ground water, Filtrates of leach test	Determination of dissolved & total metals by: ICP-OES (Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Si, Sn, Sr, Tl, U, V & Zn) & ICP-MS (Ag, As, Ba, Be, Cd, Co, Cr, Cu, Hg, Mn, Ni, Pb, Sb, Se, Sn, Sr, Th, Tl, U, V & Zn)	8. ME-ZA-[MINANA]-[BYZ(ICM)]AN-001

Original date of accreditation: 01 December 2002

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Field Manager

ANNEXURE A

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Materials/Products Tested	Types of Tests/Properties Measured, Range of Measurement	Standard Specifications, Equipment/ Techniques Used
CHEMISTRY – WATER		
Drinking, ground & surface waters & filter samples	<p>Determination of metals and trace elements in aqueous samples and filters:</p> <p>ICP-OES: (Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, In, Ir, K, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Pd, Pt, Re, Rh, Ru, S, Sb, Se, Si, Sn, Sr, Ta, Te, Ti, Tl, U, V, W, Zn & Zr)</p> <p style="text-align: center;">&</p> <p>ICP-MS: (Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, In, Ir, K, Li, Mg, Mn, Mo, Na, Nb, Ni, Os, P, Pb, Pd, Pt, Re, Ru, S, Sb, Se, Si, Sn, Sr, Ta, Te, Ti, Tl, U, V, W, Zn & Zr)</p>	26. ME-ZA-[AGRILAB]-[BYZ(IOR)]-AN017
Drinking water, surface, ground & process water and filtrates of leach tests	Determination of Chloride analysis by Potentiometric Titration	25. ME-ZA-[MINANA]-[BYZ(WET)]AN-001
MICROBIOLOGY – FOOD & WATER		
<p>Food & food products: Cereal products, Nuts & nut product, Dairy products, Meat & meat products, Fish, crustaceans & molluscs, Sugar and sugar products, Confectionery, Fruits, jams & other fruit products, Vegetables & vegetable products, Alcoholic beverages, Soft drinks & cordials, Fruit juices & concentrates, Edible fats & oils, Margarines, Eggs & egg products, Pet foods, Antioxidants in foods, Colorants in foods, Preservatives in foods, Additives in foods, Vitamins in foods, Fats, oils and waxes.</p> <p>Agricultural products: Cereals grains & by-products, Oil seeds & by-products</p> <p>Drugs & pharmaceuticals: Cosmetics, perfumes & essential oils</p> <p>Water: Waters for potable & domestic purposes, irrigation & stock and industrial purposes</p>	Enumeration of Yeast & Mould – Colony count technique	12. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-010
	Enumeration of <i>Bacillus cereus</i>	13. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-011
	Enumeration of <i>Staphylococcus aureus</i> - Colony count technique	14. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-012
	Detection of <i>Clostridium perfringens</i>	15. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-014
	Enumeration of Enterobacteriaceae (VRBG)	16. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-015
	Detection of <i>Salmonella spp.</i>	17. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-018
	Detection of <i>Shigella</i>	18. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-021
	Detection of <i>Listeria monocytogenes</i>	19. ME-ZA-[AGRILAB]-[BYZ(MIC)]AN-022

