

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK



1543

Accredited to
ISO/IEC 17025:2017

Alfred H Knight International Ltd

Issue No: 031 Issue date: 18 July 2024

The John Knight Laboratory
Kings Business Park
Kings Drive
Prescot
L34 1PJ
United Kingdom

Contact: Mr N Birch
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Fax: +44 (0)151 481 0970
E-Mail: nick.birch@ahkgroup.com
Website: www.ahkgroup.com

Testing performed by the Organisation at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address The John Knight Laboratory Kings Business Park Kings Drive Prescot L34 1PJ Local contact Mr N Birch Tel: +44 (0) 151 481 5850 Fax: +44 (0)151 481 0970 E-Mail: nick.birch@ahkgroup.com Website: www.ahkgroup.com	Minerals, Metals and Catalysts - Chemical and Physical Tests	A
Address Units C & D Lea Green Business Park Eurolink Lea Green St Helens WA9 4TR Local contact Mr N Birch Tel: +44 (0)1744 733757 Fax: +44 (0)1744 27062 E-Mail: nick.birch@ahkgroup.com Website: www.ahkgroup.com	Minerals, Metals and Catalysts - Chemical and Physical Tests	B
Address Unit 9 Lea Green Business Park Eurolink Lea Green St Helens WA9 4TR Local contact Mr N Birch Tel: +44 (0)1744 733757 Fax: +44 (0)1744 27062 E-Mail: nick.birch@ahkgroup.com Website: www.ahkgroup.com	Minerals, Metals and Catalysts - Chemical and Physical Tests	C



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Laboratory locations continued:

Location details	Activity	Location code
Address Unit 8 Villiers Road Knowsley Business Park Knowsley L34 9ET	Local contact Mr N Birch Tel: +44 (0)1744 733757 Fax: +44 (0)1744 27062 E-Mail: nick.birch@ahkgroup.com Website: www.ahkgroup.com	Minerals, Metals and Catalysts - Chemical and Physical Tests D
Address K31 Acornfield Road Knowsley Business Park Liverpool Merseyside L33 7TH	Local contact Mr N Birch Tel: +44 (0)1744 733757 Fax: +44 (0)1744 27062 E-Mail: nick.birch@ahkgroup.com Website: www.ahkgroup.com	Minerals, Metals and Catalysts - Chemical and Physical Tests E



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location
CATALYST MATERIALS	<u>Chemical Tests</u>	Documented In-house Methods	
Auto catalysts	Rhodium	PA126, fire assay, ICP-OES	A
Refining / reforming catalysts	Loss on ignition	PA130, thermogravimetric	A
	Platinum	PS401, Alkali Fusion, ICP-OES	A
	Rhenium	PA119, ICP-OES	A
PGM Commodities	Ruthenium, Rhodium, Iridium	PC913, fire assay, ICP-OES	A
METALS AND ALLOYS			
Copper anodes and blister copper	Copper	GC906, electrogravimetric	D
Cobalt alloys, residues and related materials	Cobalt (>3%)	SC829 using titrimetry	A
Dore bullion	Gold, Silver	PG406, fire assay, gravimetric	A
PM bearing copper scrap, electronic scrap and bullion	Copper	GC924, electrogravimetric	D
Copper (high purity)	Ag, Al, As, Be, Bi, Cd, Co, Cr, Fe, Mg, Mn, Ni, P, Pb, S, Sb, Se, Si, Sn, Te, Ti, Zn and Zr	OC900, spark emission spectroscopy	A
Silver metal and bullion	Gold	PS510, gravimetric	A
Silver metal and bullion	Silver	PS508, potentiometric titration	A
Base Metal Commodities and Scrap	Ag, Au, Pt, Pd	PC924 using fire assay followed by ICP-OES	A
Coal Ash and Biomass	Al ₂ O ₃ , CaO, Fe ₂ O ₃ , MgO, MnO, SO ₃ , SiO ₂ and TiO ₂	YME01, using Wavelength Dispersive X-ray Fluorescence (XRF) Spectrometer	A



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CONCENTRATES, ORES AND MINERALS	<u>Chemical Tests</u> (cont'd)	Documented In-house Methods	
Cassiterite and tin concentrates	Tin	TT701, titrimetric	A
Tin slags	Tin, Niobium, Tantalum, Titanium	YT713, XRF	A
Columbite	Niobium, Tantalum, Tin, Titanium	YN412, XRF	A
Copper concentrates	Copper	GC936, titrimetric	D
	Copper	GC920, electrogravimetric	D
	Copper	YC923, XRF	A
Copper concentrates, ores and minerals	Copper	GM003, potentiometric	D
Lead and bulk concentrates	Lead	GL203, titrimetric	A
Copper, lead and zinc concentrates	Silver	SC905, FAAS	A, B
	Gold, Silver	PC904, fire assay, gravimetric, FAAS	B
Molybdenum concentrates	Oil	YM406, gravimetric	A
PGM bearing concentrates	Gold, Platinum, Palladium, Rhodium	PC905, ICP-OES	A
Tantalite	Tantalum, Niobium, Tin, Titanium	YT111, XRF	A
Wolframite	Tungsten, Calcium, Iron, Silica, Tin	YT901, XRF	A
Wolfram powders, ferberite and hubnerite	Arsenic, Bismuth, Copper, Lead, Molybdenum, Zinc	YT908, XRF	A
Molybdenum sulphide concentrates and oxides	Mo, Cu	YM407, XRF	A
Zinc Concentrates and Bulk Concentrates	Zn	YZ108, XRF	A



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CONCENTRATES, ORES AND MINERALS (cont'd)	<u>Chemical Tests</u> (cont'd)	Documented In-house Methods	
Nickel concentrates	Ni, Cu, Co, MgO	YN429, XRF	A
Zinc concentrates	Zinc	GZ130, titrimetric	A
Copper concentrates and ores	Determination of Silver and Gold	PM018, PhotonAssay	E
BASE METAL MATERIALS			
Anode slimes	Copper	GC909, electrogravimetric	D
	Selenium (concentrates ≤ 10% Se w/w)	GC941, FAAS	A
PM BEARING MATERIALS			
Alumina sweeps and residues, catalysts, residues and refractory slags	Gold, Palladium, Platinum	PA122, fire assay, ICP-OES, FAAS	A
Anode slimes, selenium slimes and residues	Gold, Palladium, Platinum, Silver	PS301, gravimetric, ICP-OES	A
Bulk Cargoes such as Minerals, ores and concentrates	<u>Physical Tests</u>	Documented In-house Methods	C
	Flow Moisture Point (FMP) and Transportable Moisture Limit (TML)	FMP based on ISO 12742:2022 and IMO Guide	C
ALL MATERIALS (LISTED IN THIS SCHEDULE)	<u>Chemical and Physical Tests</u>		
	Carbon, Sulphur	SC4142, combustion and infra red detection	A
	Moisture	GJ038, gravimetric	A

END