Schedule of Accreditation

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United Kingdom Accreditation Service

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0012

Accredited to ISO/IEC 17025:2017

The Sheffield Assay Office

Issue No:058 **Issue date:** 29 July 2024

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Testing performed at the above address only

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS)	Chemical Tests for the purpose of Hallmarking	Documented In-House Methods
Precious metals and alloys	Gold, Silver, Platinum, Palladium	X-ray fluorescence analysis (XRF) - ATM 105
	Gold, Silver, Platinum, Palladium	Optical Emission Spectrometry (ICP-OES) - ATM 74
	Gold Silver	Fire assay technique (cupellation) - ATM 01
	Silver	Potentiometric titration - ATM 11
	Chemical Tests	Documented In-House Methods
Precious metal alloys & powders	Gold, Palladium, Platinum, Rhodium	ATM 74 using Optical Emission Spectrometry (ICP-OES)
Precious metal alloys & powders	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional parameters using Flexible Scope Protocol AP 10 and ICP-OES instrumentation by method ATM 074
	Silver	Potentiometric titration - ATM 11 or ATM 12 ICP-OES – ATM 12
	Gold	Fire assay technique (cupellation) – ATM 01

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS) (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods
Precious metal powders	Gold, Platinum, Palladium	Lead fusion/fire assay/ICP-OES ATM 03
High purity silver	Aluminium, Arsenic, Gold, Bismuth, Cadmium, Cobalt, Chromium, Copper, Iron, Magnesium, Manganese, Nickel, Lead, Palladium, Platinum, Antimony, Selenium, Silicon, Tin, Tellurium, Titanium, Zinc, Boron, Mercury, Indium, Phoshorous, Ruthenium,	ATM 79 using Optical Emission Spectrometry (ICP-OES)
Base metals & alloys (e.g. steels)	Aluminium, Boron, Bismuth, Cobalt, Chromium, Copper, Iron, Lead Magnesium, Manganese, Nickel, Molybdenum, Niobium, Phosphorous, Silicon, Tin, Tantalum, Titanium, Vanadium, Tungsten, Zinc, Zircomium	ATM 150 using Optical Emission Spectrometry (ICP-OES)
Base metals & alloys (e.g. steels)	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional elements using Flexible Scope Protocol AP 10 and ICP-OES instrumentation by Method ATM150, ATM101, ATM102, ATM72
	Carbon Sulphur	Combustion/Infra-red analysis - ATM 82
	Silver	Potentiometric titration - ATM 11 or ATM 12, ICPOES – ATM 12
Metals, Metal Alloys, and Metal Powders (e.g titanium and steels)	Nitrogen,Oxygen, & Hydrogen	Thermoconductivity and IR absorption using in-house method ATM 149

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS) (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods
Copper and Brass alloys	Arsenic, Aluminium, Bismuth, Cadmium, Chromium, Copper, Iron, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Lead, Antimony, Silicon, Tin, Titanium, Zinc	ATM 101 using Optical Emission Spectrometry (ICP-OES)
Aluminium alloys	Aluminium, Bismuth, Chromium, Copper, Iron, Gallium, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Lead, Antimony, Silicon, Tin, Titanium, Zinc, Zirconium	ATM 102 using Optical Emission Spectrometry (ICP-OES)
Lead/Tin Alloys	Silver, Aluminium, Arsenic, Gold, Bismuth, Cadmium, Copper, Iron, Indium, Nickel, Lead, Palladium, Antimony, Tin Zinc	ATM 72 using Optical Emission Spectrometry (ICP-OES)
Ferrosilicon Alloys	Aluminium, Barium, Calcium, Chromium, Iron, Magnesium, Mangenese, Phosphorus, Silicon, Titanium, Zirconium	ATM 166 using Optical Emission Spectroscopy (ICP-OES)
Titanium Alloys	Aluminium, Chromium, Copper, Iron, Molybdenum, Nickel, Niobium, Tantalum, Tin, Titanium, Vanadium, Zirconium	ATM 167 using Optical Emission Spectroscopy (ICP-OES)
Metal powders and Turnings	Loss-on-ignition at 120 °C, 500 °C and 800 °C	Gravimetric determination - ATM 144

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS) (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods
Metals, metal alloys and metal powders (trace analysis)	Gold, Silver, Platinum, Palladium, Aluminium, Arsenic, Antimony, Boron, Barium, Beryllium, Bismuth, Calcium, Cadmium, Chromium, Copper, Iron, Gallium, Hafnium, Mercury, Indium, Iridium, Lanthanum, Magnesium, Manganese, Molybdenum, Sodium, Niobium, Nickel, Phosphorus, Lead, Rhenium, Rhodium, Ruthenium, Selenium, Silicon, Tin, Tantalum, Tellurium, Thorium, Thallium, Titanium, Vanadium, Tungsten, Yttrium, Zinc, Zirconium	ICP-OES - ATM 83
Metals, metal alloys and metal powders (trace analysis)	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional elements using Flexible Scope Protocol AP 10 and ICP-OES instrumentation by ATM83
Metals in solution (eg, plating solutions, tank washings, process waste)	Gold, Silver, Platinum, Palladium, Aluminium, Arsenic, Antimony, Boron, Barium, Beryllium, Bismuth, Calcium, Cadmium, , Chromium, Cobalt, Copper, Iron, Gallium, Hafnium, Mercury, Indium, Iridium, Potassium, Lanthanum, Magnesium, Manganese, Molybdenum, Sodium, Niobium, Nickel, Phosphorus, Lead, Rhenium, Rhodium, Ruthenium, Selenium, Silicon, Tin, , , , Thorium, Thallium, Titanium, Vanadium, Tungsten, Yttrium, Zinc, Zirconium	ICP-OES - ATM 83

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS) (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods
Metals in solution (e.g. plating solutions, tank washings, process waste)	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional elements using Flexible Scope Protocol AP 10 and ICP-OES instrumentation by ATM83
Metals, metal alloys and metal powders (trace analysis)	Sb, As, Bi, Cd, Ca, Cr, Co, Cu, Hf, In, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Te, Sn, Ti, Tl, Th, Zn , Zr, Hg	Documented in house test method using ICP-MS (ATM 160)
Metals, metal alloys and metal powders (trace analysis)	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional elements using Flexible Scope Protocol AP 10 and ICP-MS instrumentation by ATM160
Metals in solution (eg, cell culture solutions, plating solutions, tank washings, process waste)	Sb, As, Bi, Cd, Ca, Cr, Co, Cu, Hf, In, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Te, Sn, Ti, Tl, Th, Zn ,Zr, Hg	Documented in house test method using ICP-MS (ATM 160)
Metals in solution (eg, cell culture solutions, plating solutions, tank washings, process waste)	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional elements using Flexible Scope Protocol AP 10 and ICP-MS instrumentation by ATM160
Jewellery and related products	Nickel (releasable)	Acid dissolution followed by ICP-OES or ICP-MS based on BS EN 1811:2023, BS EN 12472:2020 + A1:2009 (ATM 87, ATM 89)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS) (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods
Jewellery and related products (including childrens jewellery and painted jewellery)	Lead and Cadmium	16 CFR part 1303: Documented in house method ATM 134 based on CPSC-CH-E1001-08.1 using ICP-OES
	Lead and Cadmium	Documented in house method ATM 134 based on CPSC-CH-E1001-08.1 and CPSC-CH-E1003-09.1. using ICP-MS
PAINT	Chemical Tests	Documented In-House Methods
	Lead and Cadmium	16 CFR part 1303: Documented in house method ATM 134 based on CPSC-CH-E1003-09.1 using ICP-OES)
	Lead and Cadmium	Documented in house method ATM 134 based on CPSC-CH-E1001-08.1 and CPSC-CH-E1003-09.1. using ICP-MS
BODY FLUIDS	Chemical Tests	Documented In-House Method
Urine samples (human)	Mercury and creatinine content	Atomic fluorescence (cold vapour technique - CV-AFS) and UV/VIS spectrophotometry ATM 103

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Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
MEDICAL MATERIALS	Chemical Tests	Documented In-House Method
Alginate Fibres	Silver, Arsenic, Cadmium, Cobalt, Copper, Iron, Mercury, Sodium, Nickel, Lead, Tin, Zinc	ATM 99 using ICP-MS
Medical Materials	Silver	ATM 106 using Optical Emission Spectrometry (ICP-OES)
Silver Migration into Simulated Wound Fluid	Silver	ATM 115 using Optical Emission Spectrometry (ICP-OES)
Alginate Fibres & Medical Materials	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement for additional elements using Flexible Scope Protocol AP 10 and ICP-OES instrumentation by ATM99, ATM106
END		