Schedule of Accreditation

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Accredited to ISO/IEC 17025:2017

The Sheffield Assay Office

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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	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	Fire assay technique (cupellation) - ATM 01
	Silver	Potentiometric titration - ATM 11
METALS and METAL ALLOYS (Including PRECIOUS METALS/ALLOYS)	Chemical Tests	Documented In-House Methods
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)
Precious metal alloys & powders	Aluminium, Arsenic, Gold, Bismuth, Cadmium, Cobalt, Copper, Iron, Gallium, Germanium, Indium, Iridium, Manganese, Nickel, Lead, Palladium, Platinum, Rhodium, Ruthenium, Antimony, Tin, Zinc	ATM 74 using Optical Emission Spectrometry (ICP-OES)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
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, Iridium	ATM 79 using Optical Emission Spectrometry (ICP-OES)
Copper and Brass alloys	Silver, Aluminium, Arsenic, Beryllium, Bismuth, Cadmium, Cobalt, Chromium, Copper, Iron, Magnesium, Manganese, Molybdenum, Niobium, Nickel, Phosphorous, Lead, Antimony, Selenium, Silicon, Tin, Titanium, Zinc	ATM 101 using Optical Emission Spectrometry (ICP-OES)
Aluminium alloys	Silver, Aluminium, Arsenic, Beryllium, Bismuth, Calcium, Cadmium, Cerium, Cobalt, Chromium, Copper, Iron, Gallium, Germanium, Mercury, Indium, Lanthanum, Lithium, Magnesium, Manganese, Molybdenum, Sodium, Niobium, Nickel, Phosphorous, Lead, Sulphur, Antimony, Selenium, Silicon, Tin, Strontium, Tantalum, Titanium, Vanadium, Tungsten, Zinc, Zirconium	ATM 102 using Optical Emission Spectrometry (ICP-OES)

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
Base metals & alloys (e.g. steels)	Aluminium, Boron, Berylium, Bismuth, Calcium, Cobalt, Chromium, Copper, Iron, Potassium, Magnesium, Manganese, Nickel, Molybdenum, Sodium, Niobium, Phosphorous, Lead, Antimony, Silicon, Selenium, Tin, Tantalum, Titanium, Vanadium, Tungsten, Zinc, Zircomium	ATM 150 using Optical Emission Spectrometry (ICP-OES)
	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement using Flexible Scope Protocol AP 10 and ICP-OES instrumentation
	Carbon Sulphur	Combustion/Infra-red analysis - ATM 82
	Silver	Potentiometric titration - ATM 11 or ATM 12 Fire assay technique (cupellation) - ATM 02
	Gold	Fire assay technique (cupellation) - ATM 01
STEEL and TANTALUM ALLOYS	Nitrogen and Oxygen	Thermoconductivity and IR absorption (Eltra ONH 2000 Analyser) using in-house method ATM 149
	Physical Tests	
	Plating thickness measurements	XRF - ATM 124 (based on: BS 6669:Part 1:1986 BS 6670:Part 1:1986)

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
STEEL and TANTALUM ALLOYS (cont'd)		
	<u>Chemical Tests</u>	
Metal powders and Turnings	Loss-on-ignition at 120 °C, 500 °C and 800 °C	Gravimetric determination - ATM 144
Precious metal powders	Gold, Platinum, Palladium	Lead fusion/fire assay/ICP-OES ATM 03
	Silver	Lead fusion/fire assay/ potentiometric titration/ICP-OES ATM 12
	Gold, Palladium, Platinum, Rhodium, Ruthenium, Iridium	Peroxide fusion/ICP-OES ATM 155
Metals in solution (eg, cyanide in plating solutions, tank washings, process waste (not including waters /effluent))	Gold, Silver, Platinum, Palladium, Aluminium, Arsenic, Boron, Barium, Beryllium, Bismuth, Calcium, Cadmium, Cerium, Chromium, Copper, Dysprosium, Iron, Gallium, Gadolinium, Germanium, Hafnium, Mercury, Indium, Iridium, Potassium, Lanthanum, Lithium, Magnesium, Manganese, Molybdenum, Sodium, Niobium, Neodynium, Nickel, Phosphorus, Lead, Praseodymium, Rubidium, Rhenium, Rhodium, Ruthenium, Sulphur, Scandium, Selenium, Silicon, Samarium, Tin, Strontium, Tantalum, Terbium, Tellurium, Thorium, Thallium, Titanium, Vanadium, Tungsten, Yttrium, Zinc, Zirconium	ICP-OES - ATM 83
	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement using Flexible Scope Protocol AP 10 and ICP-OES instrumentation

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	Nickel (releasable)	Acid dissolution followed by ICP-OES or ICP-MS based on BS EN 1811:2011 + A1:2015/, BS EN 12472:2005 + A1:2009 (ATM 87)
	Nickel (releasable)	Acid dissolution followed by XRF screening based on PDCR 12471/BS EN 1811:2011 +A1:2015-, BS EN 12472:2005 + A1:2009 - ATM 128
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	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/TISSUE	Chemical Tests	
Urine samples (human)	Mercury content	Atomic fluorescence spectrometry (cold vapour technique - CV-AFS) - ATM 103
	Creatinine content	UV/VIS spectrophotometry - ATM 104

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
MEDICAL MATERIALS	Chemical Tests	
Alginate Fibres	Silver, Arsenic, Cadmium, Cobalt, Copper, Nickel, Lead, Zinc, Iron, Magnesium, Sodium, Calcium	ATM 99 using Optical Emission Spectrometry (ICP-OES)
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)
	Elemental analysis	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement using Flexible Scope Protocol AP 10 and ICP-OES instrumentation
ATMOSPHERIC POLLUTANTS	Chemical Tests	
Charcoal, Gypsum, SKC tubes/ badges and Phosphor Powder	Mercury	Documented In-House Method by CV-AFS based on MDHS 16/2 (ATM 147)
Cell culture solutions, animal feed samples & metal powder samples.	Determination of: 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	Documented in house test method using ICP-MS (ATM 160)
Solutions (for example nutritional oils, food flavourings, glues and dyes) and Acid Soluble Materials (for example, glues, dyes, pastes, and cosmetic products such as lipstick)	Determination of: Al, Sb, As, Ba, Be, Bi, Cd, Ca, Ce, Cr, Co, Cu, Dy, Eu, Er, Gd, Ga, Ge, Hf, In, Fe, La, Pb, Mg, Mn, Mo, Nd, Ni, Pd, Pt, K, Pr, Re, Rb, Ru, Sm, Sc, Se, Sr, Te, Tb, Sn, Ti, Tl, Th, W, Zn & Zr	Analysis through the appropriate application of documented in house methods for sampling, preparation and measurement using Flexible Scope Protocol AP 10 and ICP-MS instrumentation
END		