

CERTIFICATE OF ACCREDITATION

AClass Accreditation Services

An ANSI-ASQ National Accreditation Board Company

2009 N. 14th Street, Suite 502, Arlington, VA 22201, 877.344.3044

This is to certify that

NSL Analytical Services, Inc.

4450 Cranwood Parkway
Cleveland, OH 44128

has been assessed by ACLASS®
and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field(s) of

TESTING

Refer to the accompanying Scope(s) of Accreditation for
information regarding the types of calibrations and/or
tests/types to which this accreditation applies.

AT-1354

CERTIFICATE NUMBER



AClass APPROVAL



Certificate Valid: 11/23/2008-11/23/2010





SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

NSL Analytical Services, Inc.

4450 Cranwood Parkway Cleveland, Ohio 44128
 Craig E. Mikin Phone: 216-438-5208

TESTING

Valid to: November 23, 2010 Certificate Number: AT - 1354

I. Chemical

ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	*DETECTION LIMIT/ RANGE/ EQUIPMENT
Metal Alloys, Ceramics, Plastics, chemicals	Elemental analysis	NSL 4033, 4030 rev. B, 4011 rev. F	ICP-OES (0.00001 to 70) % by wt Leeman Profile , P-E 3300 Optima & P-E 5300 Optima
Ni/ Co base alloys	Se, Te, Cd	NSL 4029 rev. B	AA-GF (0.1 to 10) µg/g PE 5100ZL
Metal Alloys, Ceramics, Plastics, chemicals	Elemental analysis	NSL 4027, 4014, rev. E, 4007 rev. E, 4035	ICP-MS (0.001 to 50 000) µg/g P-E Elan 5000 & 6000, DRCE, DRCII
Metal Alloys	Wet gravimetric for Ni	NSL 1081 rev.E	(0.5 to 90) % by wt
Metal Alloys	Titration method for Cr	NSL 1120 rev. C	(0.5 to 90) % by wt
Children's Products	Sample preparation for total Pb and Soluble Heavy Metals	16CFR part 1303 CPSA HR 4040 ASTM F 963-07 EN 71-3:1995 NSL 1221	NA
Metal Alloys, Ceramics, Plastics, chemicals	Cl, F and I	NSL 4018 rev. A	(0.1 to 100,000) µg/g Specific ion electrode Orion EA 940
Steel, Ni, Ti and Co alloys	Carbon Analysis [combustion or fusion]	NSL 4021 rev. I	(0.002 to 30) % by wt Leco CS444LS




ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	*DETECTION LIMIT/ RANGE/ EQUIPMENT
Titanium, Iron, Powder metal	Hydrogen Analysis [combustion or fusion]	NSL 4024 rev. L	(1 to 3 000) µg/g Leco RH404
Ni, Ti, Fe and Co alloys	Nitrogen Analysis [combustion or fusion]	NSL 4023 rev. K, 4028 rev. D	(0.001 to 40) % by wt Leco TC436DR, TC 436
Ni, Ti, Fe and Co alloys and ceramics	Oxygen Analysis [combustion or fusion]	NSL 4023 rev. K, 4028 rev. D	(0.001 to 50) % by wt Leco TC436DR, (0.001 to 3) % by wt TC 436
Steel, Ni, Ti and Co alloys	Sulfur Analysis [combustion or fusion]	NSL 4022 rev. I	(0.001 to 5) % by wt Leco CS444LS
Metal Alloys, Ceramics, Plastics, Chemicals	Cl, F, Br, I, NO ₂ , NO ₃ , SO ₄ , PO ₄ , Chlorate, Acetate	NSL 4034, 4016 rev. E	Ion chromatography (0.001 to 10) % by wt Dionex DX500 & DX120
Ni, Ti, Fe, Al and Co alloys	Elemental analysis	NSL 4026 rev. E	Spark OES (0.01 to 40) % by wt Spectro Lab M
Ni, Ti, Fe and Co alloys	Elemental analysis	NSL 4003 rev. G	XRF analysis (0.1 to 50) % by wt Rigaku 3271
Metal Alloys, Ceramics, Plastics, Children's Products	Elemental analysis	NSL 4004 rev. A	Portable XRF Niton-X (0.0002 to 90) % by wt
Ceramics, Chemicals	Elemental analysis	NSL 4010 rev. B	DCArc (0.2 to 5 000) µg/g Atom Comp 2000
Children's products	Lead Analysis by ICP-MS / ICP-OES	NSL 4027, 4014, rev. E, 4007 rev. E, 4035 NSL 4033, 4030 Rev. B, 4011 rev. F	(0.5 to 10 000) µg/g PE Elan 6000, PE Elan DRC-e (1 to 70) % by wt Leeman Profile PE Optima 3300, 5300
Polymers	Phthalates, PBB and PBDE	NSL 4031 rev. A	GC-MS (0.001 to 30) % by wt Varian 4000

II. Mechanical

ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	*DETECTION LIMIT/ RANGE/ EQUIPMENT
Metal Alloy's	Rockwell Hardness	ASTM E18	LCR-500
Metal Alloys	Grain Size	ASTM E112	Leco GPX 300 Unimet Unitron 8246
Metal Alloys	Microetching	ASTM E407	Unimet Unitron 8246
Metal Alloys	Knoop Microhardness	ASTM E384	Wilson MO

Notes:

1. * = As Applicable
2. This scope is part of and must be included with the Certificate of Accreditation No. AT-1354



Vice President

