



ASACERT
ASSESSMENT &
CERTIFICATION

PHYSICAL INVENTORY INSPECTION

Client	Alkemya Luxembourg Sarl 26 boulevard Royal L2449 Luxembourg Numéro d'immatriculation : B265985
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Inspection Date:	06/12/2022
Report Issue Date:	06/12/2022
Report Number	006/22

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Summary

FOREWARD	3
PHYSICAL INVENTORY INSPECTION	3
CONCLUSION	14

FOREWARD

The Physical Inventory Inspection consists in verifying the adequacy of the place of custody of the asset both from the point of view of the microclimatic conditions and of the safety conditions by visual inspection. For this purpose, to the property of the Caveau will require documentary evidence on the control of microclimatic parameters and anti-theft management measures. The visual inspection will subsequently be concentrated on the asset by carrying out an inventory of the reels kept in the three aluboxes.

The operations were carried out on 6th December 2022, inside the caveau of Helvetic Securgest in Lugano in Piazzetta Santa Lucia.

PHYSICAL INVENTORY INSPECTION

Inspection Object

"Bobbins containing unalloyed nickel wire, stored in four "aluboxes", protected in a safe inside the caveau of Helvetic Securgest SA in piazzetta Santa Lucia - 6900 - Massagno (Lugano), Switzerland".

The inspection operations were launched in support of the General Manager of Alkemya Lux, Dr. Carlo della Peruta and the Keeper, Helvetic Securgest, Lorenzo Forni.

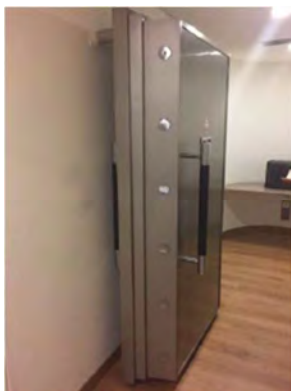


Foto 1 - Caveau

Only the Keeper can unseal the aluboxes for inspection of the inventory and only he can re-seal them to protect the security of the Collateral. The place looks to be safe and it seems not to be possible to enter into without a prior authorization. The Keeper, in person of Mr. Lorenzo Forni, tells us that there is an efficient alarm system with microphone walls. The inventory is kept in sealed aluboxes.



Foto 2 - Aluboxes no. 1, 2 e 3



Foto 3 - Alubox no. 4 - "Reserve"

The Keeper takes the four aluboxes in the meeting room for our Physical Inventory Inspection and shows us the Collateral following the numerical order.



Foto 4 - Breaking of seals



Foto 5 - Box contents

The Keeper tells us that he only has the key to open the strongbox containing the Collateral. The Keeper shows us that the aluboxes are intact, without apparent damage. We confirm that seals are intact (foto 2 and foto 3).

For each alubox, the same procedure occurs:

1. The Keeper checks that the aluboxes are intact and without apparent damage or without any tampering of the seals or of the aluboxes;
2. The Keeper breaks the seals;
3. ASACERT checks that the bobbins are intact and without apparent damage;
4. ASACERT allows to begin the Inspection with the presence of the GM Alkemya Lux. Photographs are taken for every step of the Inspection;
5. After random checks made by ASACERT, as indicated in the tables hereinafter provided, the Keeper puts back and then re-seals each of the four aluboxes with his seals.

Finally, the Keeper puts back the aluboxes in the safe (strongbox); then, the Keeper closes it and at the end he closes the caveau / the heavy safe door.



Foto 6 - Alubox 1 re-sealed



Foto 7 - Alubox 2 re-sealed



Foto 8 - Alubox 3 re-sealed



Foto 9 - Alubox "Reserve" - re-sealed

The following tables show the net and gross weight of the bobbins. Moreover, the bobbins that have been randomly verified by ASACERT (the gross weight was verified using a certified precision balance). The ones that have been inspected by ASACERT have been marked with *:

Alubox no.	Bobbin no.	Label information		Weight (g) Checked by Asacert	Note
		Net Weight (g)	Gross Weight (g)		
1	1	236	301		
1	2	214	279		
1	3	265	330		
1	4*	225	290	291,342	Sample collection for scientific tests for a total of approx 11,5 meters
1	5	258	323		
1	6	266	331		
1	7	218	283		
1	8*	224	289	291,183	
1	9*	223	288	289,364	
1	10	264	329		
1	11	244	309		
1	12	261	326		
1	13	230	295		
1	14	232	297		
1	15	222	287		
1	16	219	284		
1	17	263	328		
1	18	243	308		Sample collection for scientific tests for a total of approx 105 meters
1	19	251	316		
1	20	310	375		Sample collection for scientific tests for a total of approx 4,5 meters
1	21	258	323		
1	22	266	331		
1	23	298	363		
1	24	228	293		
1	25	275	340		
1	26*	215	280	282,063	
1	27	272	337		
1	28	250	315		
1	29*	212	277	279,852	
1	30	279	344		
1	31	211	276		
1	32	216	281		
1	33	287	352		
1	34	307	372		
1	35	253	318		

Alubox no.	Bobbin no.	Label information		Weight (g) Checked by Asacert	Note
		Net Weight (g)	Gross Weight (g)		
1	36	276	341		
1	37	238	303		
1	38	236	301		<i>Sample collection for scientific tests for a total of approx 10 meters</i>
1	39	290	355		
1	40	265	330		
TOTAL		10.000,00	12.600,00		

Table 1 – Content Alubox 1

Alubox no.	Bobbin no.	Label information		Weight (g) Checked by Asacert	Note
		Net Weight (g)	Gross Weight (g)		
2	41	263	328		
2	42	225	290		
2	43	235	300		
2	44*	226	291	292,938	
2	45	217	282		
2	46	231	296		
2	47	343	408		
2	48	278	343		
2	49	223	288		
2	50	224	289		
2	51*	233	298	299,455	Sample collection for scientific tests for a total of approx 6 meters
2	52	221	286		
2	53	270	335		
2	54	226	291		
2	55	252	317		
2	56	256	321		Sample collection for scientific tests for a total of approx 108 meters
2	57	265	330		
2	58	330	395		
2	59	246	311		
2	60	293	358		
2	61	251	316		
2	62	225	290		
2	63*	221	286	288,161	Sample collection for scientific tests for a total of approx 10 meters
2	64	241	306		
2	65	266	331		
2	66	302	367		
2	67	235	300		
2	68	246	311		
2	69	230	295		
2	70	313	378		Sample collection for scientific tests for a total of approx 11 meters
2	72	234	299		
2	73	256	321		
2	74	229	294		

Alubox no.	Bobbin no.	Label information		Weight (g) Checked by Asacert	Note
		Net Weight (g)	Gross Weight (g)		
2	75*	222	287	289,049	
2	76	252	317		
2	77	221	286		
2	78	223	288		
2	80	208	273		
TOTAL		9.432,00	11.902,00		

Table 2 – Content Alubox 2

Alubox no	Bobbin n°	Label Information		Weight (g) Checked by Asacert	Note
		Net Weight (g)	Gross Weight (g)		
3	71	318	383		
3	81	234	299		
3	82	283	348		
3	83	260	325		
3	84	294	359		
3	85*	222	287	288,328	
3	86	244	309		
3	87	228	293		
3	88	217	282		
3	89	242	307		
3	90	233	298		
3	91	253	318		
3	92	223	288		
3	93	242	307		
3	94	302	367		
3	95	249	314		
3	96	239	304		Sample collection for scientific tests for a total of approx 10 meters
3	97*	228	293	294,716	Sample collection for scientific tests for a total of approx 13 meters
3	98	222	287		
3	99	223	288		
3	100	246	311		
3	101	240	305		
3	103	245	310		
3	104	343	408		
3	114	240	305		
3	115	237	302		
3	116	234	299		Sample collection for scientific tests for a total of approx 106 meters
3	117*	232	297	298,823	
3	118	244	309		
3	119	245	310		
TOTAL		7.462,00	9.412,00		

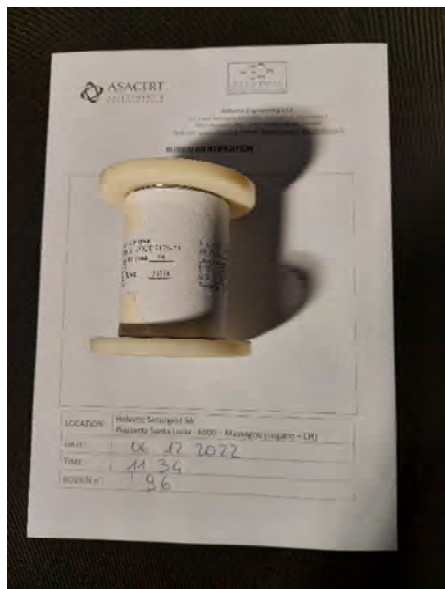
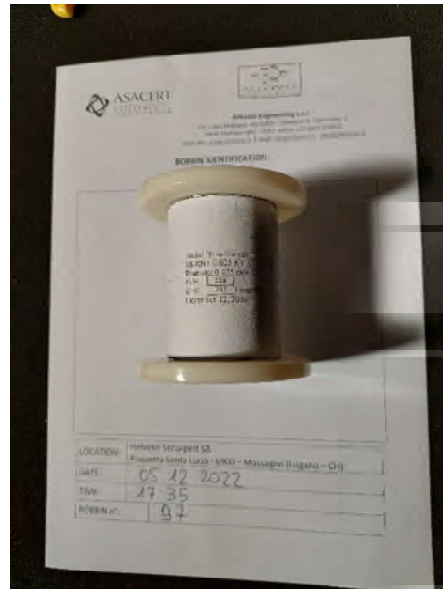
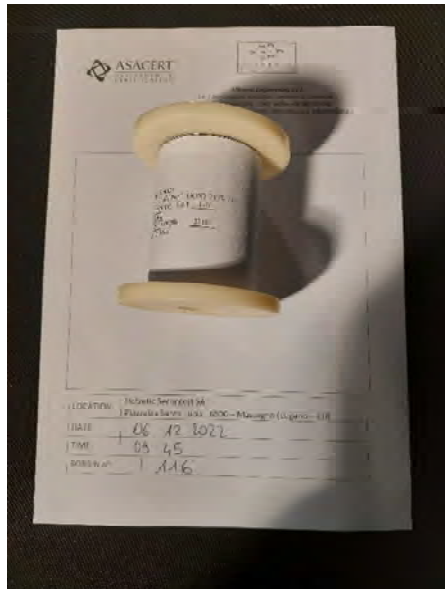
Table 3 – Content Alubox 3

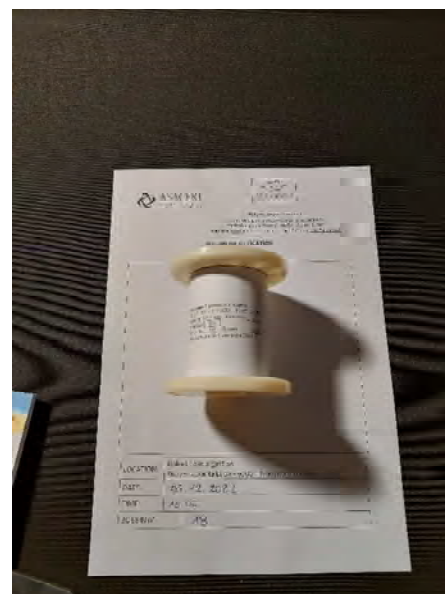
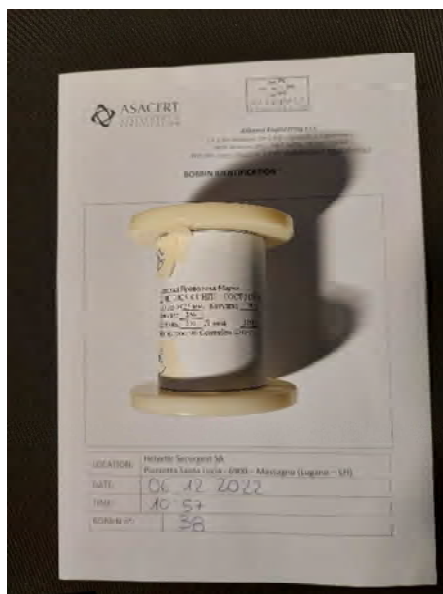
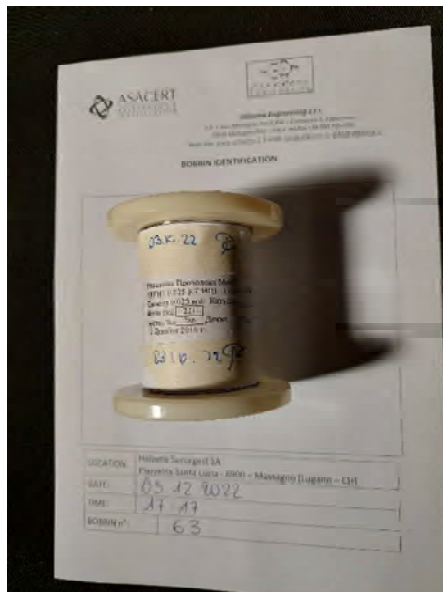
Alubox no.	Bobbin no.	Label Information		Weight (g) Checked by Asacert	Note
		Net Weight (g)	Gross Weight (g)		
RESERVE	79	247	312		
RESERVE	105	331	396		
RESERVE	106*	342	407		<i>Sample collection for scientific tests for a total of approx 8 meters</i>
RESERVE	107	246	311		
RESERVE	108	240	305		
RESERVE	109*	226	291	292,74	
RESERVE	110	228	293		
RESERVE	111	249	314		
RESERVE	112	252	317		
RESERVE	113	258	323		
TOTAL		2.619,00	3.269,00		

Table 4 – Content Alubox “Reserve”

The gross weight check has always highlighted a positive difference (higher gross weight detected than declared on the label of the sampled bobbin)

Below there are some images regarding, some of the bobbins inspected:





CONCLUSION

Reading the data in tables 1, 2, 3 and 4, the following results:

Alubox no.	Label Information		Samples for scientific test (m)
	Net Weight (g)	Gross Weight (g)	
Alubox no. 1	10.000	12.600	-131
Alubox no. 2	9.432	11.902	-135
Alubox no. 3	7.462	9.412	-129
Alubox "reserve"	2.619	3.269	-8
TOTAL	29.513	37.183	-403

Table 5 – Summary information Table 1, Table 2, Table 3 and Table 4

with reference to the Helvetic Securgest "Safe Keeping Receipt" (S.K.R - No. 004 of 18/05/2022) – annex 1 and Nickel wire characterization analysis by Allkema Engineering s.r.l. – annex 2, we deduce the following:

- Total quantity of Alubox 1 + 2 + 3 (m): 6,403,333.33
- Total quantity picked from Alubox 1 + 2 + 3 (m): 395
- Total quantity of Alubox Reserve (m): 623,571.43
- Total quantity picked from Alubox Reserve (m): 8

Total quantity (m): 6,403,333.33 – 395 + 623,571.43 – 8 ~ 7,026,501.76

Finally, based on what previously written and in relation to our mandate, ASACERT UK certifies that the whole Collateral is safe, without apparent damage and is kept in a safe place.

Observers on behalf of Alkemya Luxembourg Sarl

- *Carlo Della Peruta – Managing Director*

Lugano, 6th December

ASACERT UK Ltd



Nicola Petta- Inspector

Annex 1 – Safe Keeping Receipt – Helvetic Securgest

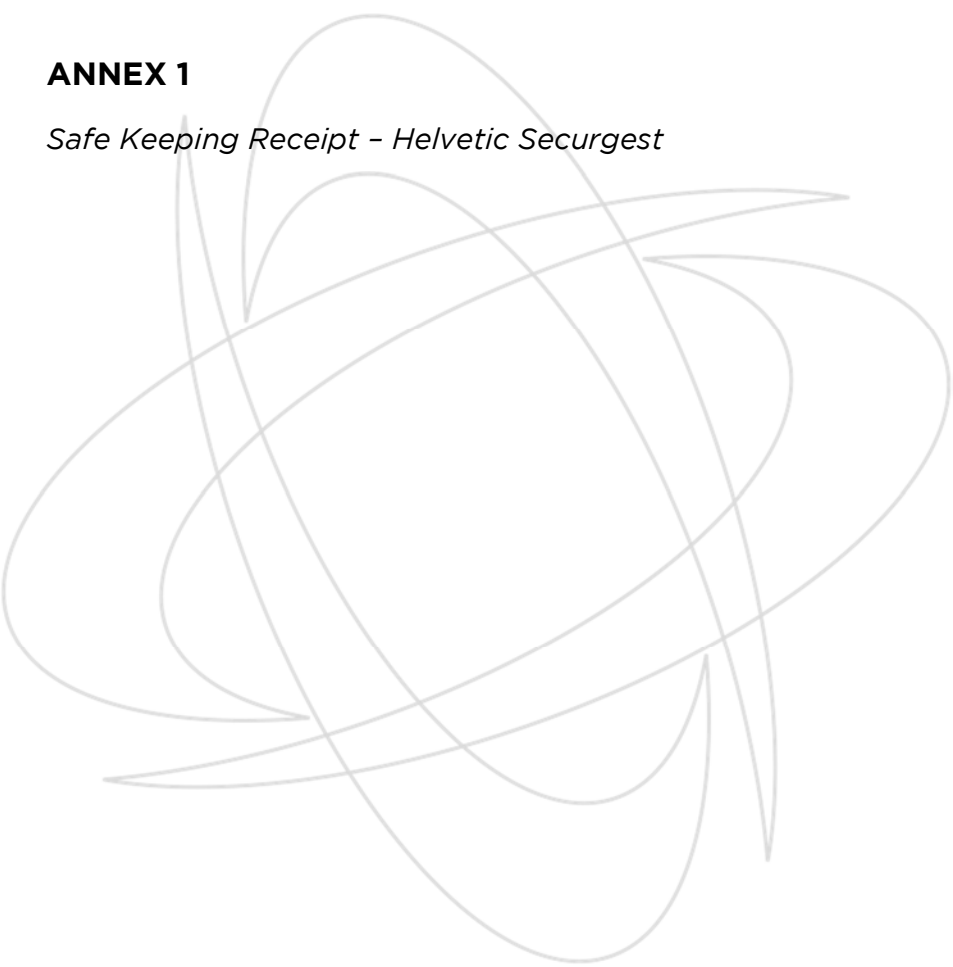
Annex 2 – Nickel wire characterization analysis by Allkema Engineering s.r.l.

Alkemya Luxembourg Sarl

26 boulevard Royal L2449 Luxembourg
Numéro d'immatriculation : B265985

ANNEX 1

Safe Keeping Receipt - Helvetic Securgest



SAFE KEEPING RECEIPT

(S.K.R) No: 005

Lugano, 18/05/2022

We, the Helvetic Securgest SA confirm the deposit of:

Product Description: NICKEL Wire, 0.025mm (0.001 in) dia, hard 99.99%
(metals basis)
Lot #KT NP1
SGS Certificate No. 140701/ZH-0310'5580

Product Mark: NP-1 GOST 2179 & 492/Alfa Aesar ref. 40672

Location: Helvetic Securgest SA
Piazzetta Santa Lucia
6900 - Massagno (Lugano)

Total Net Weight (grams): 26,894 g

Total Quantity (metres): 6,403,333.33 m

Total Value: According to Alfa Aesar, ref. #40672

Account: Alkemya Luxembourg S.à r.l.
26, Boulevard Royal
L-2449 Luxembourg

and of:

Product Description: NICKEL Wire, 0.075mm (0.001 in) dia, hard 99.99%
(metals basis)
Lot #KT FtPI "RESERVE"
Sgf Certificate No. 140701/ZH-0310'5579 NP-



Helvetic Securgest
Piazzetta Santa Lucia
6900 Massagno (Lugano)
Svizzera
Tel: +41 91 950 02 38
Email: info@helveticlugano.com
Web: www.helveticlugano.com



Product Mark: 1 GOST 2179 6 492/Alfa Aesar ref. 40672

Location: Helvetic Securgest SA
Piazzetta Santa Lucia
6900 - Massagno (Lugano)

Total Net Weight (grams): 2,619 g

Total Quantity (metres): 623,571.43 m

Total Value: According to Alfa Aesar, ref. #40672

Account: Alkemya Luxembourg S.à r.l.
26, Boulevard Royal
L-2449 Luxembourg

A handwritten signature in blue ink, consisting of a stylized 'A' followed by a long horizontal stroke and a final upward curve.

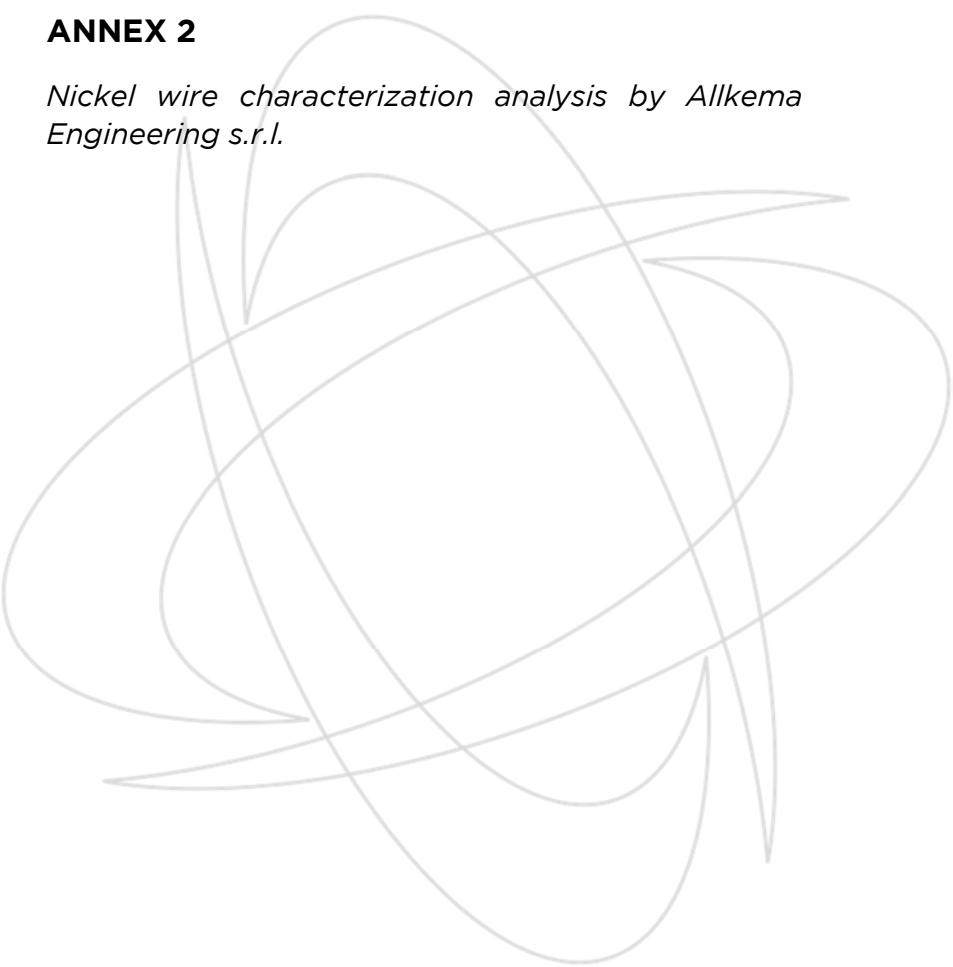
Helvetic Securgest SA

Alkemya Luxembourg Sarl

26 boulevard Royal L2449 Luxembourg
Numéro d'immatriculation : B265985

ANNEX 2

*Nickel wire characterization analysis by Allkema
Engineering s.r.l.*





Certificate of analysis n. AE01/211022 rev.01 Modugno (BA), 13 dicembre 2022

CHARACTERIZATION OF NICKEL WIRE

Reason for review: elimination of semi-quantitative parameters of not fully referable accuracy

Applicant	ASACERT
Laboratory	Allkema Engineering S.r.l. – S.P.1 Bari-Modugno Km 0.800 – Comparto G – Capannone 1 – Modugno (BA) – ITALY
Product category	METAL MATERIALS
Product description / Description of goods	NICKEL WIRE IN BOBBINS
Location of the goods	HELVETIC SECURGEST SA - PIAZZETTA SANTA LUCIA - 6900 – MASSAGNO – LUGANO (CH)
Scope of analysis	BASIC ANALYTICAL CHARACTERIZATION OF SAMPLE, VERIFICATION OF IMPURITIES
Sampling date	MONDAY, 3 OCTOBER 2022
Sampling execution by	ALLKEMA ENGINEERING S.R.L. : DR. CHEMIST COSIMO VITARELLA DR. ING. MICHELE MASSIMO NUOVO
Sampling supervisor	ASACERT - ASSESSMENT & CERTIFICATION : DR. ING. NICOLA PETTA
Sampling procedure	THE SAMPLE WIRE WAS TAKEN FROM A SPECIFIC REEL, CHECKED IN ITS LENGTH AND THEN MANUALLY CUTTED WITH A PLIER. AFTER THAT WAS COILED UP ON FINGERS BEFORE BEING WRAPPED IN GREASEPROOF PAPER
Coil/Bobbin identification code	N° 04
Sample packaging	THE SAMPLE IN HIS WRAPPING WAS PLACED INSIDE A PLASTIC ENVELOP, SEALED AND FINALLY STORED IN A POLYSTYRENE BOX.
Sample transport conditions	BOX SAILED, ROOM TEMPERATURE, TRANSPORTED TO THE LABORATORY BY CAR VAN FROM ALLKEMA ENGINEERING S.R.L. STAFF
Sample physical state	SOLID, WIRE SHAPE
Sample Identification CODE	S5_O_04
Sample details	AMOUNT: ≈ 1 METER LENGTH / ≈ 5 MILLIGRAMS WEIGHT
Delivery date to the main laboratory	WEDNESDAY, 05 OCTOBER 2022
Start date - end date of the tests	FROM 06/10/2022 TO 20/10/2022
SEM EDS analysis	PERFORMED BY MOTIVEXLAB - ALLKEMA PARTNER LABORATORY – LAB PROJECT CODE 75484 - 273/113 SEM ZEISS EVO MA10 - ID.309 + MICROPROBE EDS OXFORD XPLORE - ID.529
ICP and other main analysis	PERFORMED BY ALLKEMA ENGINEERING S.R.L. LABORATORY – SAMPLE LAB CODE 273/113 2022 ICP-MS - AGILENT 7800 SN JP15240109 - ID. S_36 MICROWAVE DIGESTION SYSTEM – MILESTONE ETHOS EASY SN 15040354 – ID. D_49 ANALYTICAL BALANCE - KERN ABT 220 5DM SN WB10E0098 - ID. S_03

This test report refers strictly to the sample tested as sampled and received. No partial or total reproduction of the report is allowed without the authorization of Allkema Engineering S.r.l.
The laboratory has no responsibility in relation to:

- the suitability of sampling procedures when this is carried out by third parties;
- the representativeness of the sample received with respect to the source material when sampling is carried out by third parties;
- the truthfulness or the completeness of the information provided by the customer regarding the chemical/physical properties of the test material that are not included in the analytical service.

Once the tests have been completed, the sample or the sample portion still available, is kept in stock for a period not exceeding 30 days from the issue of the test certificate.





Cartificate of analysis n. AE01/211022 rev.01 Modugno (BA), 13 dicembre 2022

SEMIQUANTITATIVE ANALYSIS					
TEST	U.M.	RESULT	UNCERTAINTY	TEST METHOD ANALYTICAL TECHNIQUE	
Medium Thickness	µm	25,0	± 0,3	SEM - Microscopic analysis	
Nichel (Ni)	%	> 99 (confirmed)	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis confirmed by Inductive Coupled Plasma Atomic Emission Analysis	
Nichel (Ni)	%	> 99 (confirmed)	--	Energy Dispersive X-ray Spectroscopy (EDS)	
QUANTITATIVE ANALYSIS - IMPURITIES					
TEST	U.M.	RESULT	UNCERTAINTY	TEST METHOD ANALYTICAL TECHNIQUE	
Lead (Pb)	%	< 0,002	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis	
Aluminium (Al)	%	< 0,02	--		
Cobalt (Co)	%	< 0,002	--		
Copper (Cu)	%	< 0,002	--		
Magnesium (Mg)	%	< 0,02	--		
Molybdenum (Mo)	%	< 0,002	--		
Silicon (Si)	%	< 0,02	--		
Chromium (Cr)	%	< 0,02	--		
Iron (Fe)	%	< 0,005	--		
Manganese (Mn)	%	< 0,002	--		
Nichel (Ni)	%	> 99,9	--	Calculated from metallic impurities	
ISOTOPIC RATIO					
ISOTOPE	U.M.	RESULT	UNCERTAINTY	ANALYTICAL TECHNIQUE	NOTE
Nichel (56)	% TOT ISOTOP.	< 0,01	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis	non abundant in nature
Nichel (58)	% TOT ISOTOP.	> 65	--		stable and existing in nature
Nichel (59)	% TOT ISOTOP.	< 0,01	--		non abundant in nature
Nichel (60)	% TOT ISOTOP.	25,5	± 2,5		stable and existing in nature
Nichel (61)	% TOT ISOTOP.	1,21	± 0,24		stable and existing in nature
Nichel (62)	% TOT ISOTOP.	4,1	± 0,8		stable and existing in nature
Nichel (63)	% TOT ISOTOP.	< 0,01	--		artificial – non abundant in nature
Nichel (64)	% TOT ISOTOP.	1,20	± 0,24		stable and existing in nature

NOTE

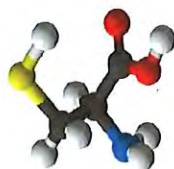
The uncertainty value (if present in the proper field) is generally preceded by "±" symbol. In such a case, the uncertainty is to be intended as "extended" and for chemical tests, it is intended "normally" distributed and characterized by a cover factor of 2 corresponding to a significance level of 95%.

The quantification limits is a value preceded by the "<" symbol. If present in the determination of the analytes, it refers to the lowest concentration of which the laboratory guarantees correct metrological traceability through the use of "certified" reference materials. The quantification limit of each method is always higher than the instrumental detection limit.

CAPTION

U.M.: Unit of measurement

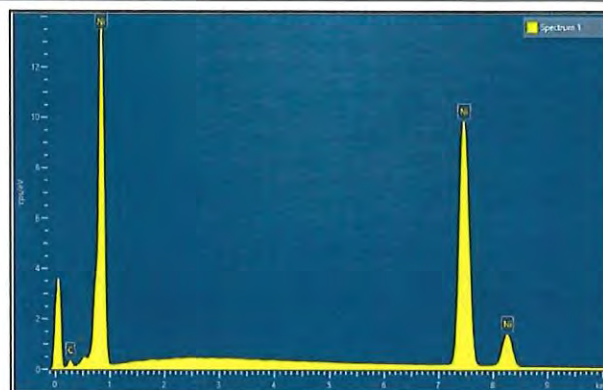




Cartificate of analysis n. AE01/211022 rev.01

Modugno (BA), 13 dicembre 2022

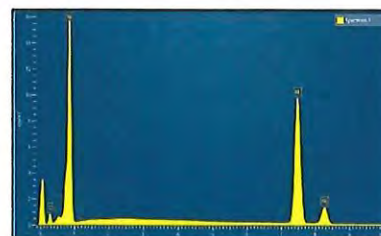
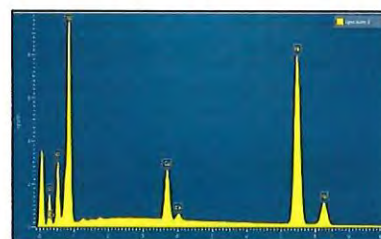
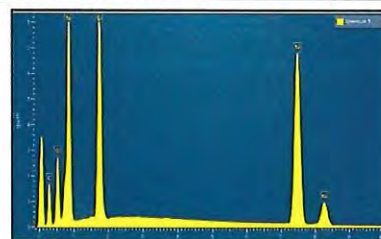
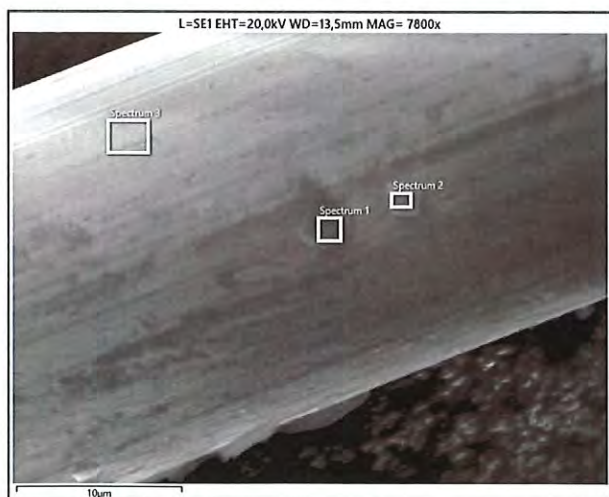
SEM-EDS SUPERFICIAL IMAGE AND EDS SPECTRUM
MAGNIFICATION 4500 x



According to EDS analysis, the wire sample S5_O_04 is quantitatively made up of > 99,9 % Nickel. (Carbon < 0,01%).

The measured diameter is about 25,0 µm

SPOT IMAGE AND EDS SPECTRUM - MAGNIFICATION 7800 x



The EDS analysis shows on some "spot" points of the sample, a slight particle contamination, consisting of elements in variable quantities such as carbon, oxygen, silicon, calcium, potassium, sulfur, chlorine and even traces of aluminum. There are also areas of the surface that are visually darker, also characterized by the same elements detected on the particles, in a very low percentage or in traces. This contamination is generally attributable to exposure to the environment.

LABORATORY MANAGER
Dr. Chem. Cosimo Vitarella





Cartificate of analysis n. AE02/211022 rev.01 Modugno (BA), 13 dicembre 2022

CHARACTERIZATION OF NICKEL WIRE

Reason for review: elimination of semi-quantitative parameters of not fully referable accuracy

Applicant	ASACERT
Laboratory	Allkema Engineering S.r.l. – S.P.1 Bari-Modugno Km 0.800 – Comparto G – Capannone 1 – Modugno (BA) - ITALY
Product category	METAL MATERIALS
Product description / Description of goods	NICKEL WIRE IN BOBBINS
Location of the goods	HELVETIC SECURGEST SA - PIAZZETTA SANTA LUCIA - 6900 – MASSAGNO - LUGANO (CH)
Scope of analysis	BASIC ANALYTICAL CHARACTERIZATION OF SAMPLE, VERIFICATION OF IMPURITIES
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Sampling execution by	ALLKEMA ENGINEERING S.R.L. : DR. CHEMIST COSIMO VITARELLA DR. ING. MICHELE MASSIMO NUOVO
Sampling supervisor	ASACERT – ASSESSMENT & CERTIFICATION : DR. ING. NICOLA PETTA
Sampling procedure	THE SAMPLE WIRE WAS TAKEN FROM A SPECIFIC REEL, CHECKED IN ITS LENGTH AND THEN MANUALLY CUTTED WITH A PLIER. AFTER THAT WAS COILED UP ON FINGERS BEFORE BEING WRAPPED IN GREASEPROOF PAPER
Coil/Bobbin identification code	N° 63
Sample packaging	THE SAMPLE IN HIS WRAPPING WAS PLACED INSIDE A PLASTIC ENVELOPE, SEALED AND FINALLY STORED IN A POLYSTYRENE BOX.
Sample transport conditions	BOX SEALED, ROOM TEMPERATURE, TRANSPORTED TO THE LABORATORY BY CAR VAN FROM ALLKEMA ENGINEERING S.R.L. STAFF
Sample physical state	SOLID, WIRE SHAPE
Sample Identification CODE	S5_P_63
Sample details	AMOUNT: ≈ 1 METER LENGTH / ≈ 5 MILLIGRAMS WEIGHT
Delivery date to the main laboratory	WEDNESDAY, 05 OCTOBER 2022
Start date - end date of the tests	FROM 06/10/2022 TO 20/10/2022
SEM EDS analysis	PERFORMED BY MOTIVEXLAB - ALLKEMA PARTNER LABORATORY – LAB PROJECT CODE 75484 - 273/114 SEM ZEISS EVO MA10 - ID.309 + MICROPROBE EDS OXFORD XPLORE - ID.529
ICP and other main analysis	PERFORMED BY ALLKEMA ENGINEERING S.R.L. LABORATORY – SAMPLE LAB CODE 273/114 2022 ICP-MS - AGILENT 7800 SN JP15240109 - ID. S_36 MICROWAVE DIGESTION SYSTEM - MILESTONE ETHOS EASY SN 15040354 - ID. D_49 ANALYTICAL BALANCE - KERN ABT 220 5DM SN WB10E0098 - ID. S_03

This test report refers strictly to the sample tested as sampled and received. No partial or total reproduction of the report is allowed without the authorization of Allkema Engineering S.r.l..
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- the suitability of sampling procedures when this is carried out by third parties;
- the representativeness of the sample received with respect to the source material when sampling is carried out by third parties;
- the truthfulness or the completeness of the information provided by the customer regarding the chemical/physical properties of the test material that are not included in the analytical service.

Once the tests have been completed, the sample or the sample portion still available, is kept in stock for a period not exceeding 30 days from the issue of the test certificate.





Cartificate of analysis n. AE02/211022 rev.01 Modugno (BA), 13 dicembre 2022

SEMIQUANTITATIVE ANALYSIS					
TEST	U.M.	RESULT	UNCERTAINTY	TEST METHOD ANALYTICAL TECHNIQUE	
Medium Thickness	µm	25,2	± 0,3	SEM - Microscopic analysis	
Nichel (Ni)	%	> 99 (confirmed)	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis confirmed by Inductive Coupled Plasma Atomic Emission Analysis	
Nichel (Ni)	%	> 99 (confirmed)	--	Energy Dispersive X-ray Spectroscopy (EDS)	
QUANTITATIVE ANALYSIS - IMPURITIES					
TEST	U.M.	RESULT	UNCERTAINTY	TEST METHOD ANALYTICAL TECHNIQUE	
Lead (Pb)	%	< 0,002	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis	
Aluminium (Al)	%	< 0,02	--		
Cobalt (Co)	%	< 0,002	--		
Copper (Cu)	%	< 0,002	--		
Magnesium (Mg)	%	< 0,02	--		
Molybdenum (Mo)	%	< 0,002	--		
Silicon (Si)	%	< 0,02	--		
Chromium (Cr)	%	< 0,02	--		
Iron (Fe)	%	< 0,005	--		
Manganese (Mn)	%	< 0,002	--		
Nichel (Ni)	%	> 99,9	--	Calculated from metallic impurities	
ISOTOPIC RATIO					
ISOTOPE	U.M.	RESULT	UNCERTAINTY	ANALYTICAL TECHNIQUE	NOTE
Nichel (56)	% TOT ISOTOP.	< 0,01	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis	non abundant in nature
Nichel (58)	% TOT ISOTOP.	> 65	--		stable and existing in nature
Nichel (59)	% TOT ISOTOP.	< 0,01	--		non abundant in nature
Nichel (60)	% TOT ISOTOP.	25,5	± 2,5		stable and existing in nature
Nichel (61)	% TOT ISOTOP.	1,22	± 0,24		stable and existing in nature
Nichel (62)	% TOT ISOTOP.	4,0	± 0,8		stable and existing in nature
Nichel (63)	% TOT ISOTOP.	< 0,01	--		artificial – non abundant in nature
Nichel (64)	% TOT ISOTOP.	1,21	± 0,24		stable and existing in nature

NOTE

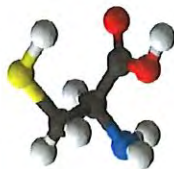
The uncertainty value (if present in the proper field) is generally preceded by "±" symbol. In such a case, the uncertainty is to be intended as "extended" and for chemical tests, it is intended "normally" distributed and characterized by a cover factor of 2 corresponding to a significance level of 95%.

The quantification limits is a value preceded by the "<" symbol. If present in the determination of the analytes, it refers to the lowest concentration of which the laboratory guarantees correct metrological traceability through the use of "certified" reference materials. The quantification limit of each method is always higher than the instrumental detection limit.

CAPTION

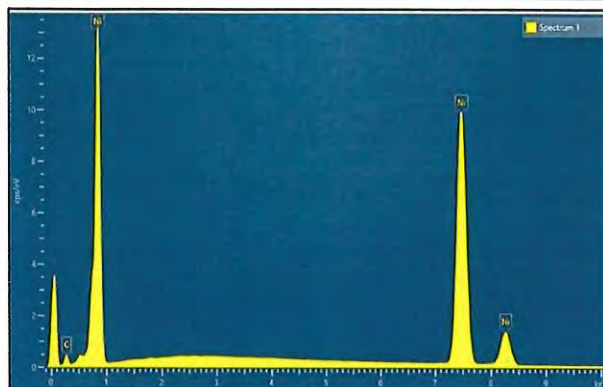
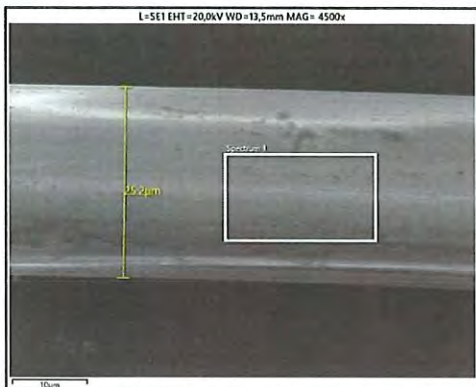
U.M.: Unit of measurement





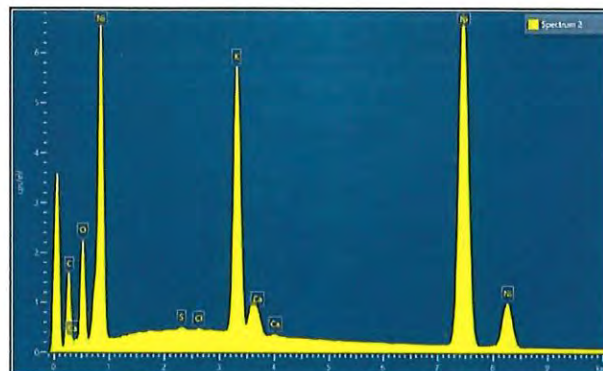
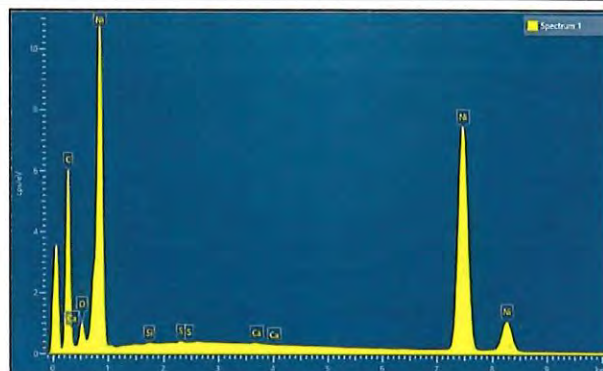
Cartificate of analysis n. AE02/211022 rev.01 Modugno (BA), 13 dicembre 2022

SEM-EDS SUPERFICIAL IMAGE AND EDS SPECTRUM
MAGNIFICATION 4500 x



According to EDS analysis, the wire sample S5_O_04 is quantitatively made up of > 99,9 % Nickel. (Carbon < 0,01%).
The measured diameter is about 25,2 μm

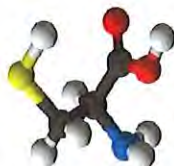
SPOT IMAGE AND EDS SPECTRUM - MAGNIFICATION 8800 x



The EDS analysis shows on some "spot" points of the sample, a slight particle contamination, consisting of elements in variable quantities such as carbon, oxygen, silicon, calcium, potassium, sulfur, chlorine and even traces of aluminum. There are also areas of the surface that are visually darker, also characterized by the same elements detected on the particles, in a very low percentage or in traces. This contamination is generally attributable to exposure to the environment.

LABORATORY MANAGER
Dr. Chem. Cosimo Vitarella





Cartificate of analysis n. AE03/211022 rev.01 Modugno (BA), 13 dicembre 2022

CHARACTERIZATION OF NICKEL WIRE

Reason for review: elimination of semi-quantitative parameters of not fully referable accuracy

Applicant	ASACERT
Laboratory	Allkema Engineering S.r.l. – S.P.1 Bari-Modugno Km 0.800 – Comparto G – Capannone 1 – Modugno (BA) - ITALY
Product category	METAL MATERIALS
Product description / Description of goods	NICKEL WIRE IN BOBBINS
Location of the goods	HELVETIC SECURGEST SA - PIAZZETTA SANTA LUCIA - 6900 – MASSAGNO – LUGANO (CH)
Scope of analysis	BASIC ANALYTICAL CHARACTERIZATION OF SAMPLE, VERIFICATION OF IMPURITIES
Sampling date	MONDAY, 3 OCTOBER 2022
Sampling execution by	ALLKEMA ENGINEERING S.R.L. : DR. CHEMIST COSIMO VITARELLA DR. ING. MICHELE MASSIMO NUOVO
Sampling supervisor	ASACERT – ASSESSMENT & CERTIFICATION : DR. ING. NICOLA PETTA
Sampling procedure	THE SAMPLE WIRE WAS TAKEN FROM A SPECIFIC REEL, CHECKED IN ITS LENGTH AND THEN MANUALLY CUTTED WITH A PLIER. AFTER THAT WAS COILED UP ON FINGERS BEFORE BEING WRAPPED IN GREASEPROOF PAPER
Coil/Bobbin identification code	N° 97
Sample packaging	THE SAMPLE IN HIS WRAPPING WAS PLACED INSIDE A PLASTIC ENVELOP, SEALED AND FINALLY STORED IN A POLYSTYRENE BOX.
Sample transport conditions	BOX SAILED, ROOM TEMPERATURE, TRANSPORTED TO THE LABORATORY BY CAR VAN FROM ALLKEMA ENGINEERING S.R.L. STAFF
Sample physical state	SOLID, WIRE SHAPE
Sample Identification CODE	S5_Q_97
Sample details	AMOUNT: ≈ 1,5 METER LENGHT / ≈ 8 MILLIGRAMS WEIGHT
Delivery date to the main laboratory	WEDNESDAY, 05 OCTOBER 2022
Start date - end date of the tests	FROM 06/10/2022 TO 20/10/2022
SEM EDS analysis	PERFORMED BY MOTIVEXLAB – ALLKEMA PARTNER LABORATORY – LAB PROJECT CODE 75484 - 273/115 SEM ZEISS EVO MA10 - ID.309 + MICROPROBE EDS OXFORD XPLORE - ID.529
ICP and other main analysis	PERFORMED BY ALLKEMA ENGINEERING S.R.L. LABORATORY – SAMPLE LAB CODE 273/115 2022 ICP-MS - AGILENT 7800 SN JP15240109 - ID. S_36 MICROWAVE DIGESTION SYSTEM – MILESTONE ETHOS EASY SN 15040354 – ID. D_49 ANALYTICAL BALANCE – KERN ABT 220 5DM SN WB10E0098 - ID. S_03

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Cartificate of analysis n. AE03/211022 rev.01 Modugno (BA), 13 dicembre 2022

SEMIQUANTITATIVE ANALYSIS					
TEST	U.M.	RESULT	UNCERTAINTY	TEST METHOD ANALYTICAL TECHNIQUE	
Medium Thickness	µm	26,4	± 0,3	SEM - Microscopic analysis	
Nichel (Ni)	%	> 99 (confirmed)	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis confirmed by Inductive Coupled Plasma Atomic Emission Analysis	
Nichel (Ni)	%	> 99 (confirmed)	--	Energy Dispersive X-ray Spectroscopy (EDS)	
QUANTITATIVE ANALYSIS - IMPURITIES					
TEST	U.M.	RESULT	UNCERTAINTY	TEST METHOD ANALYTICAL TECHNIQUE	
Lead (Pb)	%	< 0,002	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis	
Aluminium (Al)	%	< 0,02	--		
Cobalt (Co)	%	< 0,002	--		
Copper (Cu)	%	< 0,002	--		
Magnesium (Mg)	%	< 0,02	--		
Molybdenum (Mo)	%	< 0,002	--		
Silicon (Si)	%	< 0,02	--		
Chromium (Cr)	%	< 0,02	--		
Iron (Fe)	%	< 0,005	--		
Manganese (Mn)	%	< 0,002	--		
Nichel (Ni)	%	> 99,9	--	Calculated from metallic impurities	
ISOTOPIC RATIO					
ISOTOPE	U.M.	RESULT	UNCERTAINTY	ANALYTICAL TECHNIQUE	NOTE
Nichel (56)	% TOT ISOTOP.	< 0,01	--	"Acqua Regia" Microwave Digestion + Inductive Coupled Plasma Mass Spectrometry Analysis	non abundant in nature
Nichel (58)	% TOT ISOTOP.	> 65	--		stable and existing in nature
Nichel (59)	% TOT ISOTOP.	< 0,01	--		non abundant in nature
Nichel (60)	% TOT ISOTOP.	25,5	± 2,5		stable and existing in nature
Nichel (61)	% TOT ISOTOP.	1,23	± 0,24		stable and existing in nature
Nichel (62)	% TOT ISOTOP.	4,0	± 0,8		stable and existing in nature
Nichel (63)	% TOT ISOTOP.	< 0,01	--		artificial – non abundant in nature
Nichel (64)	% TOT ISOTOP.	1,21	± 0,24		stable and existing in nature

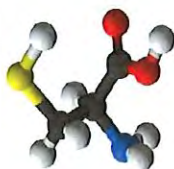
NOTE

The uncertainty value (if present in the proper field) is generally preceded by "±" symbol. In such a case, the uncertainty is to be intended as "extended" and for chemical tests, it is intended "normally" distributed and characterized by a cover factor of 2 corresponding to a significance level of 95%.
The quantification limits is a value preceded by the "<" symbol. If present in the determination of the analytes, it refers to the lowest concentration of which the laboratory guarantees correct metrological traceability through the use of "certified" reference materials. The quantification limit of each method is always higher than the instrumental detection limit.

CAPTION

U.M.: Unit of measurement

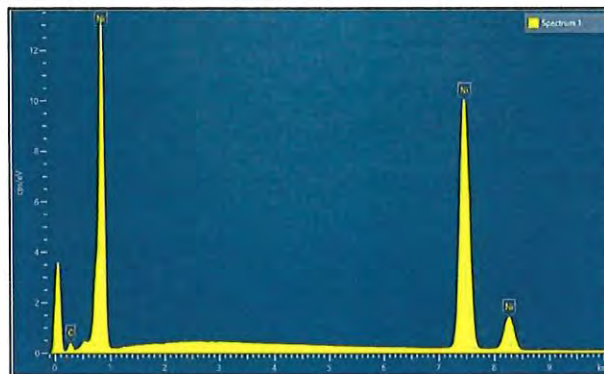




Cartificate of analysis n. AE03/211022 rev.01

Modugno (BA), 13 dicembre 2022

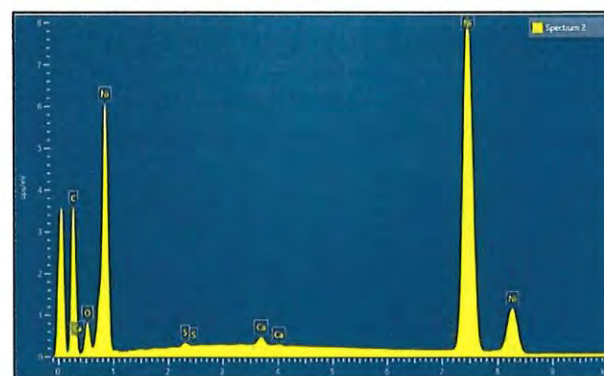
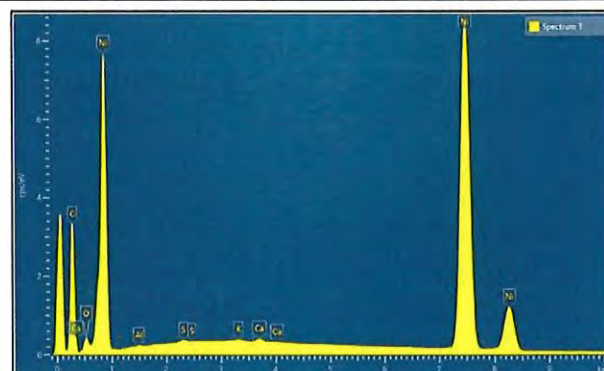
SEM-EDS SUPERFICIAL IMAGE AND EDS SPECTRUM
MAGNIFICATION 4500 x



According to EDS analysis, the wire sample S5_O_04 is quantitatively made up of > 99,9 % Nickel. (Carbon < 0,01%).

The measured diameter is about 26,4 μm

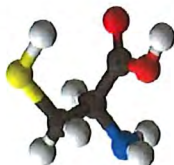
SPOT IMAGE AND EDS SPECTRUM - MAGNIFICATION 6300 x



The EDS analysis shows on some "spot" points of the sample, a slight particle contamination, consisting of elements in variable quantities such as carbon, oxygen, silicon, calcium, potassium, sulfur, chlorine and even traces of aluminum. There are also areas of the surface that are visually darker, also characterized by the same elements detected on the particles, in a very low percentage or in traces. This contamination is generally attributable to exposure to the environment.

LABORATORY MANAGER
Dr. Chem. Cosimo Vitarella





Project ASACERT – Nichel Wires

Modugno (BA), 21 october 2022

CHARACTERIZATION OF NICKEL WIRES

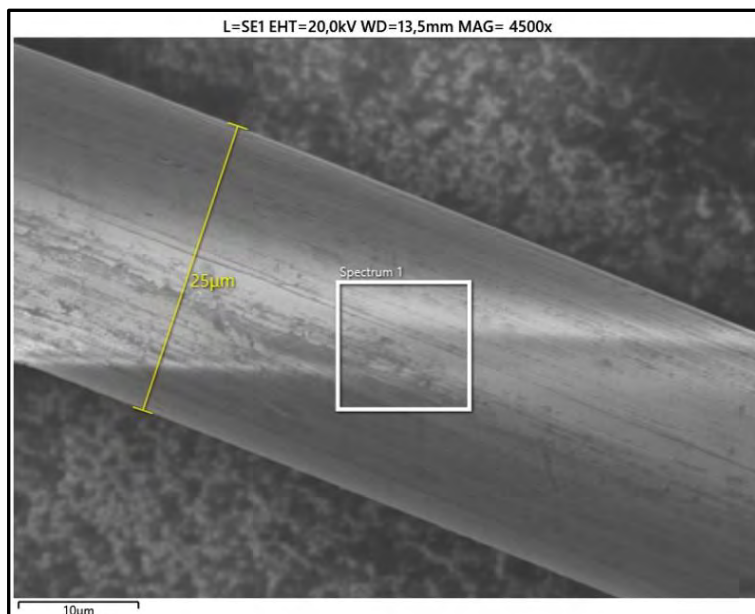
Attachement/Supporting Document

<i>Applicant</i>	ASACERT
<i>Laboratory</i>	Allkema Engineering S.r.l. – S.P.1 Bari-Modugno Km 0.800 – Comparto G – Capannone 1 – Modugno (BA) - ITALY
<i>Product category</i>	METAL MATERIALS
<i>Product description / Description of goods</i>	NICKEL WIRES IN BOBBINS
<i>Location of the goods</i>	HELVETIC SECURGEST SA - PIAZZETTA SANTA LUCIA - 6900 – MASSAGNO - LUGANO (CH)
<i>Scope of the document</i>	PROVIDE SUPPORTING IMAGES ASSOCIATED TO CERTIFICATE OF ANALYSIS – ALLKEMA ENGINEERING LAB ISSUED ON 21 OCTOBER 2022 • N. AE 01 / 211002 • N. AE 02 / 211002 • N. AE 03 / 211002
<i>Sampling date</i>	MONDAY, 3 OCTOBER 2022
<i>Sampling execution by</i>	ALLKEMA ENGINEERING S.R.L. : DR. CHEMIST COSIMO VITARELLA DR. ING. MICHELE MASSIMO NUOVO
<i>Sampling supervisor</i>	ASACERT - ASSESSMENT & CERTIFICATION : DR. ING. NICOLA PETTA
<i>Sampling procedure</i>	THE SAMPLE WIRE A WAS TAKEN FROM A SPECIFIC REEL, CHECKED IN ITS LENGTH AND THAN MANUALLY CUTTED WITH A PLIER. AFTER THAT WAS COILED UP ON FINGERS BEFORE BEING WRAPPED IN GREASEPROOF PAPER
<i>Coil/Bobbin identification code</i>	N°04 - N°63 – N°97
<i>Sample ID</i>	SAMPLE 1 - S5_O_04 SAMPLE 2 - S5_P_63 SAMPLE 1 - S5_Q_97
<i>Start date - end date of the tests</i>	FROM 06/10/2022 TO 20/10/2022

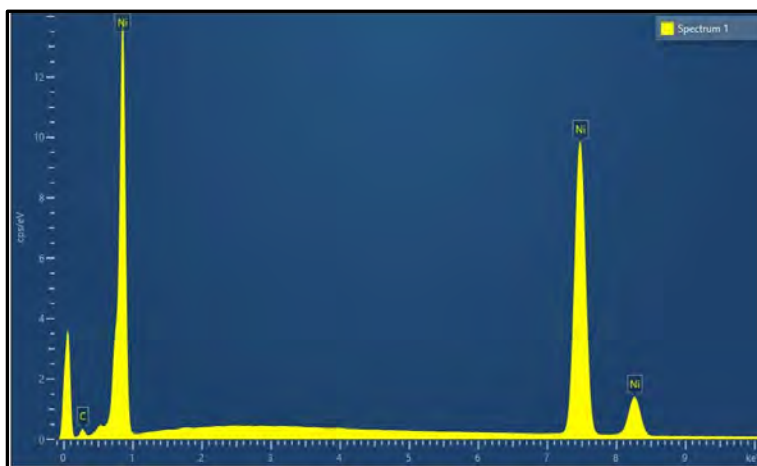




SAMPLE S5_O_04
SUPERFICIAL IMAGE



S5_O_04 - SEM-EDS SUPERFICIAL IMAGE - MAGNIFICATION 4500 x



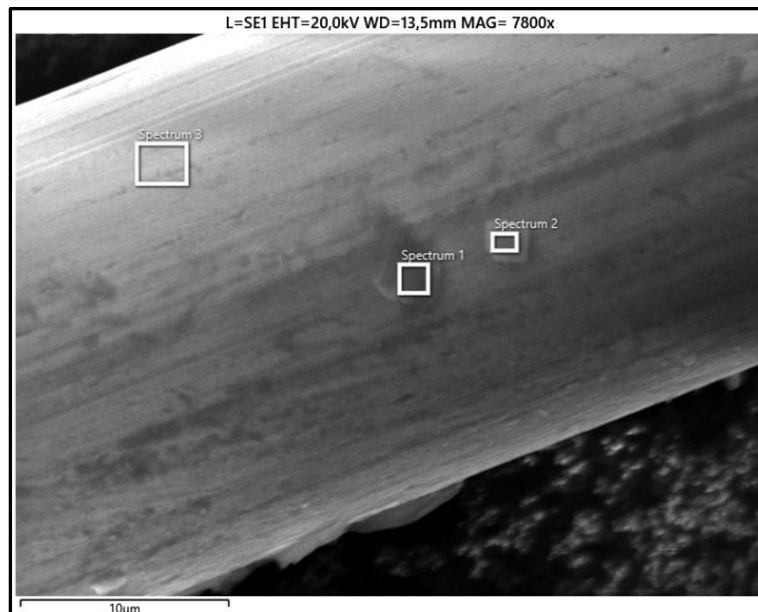
S5_O_04 - EDS SPECTRUM IMAGE - - MAGNIFICATION 4500 – SPECTRUM 1

Result Type	Weight %
Spectrum Label Spectrum 1	
C	0.00
Ni	100.00
Total	100.00

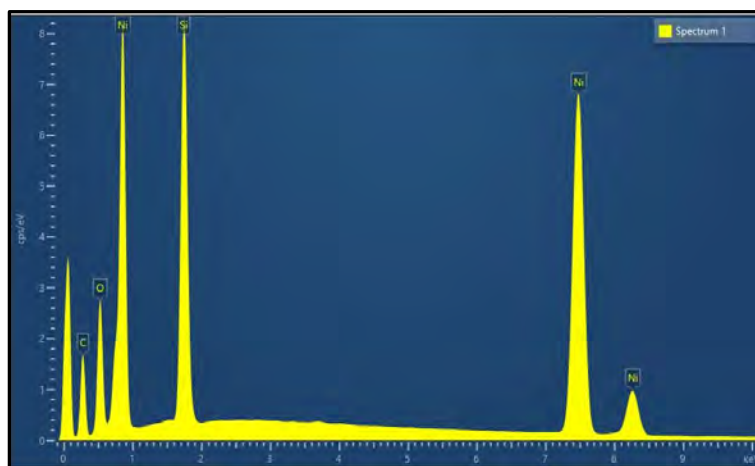
S5_O_04 - EDS SPECTRUM - MAGNIFICATION 4500 – SPECTRUM 1 – INSTRUMENT RAW DATA



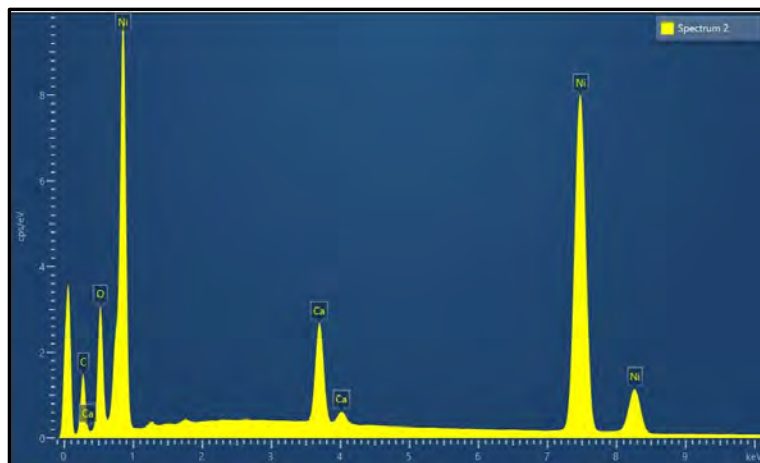
SAMPLE S5_O_04
SPOT analytical study - MAGNIFICATION 7800X



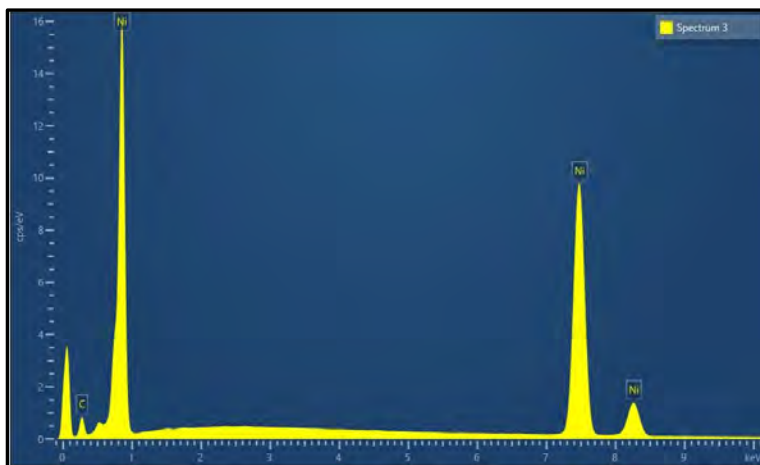
S5_O_04 - SEM SPOT IMAGE - MAGNIFICATION 7800 x



S5_O_04 - EDS SPECTRUM IMAGE - - MAGNIFICATION 7800 – SPECTRUM 1



S5_O_04 - EDS SPECTRUM IMAGE - - MAGNIFICATION 7800 – SPECTRUM 2



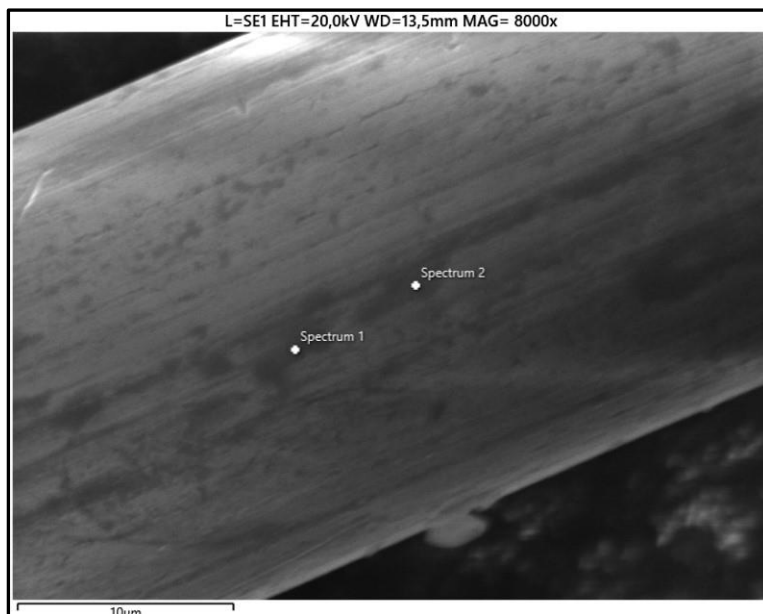
S5_O_04 - EDS SPECTRUM IMAGE - - MAGNIFICATION 7800 – SPECTRUM 3

Result Type	Weight %		
Spectrum Label	Spectrum 1	Spectrum 2	Spectrum 3
C	4.42	5.01	0.00
O	11.78	13.36	
Si	17.48		
Ca		5.69	
Ni	66.32	75.94	100.00
Total	100.00	100.00	100.00

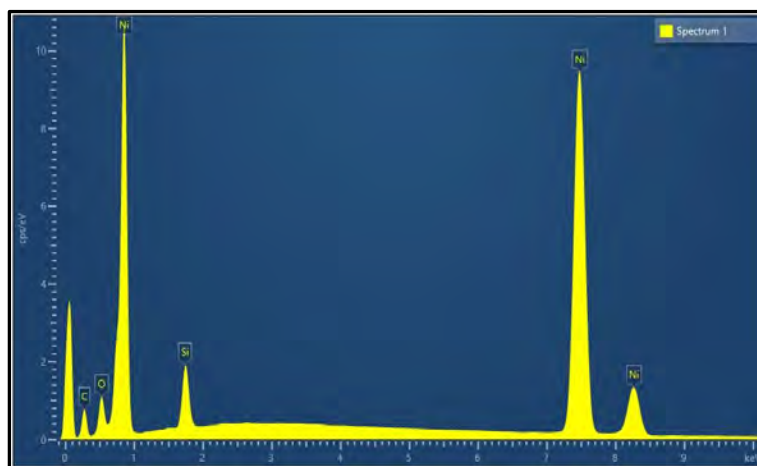
S5_O_04 - EDS SPECTRUM - MAGNIFICATION 7800 – SPECTRA 1/2/3 – INSTRUMENT RAW DATA



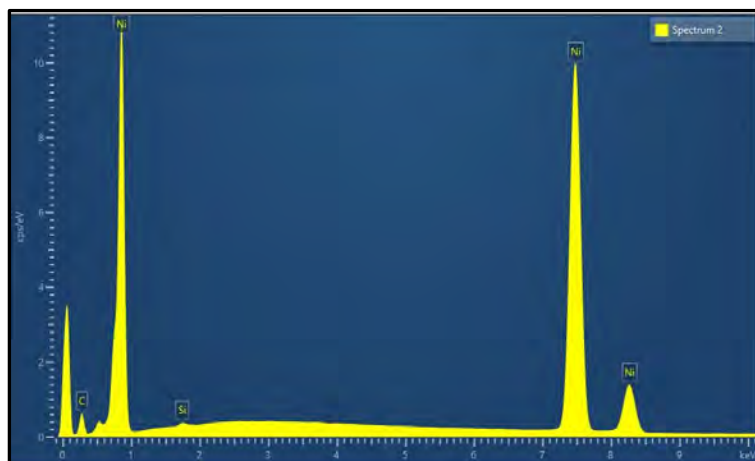
SAMPLE S5_O_04
SPOT analytical study - MAGNIFICATION 8000X



S5_O_04 - SEM SPOT IMAGE - MAGNIFICATION 8000 x



S5_O_04 - EDS SPECTRUM IMAGE - - MAGNIFICATION 8000 – SPECTRUM 1



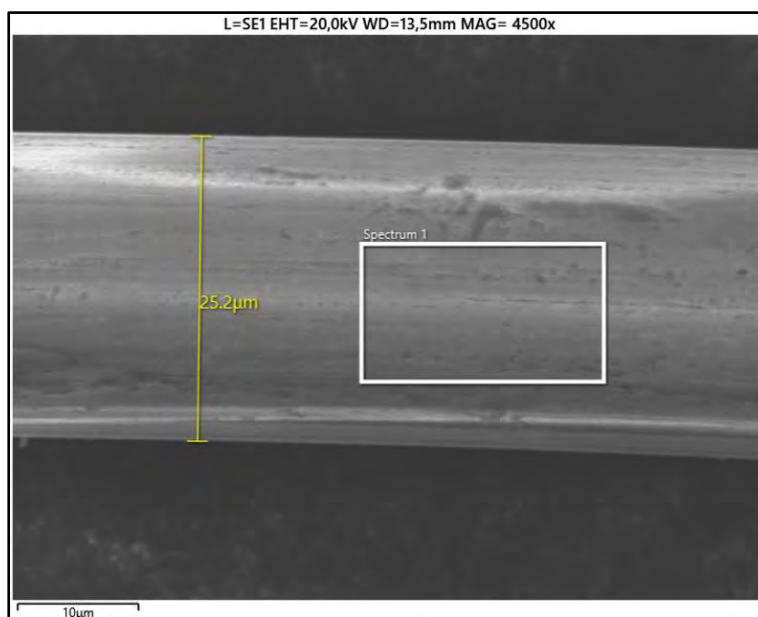
S5_O_04 - EDS SPECTRUM IMAGE - - MAGNIFICATION 8000 – SPECTRUM 2

Result Type	Weight %	
Spectrum Label	Spectrum 1	Spectrum 2
C	1.35	0.00
O	3.59	
Si	4.13	0.22
Ni	90.93	99.78
Total	100.00	100.00

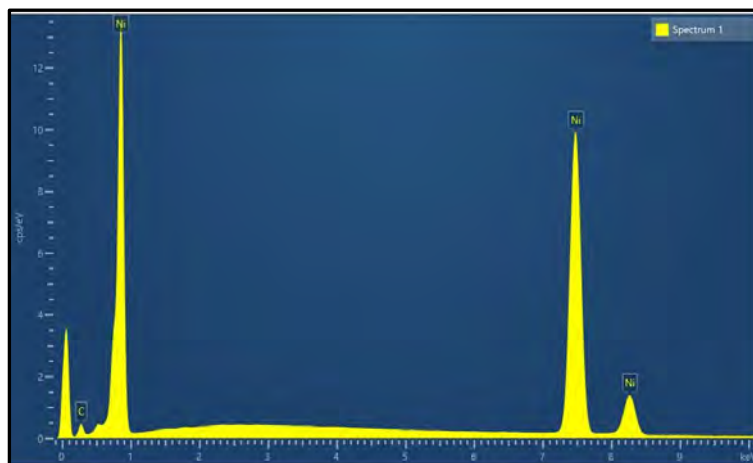
S5_O_04 - EDS SPECTRUM - MAGNIFICATION 8000 – SPECTRA 1 / 2 – INSTRUMENT RAW DATA



SAMPLE S5_P_63
SUPERFICIAL IMAGE



S5_P_63 - SEM-EDS SUPERFICIAL IMAGE - MAGNIFICATION 4500 x



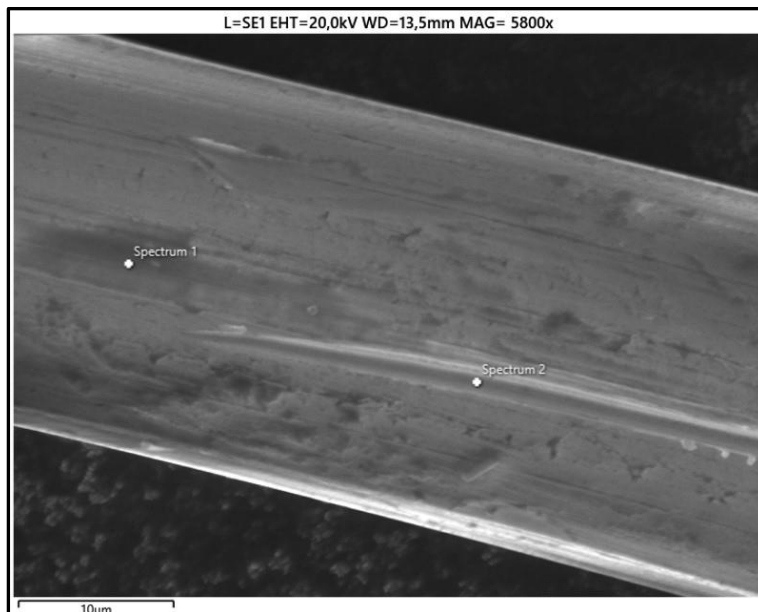
S5_P_63 - EDS SPECTRUM IMAGE - - MAGNIFICATION 4500 – SPECTRUM 1

Result Type	Weight %
Spectrum Label Spectrum 1	
C	0.00
Ni	100.00
Total	100.00

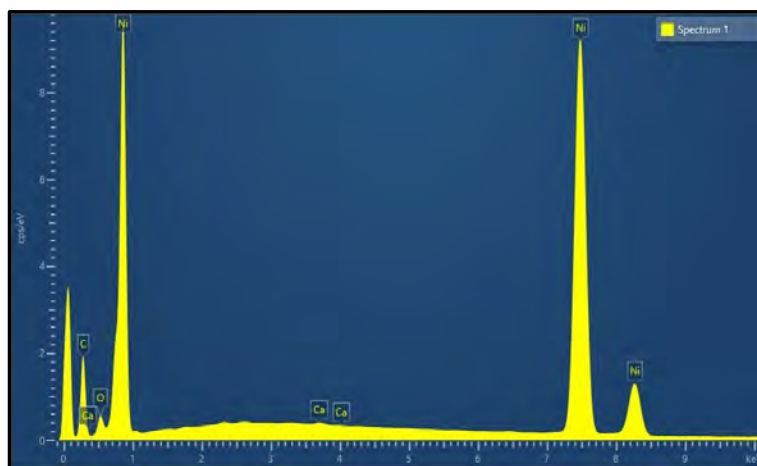
S5_P_63 - EDS SPECTRUM - MAGNIFICATION 4500 – SPECTRUM 1 – INSTRUMENT RAW DATA



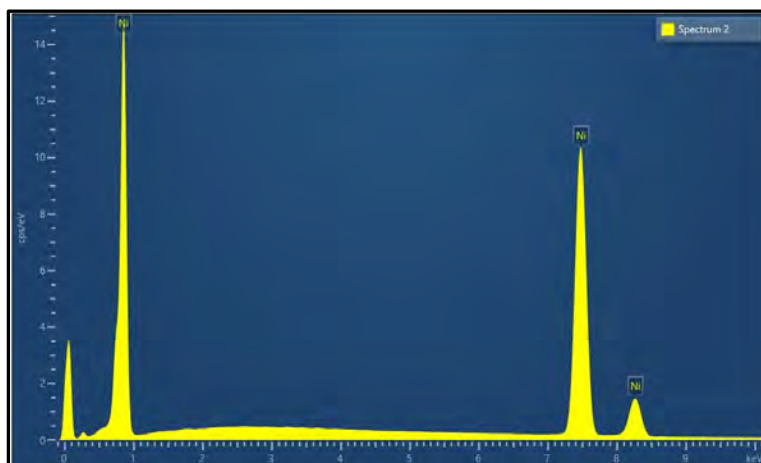
SAMPLE S5_P_63
SPOT analytical study - MAGNIFICATION 5800X



S5_P_63 - SEM SPOT IMAGE - MAGNIFICATION 5800 x



S5_P_63 - EDS SPECTRUM IMAGE - - MAGNIFICATION 5800 – SPECTRUM 1



S5_P_63 - EDS SPECTRUM IMAGE - - MAGNIFICATION 5800 – SPECTRUM 2

Result Type	Weight %	
Spectrum Label	Spectrum 1	Spectrum 2
C	0.66	0.00
O	1.75	
Ca	0.12	
Ni	97.46	100.00
Total	100.00	100.00

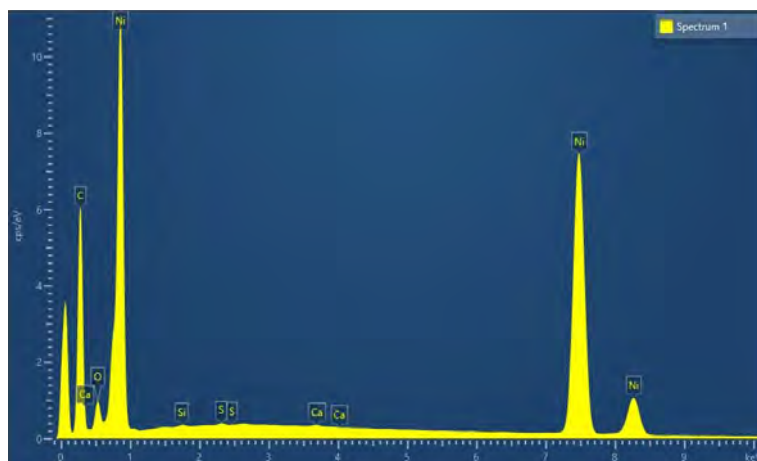
S5_P_63 - EDS SPECTRUM - MAGNIFICATION 7800 – SPECTRA 1/2 – INSTRUMENT RAW DATA



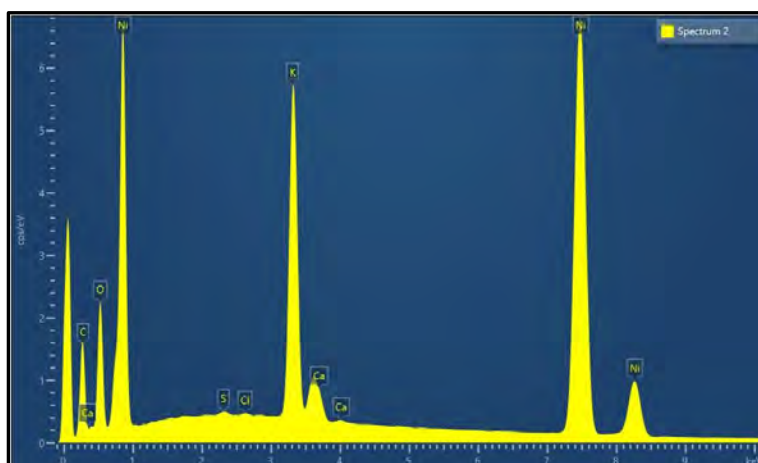
SAMPLE S5_P_63
SPOT analytical study - MAGNIFICATION 8800X



S5_P_63 - SEM SPOT IMAGE - MAGNIFICATION 8800 x



S5_P_63 - EDS SPECTRUM IMAGE - - MAGNIFICATION 8800 – SPECTRUM 1



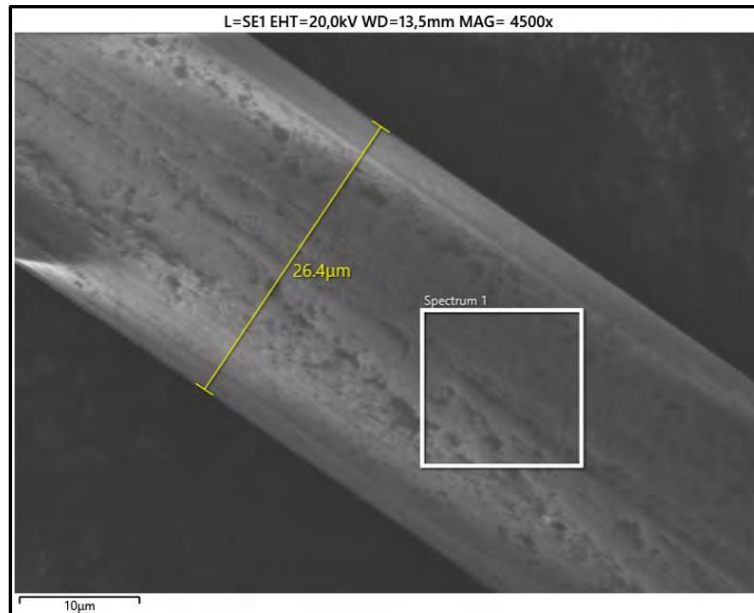
S5_P_63 - EDS SPECTRUM IMAGE - - MAGNIFICATION 8800 – SPECTRUM 2

Result Type	Weight %	
Spectrum Label	Spectrum 1	Spectrum 2
C	1.42	4.78
O	3.78	12.72
Si	0.18	
S	0.17	0.12
Cl		0.09
K		12.78
Ca	0.11	1.07
Ni	94.34	68.44
Total	100.00	100.00

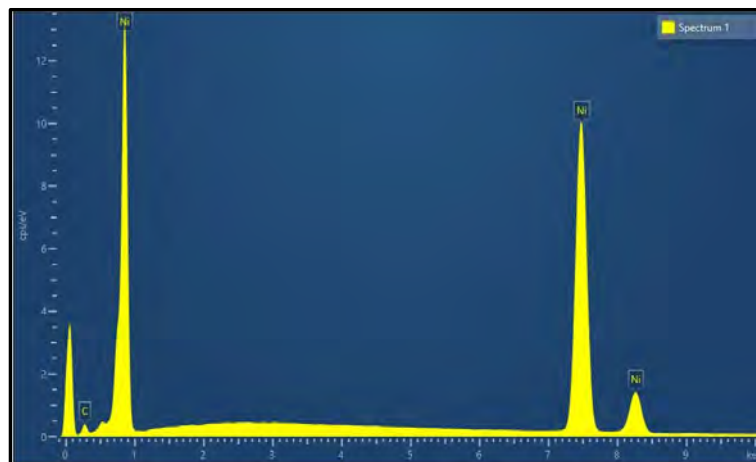
S5_P_63 - EDS SPECTRUM - MAGNIFICATION 8000 – SPECTRA 1 / 2 – INSTRUMENT RAW DATA



SAMPLE S5_Q_97
SUPERFICIAL IMAGE



S5_Q_97 - SEM-EDS SUPERFICIAL IMAGE - MAGNIFICATION 4500 x



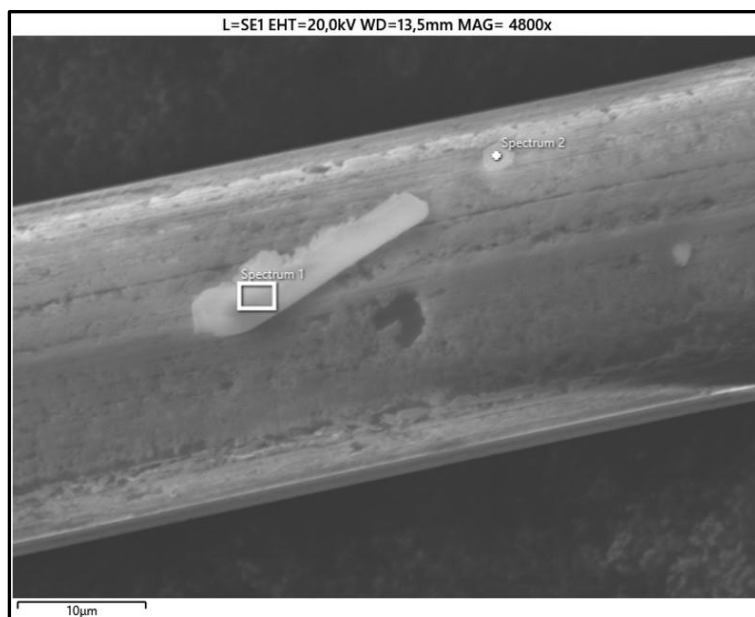
S5_Q_97 - EDS SPECTRUM IMAGE - - MAGNIFICATION 4500 – SPECTRUM 1

Result Type	Weight %
Spectrum Label	Spectrum 1
C	0.00
Ni	100.00
Total	100.00

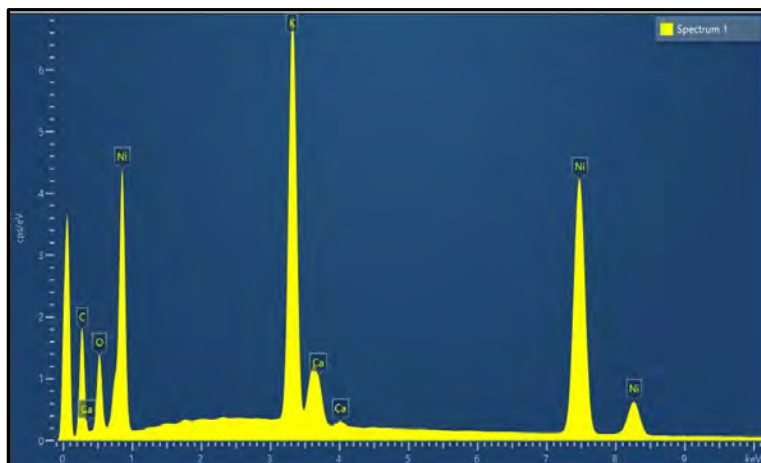
S5_Q_97 - EDS SPECTRUM - MAGNIFICATION 4500 – SPECTRUM 1 – INSTRUMENT RAW DATA



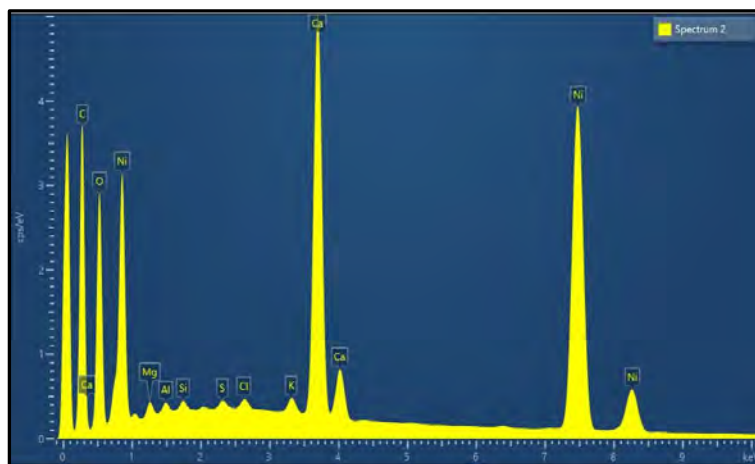
SAMPLE S5_Q_97
SPOT analytical study - MAGNIFICATION 4800X



S5_Q_97 - SEM SPOT IMAGE - MAGNIFICATION 4800 x



S5_Q_97 - EDS SPECTRUM IMAGE - - MAGNIFICATION 4800 – SPECTRUM 1



S5_Q_97 - EDS SPECTRUM IMAGE - - MAGNIFICATION 4800 – SPECTRUM 2

Result Type	Weight %	
Spectrum Label	Spectrum 1	Spectrum 2
C	4.84	8.93
O	12.90	23.72
Mg		0.76
Al		0.35
Si		0.28
S		0.23
Cl		0.29
K	21.36	0.50
Ca	2.48	15.25
Ni	58.43	49.69
Total	100.00	100.00

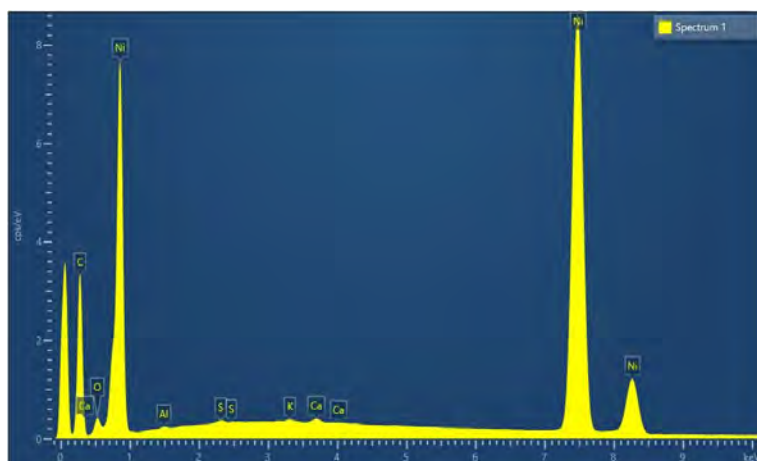
S5_Q_97 - EDS SPECTRUM - MAGNIFICATION 4800 – SPECTRA 1/2 – INSTRUMENT RAW DATA



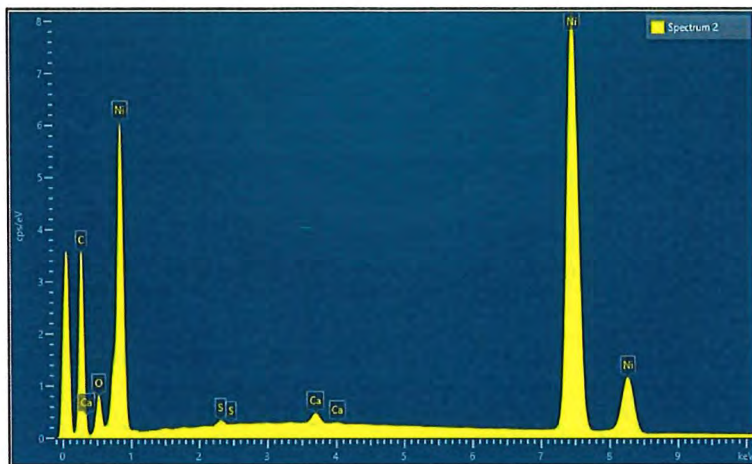
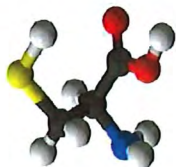
SAMPLE S5_Q_97
SPOT analytical study - MAGNIFICATION 6300X



S5_Q_97 - SEM SPOT IMAGE - MAGNIFICATION 6800 x



S5_Q_97 - EDS SPECTRUM IMAGE - - MAGNIFICATION 6800 – SPECTRUM 1



S5_Q_97 - EDS SPECTRUM IMAGE - - MAGNIFICATION 6800 - SPECTRUM 2

Result Type	Weight %	
Spectrum Label	Spectrum 1	Spectrum 2
C	0.49	1.30
O	1.32	3.47
Al	0.17	
S	0.14	0.23
K	0.10	
Ca	0.26	0.58
Ni	97.52	94.42
Total	100.00	100.00

S5_Q_97 - EDS SPECTRUM - MAGNIFICATION 6800 - SPECTRA 1 / 2 - INSTRUMENT RAW DATA

LABORATORY MANAGER
Dr. Chem. Cosimo Vitarella