

Certificate of Analysis

Date
20.08.2018
Delivery item/date
810022191 000010 / 15.08.2018
Order item/date
10017644 000010 / 18.07.2018
Customer number
700671

Material:
N1210 Ni Cathodes 100x100/150

Conforms to ASTM B39-79 (2013)
Ni min 99.9%

Batch 1819201 / Quantity 8.100 KG

Characteristic	Unit	Result	Specification
Co	%	0,0257	
Fe	%	< 0,0001	
Cu	%	0,0011	
Zn	%	< 0,0001	
Mn	%	< 0,0001	
Ca	%	0,0001	
Al	%	0,0001	
Cr	%	< 0,0001	
Cd	%	< 0,0001	
Pb	%	0,0003	
Se	%	0,0001	
P	%	< 0,0002	
As	%	< 0,0001	
Si	%	< 0,0005	
Sb	%	< 0,0004	
C	%	0,0011	
S	%	< 0,0002	
Bi	%	< 0,0010	
Sn	%	< 0,0001	

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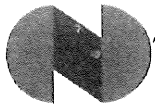
Date
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Material:
N1210 Ni Cathodes 100x100/150

Conforms to ASTM B39-79 (2013)
Ni min 99.9%

Batch 1819301 / Quantity 10.800 KG

Characteristic	Unit	Result	Specification
Co	%	0,0287	
Fe	%	< 0,0001	
Cu	%	0,0006	
Zn	%	< 0,0001	
Mn	%	< 0,0001	
Ca	%	< 0,0001	
Al	%	< 0,0001	
Cr	%	< 0,0001	
Cd	%	< 0,0001	
Pb	%	0,0005	
Se	%	0,0003	
P	%	< 0,0002	
As	%	< 0,0001	
Si	%	< 0,0005	
Sb	%	< 0,0004	
C	%	0,0013	
S	%	0,0005	
Bi	%	< 0,0010	
Sn	%	< 0,0001	



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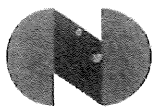
Date
19.10.2018
Delivery item/date
810022662 000010 / 17.10.2018
Order item/date
10017880 000010 / 03.09.2018
Customer number
700671

Material:
N1210 Ni Cathodes 100x100/150

Conforms to ASTM B39-79 (2013)
Ni min 99.9%

Batch 1827101 / Quantity 13.500 KG

Characteristic	Unit	Result	Specification
Co	%	0,0248	
Fe	%	< 0,0001	
Cu	%	0,0007	
Zn	%	< 0,0001	
Mn	%	< 0,0001	
Ca	%	0,0001	
Al	%	0,0001	
Cr	%	< 0,0001	
Cd	%	< 0,0001	
Pb	%	0,0005	
Se	%	0,0005	
P	%	< 0,0002	
As	%	< 0,0001	
Si	%	< 0,0005	
Sb	%	< 0,0004	
C	%	0,0028	
S	%	0,0005	
Bi	%	< 0,0010	
Sn	%	< 0,0001	



NORNICKEL

HARJAVALTA

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Material:
N1210 Ni Cathodes 100x100/150

Conforms to ASTM B39-79 (2013)
Ni min 99.9%

Batch 1827201 / Quantity 3.600 KG

Characteristic	Unit	Result	Specification
Co	%	0,0264	
Fe	%	< 0,0001	
Cu	%	0,0013	
Zn	%	< 0,0001	
Mn	%	< 0,0001	
Ca	%	< 0,0001	
Al	%	< 0,0001	
Cr	%	< 0,0001	
Cd	%	< 0,0001	
Pb	%	0,0001	
Se	%	0,0002	
P	%	< 0,0002	
As	%	0,0001	
Si	%	< 0,0005	
Sb	%	< 0,0004	
C	%	0,0028	
S	%	0,0009	
Bi	%	< 0,0010	
Sn	%	< 0,0001	


Jukka Parkkinen
Norilsk Nickel Harjavalta Oy

