



Thermo Fisher Scientific  
2 Radcliff Road  
Tewksbury, MA 01876 USA

### Certificate of Verification

XL2-120502

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Reading No	264
Mode	System Check
Time	2024-04-15 09:22
Duration	71.56
Units	cps
Sigma Value	2
Sequence	Final
Res	157.50
EScale	7.59
Shape Time	1.00
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	
User Login	User

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Ele            cps       +/-             $\pm 2\sigma$

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XL2-120502

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Reading No	265
Mode	System Check
Time	2024-04-15 09:24
Duration	75.94
Units	cps
Sigma Value	2
Sequence	Final
Res	133.72
EScale	7.57
Shape Time	4.00
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	
User Login	User

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Ele            cps       +/-             $\pm 2\sigma$

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XL2-120502

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Reading No 266  
Mode General Metals  
Time 2024-04-15 09:30  
Duration 60.78  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.54  
Alloy2 No Match : \*3.30  
Flags  
SAMPLE inlet end 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.016
Sn	<LOD	:	0.017
Cd	<LOD	:	0.010
Pd	<LOD	:	0.006
Ag	<LOD	:	0.014
Ru	<LOD	:	0.012
Mo	2.676	+/-	0.033
Nb	<LOD	:	0.019
Zr	<LOD	:	0.009
Bi	<LOD	:	0.015
Pb	<LOD	:	0.012
Se	<LOD	:	0.008
Au	<LOD	:	0.002
W	<LOD	:	0.070
Zn	<LOD	:	0.023
Cu	0.125	+/-	0.039
Ni	10.122	+/-	0.144
Co	0.389	+/-	0.110
Fe	67.815	+/-	0.200
Mn	0.930	+/-	0.085
Cr	17.731	+/-	0.117
V	0.090	+/-	0.029
Ti	0.098	+/-	0.037
Al	<LOD	:	80.000

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Reading No 267  
Mode General Metals  
Time 2024-04-15 09:33  
Duration 60.15  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 1.16  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE outlet end 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.017
Sn	<LOD	:	0.011
Cd	<LOD	:	0.008
Pd	<LOD	:	0.007
Ag	<LOD	:	0.007
Ru	<LOD	:	0.016
Mo	2.572	+/-	0.027
Nb	<LOD	:	0.014
Zr	<LOD	:	0.007
Bi	<LOD	:	0.012
Pb	<LOD	:	0.008
Se	<LOD	:	0.008
Au	<LOD	:	0.002
W	<LOD	:	0.060
Zn	<LOD	:	0.022
Cu	0.150	+/-	0.033
Ni	9.959	+/-	0.123
Co	0.301	+/-	0.096
Fe	67.743	+/-	0.174
Mn	0.834	+/-	0.074
Cr	18.234	+/-	0.103
V	0.132	+/-	0.026
Ti	0.062	+/-	0.029
Al	<LOD	:	80.000

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---

Reading No 268  
Mode General Metals  
Time 2024-04-15 09:35  
Duration 60.16  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE outlet end 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.008
Sn	0.011	+/-	0.004
Cd	<LOD	:	0.005
Pd	<LOD	:	0.003
Ag	<LOD	:	0.006
Ru	<LOD	:	0.006
Mo	2.067	+/-	0.017
Nb	0.012	+/-	0.005
Zr	<LOD	:	0.007
Bi	<LOD	:	0.004
Pb	<LOD	:	0.003
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	0.052	+/-	0.015
Zn	0.013	+/-	0.006
Cu	0.401	+/-	0.025
Ni	10.143	+/-	0.083
Co	0.315	+/-	0.064
Fe	68.301	+/-	0.115
Mn	1.725	+/-	0.053
Cr	16.830	+/-	0.066
V	0.079	+/-	0.015
Ti	0.050	+/-	0.018
Al	<LOD	:	80.000

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---

Reading No 269  
Mode General Metals  
Time 2024-04-15 09:36  
Duration 61.72  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.90  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE outlet flange 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.007
Sn	0.012	+/-	0.003
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.006
Ru	<LOD	:	0.006
Mo	2.038	+/-	0.015
Nb	0.010	+/-	0.004
Zr	<LOD	:	0.006
Bi	<LOD	:	0.004
Pb	<LOD	:	0.003
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	0.062	+/-	0.014
Zn	0.014	+/-	0.005
Cu	0.434	+/-	0.023
Ni	9.992	+/-	0.077
Co	0.305	+/-	0.060
Fe	68.424	+/-	0.107
Mn	1.796	+/-	0.050
Cr	16.793	+/-	0.062
V	0.089	+/-	0.015
Ti	<LOD	:	0.032
Al	<LOD	:	80.000

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Reading No 270  
Mode General Metals  
Time 2024-04-15 09:39  
Duration 61.44  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE outlet flange 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.010
Sn	0.014	+/-	0.003
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.007
Ru	<LOD	:	0.009
Mo	2.040	+/-	0.015
Nb	0.038	+/-	0.004
Zr	<LOD	:	0.004
Bi	<LOD	:	0.003
Pb	<LOD	:	0.002
Se	<LOD	:	0.002
Au	<LOD	:	0.002
W	<LOD	:	0.024
Zn	<LOD	:	0.010
Cu	0.474	+/-	0.024
Ni	10.278	+/-	0.077
Co	0.137	+/-	0.059
Fe	68.524	+/-	0.106
Mn	1.485	+/-	0.048
Cr	16.839	+/-	0.061
V	0.084	+/-	0.014
Ti	0.055	+/-	0.017
Al	<LOD	:	80.000

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---

Reading No 271  
Mode General Metals  
Time 2024-04-15 09:40  
Duration 61.47  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE outlet flange 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.007
Sn	0.016	+/-	0.003
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.004
Ru	<LOD	:	0.008
Mo	2.048	+/-	0.016
Nb	0.042	+/-	0.005
Zr	<LOD	:	0.005
Bi	<LOD	:	0.005
Pb	<LOD	:	0.002
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	0.030	+/-	0.013
Zn	<LOD	:	0.010
Cu	0.491	+/-	0.024
Ni	10.331	+/-	0.079
Co	<LOD	:	0.120
Fe	68.487	+/-	0.108
Mn	1.492	+/-	0.049
Cr	16.802	+/-	0.062
V	0.108	+/-	0.015
Ti	0.050	+/-	0.017
Al	<LOD	:	80.000

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Reading No 272  
Mode General Metals  
Time 2024-04-15 09:42  
Duration 50.75  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.02  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE 3 way ball valve 0.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.013
Sn	<LOD	:	0.012
Cd	<LOD	:	0.008
Pd	<LOD	:	0.005
Ag	<LOD	:	0.007
Ru	<LOD	:	0.017
Mo	2.705	+/-	0.028
Nb	<LOD	:	0.015
Zr	<LOD	:	0.007
Bi	<LOD	:	0.007
Pb	<LOD	:	0.007
Se	<LOD	:	0.007
Au	<LOD	:	0.002
W	<LOD	:	0.052
Zn	<LOD	:	0.018
Cu	0.346	+/-	0.036
Ni	10.300	+/-	0.122
Co	0.421	+/-	0.093
Fe	67.615	+/-	0.168
Mn	0.630	+/-	0.070
Cr	17.740	+/-	0.099
V	0.098	+/-	0.024
Ti	<LOD	:	0.057
Al	<LOD	:	80.000

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---

Reading No 273  
Mode General Metals  
Time 2024-04-15 09:43  
Duration 60.88  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.26  
Flags  
SAMPLE tube 3-8  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.012
Sn	<LOD	:	0.013
Cd	<LOD	:	0.007
Pd	<LOD	:	0.005
Ag	<LOD	:	0.006
Ru	<LOD	:	0.008
Mo	2.142	+/-	0.019
Nb	0.108	+/-	0.007
Zr	0.031	+/-	0.004
Bi	<LOD	:	0.007
Pb	<LOD	:	0.005
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	<LOD	:	0.044
Zn	0.017	+/-	0.006
Cu	0.161	+/-	0.024
Ni	10.150	+/-	0.092
Co	0.305	+/-	0.071
Fe	69.170	+/-	0.128
Mn	0.647	+/-	0.053
Cr	16.949	+/-	0.074
V	0.071	+/-	0.018
Ti	0.231	+/-	0.027
Al	<LOD	:	80.000

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---

Reading No 274  
Mode General Metals  
Time 2024-04-15 09:46  
Duration 60.79  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.68  
Flags  
SAMPLE stud 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.009
Sn	<LOD	:	0.007
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.004
Ru	<LOD	:	0.010
Mo	2.104	+/-	0.016
Nb	<LOD	:	0.008
Zr	<LOD	:	0.004
Bi	<LOD	:	0.004
Pb	<LOD	:	0.003
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	<LOD	:	0.029
Zn	0.011	+/-	0.005
Cu	0.597	+/-	0.027
Ni	10.403	+/-	0.082
Co	0.250	+/-	0.063
Fe	67.457	+/-	0.112
Mn	1.919	+/-	0.053
Cr	17.037	+/-	0.065
V	0.133	+/-	0.017
Ti	0.076	+/-	0.019
Al	<LOD	:	80.000

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Reading No 275  
Mode General Metals  
Time 2024-04-15 09:47  
Duration 60.74  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.90  
Flags  
SAMPLE stud 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.008
Sn	0.009	+/-	0.003
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.005
Ru	<LOD	:	0.010
Mo	2.104	+/-	0.016
Nb	<LOD	:	0.008
Zr	<LOD	:	0.004
Bi	<LOD	:	0.004
Pb	<LOD	:	0.002
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	<LOD	:	0.038
Zn	<LOD	:	0.011
Cu	0.593	+/-	0.027
Ni	10.452	+/-	0.082
Co	0.218	+/-	0.063
Fe	67.511	+/-	0.113
Mn	1.921	+/-	0.053
Cr	16.995	+/-	0.065
V	0.143	+/-	0.017
Ti	0.040	+/-	0.017
Al	<LOD	:	80.000

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---

Reading No 276  
Mode General Metals  
Time 2024-04-15 09:48  
Duration 60.05  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.56  
Flags  
SAMPLE stud 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.007
Sn	0.007	+/-	0.003
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.004
Ru	<LOD	:	0.006
Mo	2.106	+/-	0.016
Nb	<LOD	:	0.009
Zr	<LOD	:	0.004
Bi	<LOD	:	0.004
Pb	<LOD	:	0.003
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	<LOD	:	0.026
Zn	0.012	+/-	0.006
Cu	0.617	+/-	0.027
Ni	10.383	+/-	0.082
Co	0.243	+/-	0.063
Fe	67.524	+/-	0.113
Mn	1.857	+/-	0.053
Cr	17.064	+/-	0.066
V	0.131	+/-	0.017
Ti	<LOD	:	0.034
Al	<LOD	:	80.000

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### Certificate of Verification

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---

Reading No 277  
Mode General Metals  
Time 2024-04-15 09:49  
Duration 60.39  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.52  
Flags  
SAMPLE stud 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.008
Sn	<LOD	:	0.007
Cd	<LOD	:	0.004
Pd	<LOD	:	0.003
Ag	<LOD	:	0.004
Ru	<LOD	:	0.010
Mo	2.119	+/-	0.017
Nb	<LOD	:	0.008
Zr	<LOD	:	0.005
Bi	<LOD	:	0.004
Pb	<LOD	:	0.003
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	<LOD	:	0.041
Zn	0.013	+/-	0.006
Cu	0.607	+/-	0.027
Ni	10.416	+/-	0.082
Co	0.301	+/-	0.063
Fe	67.428	+/-	0.113
Mn	1.877	+/-	0.053
Cr	17.071	+/-	0.066
V	0.132	+/-	0.017
Ti	<LOD	:	0.034
Al	<LOD	:	80.000

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---

Reading No 278  
Mode General Metals  
Time 2024-04-15 09:50  
Duration 32.23  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.89  
Flags  
SAMPLE orifice 833 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.015
Sn	<LOD	:	0.013
Cd	<LOD	:	0.006
Pd	<LOD	:	0.007
Ag	<LOD	:	0.008
Ru	<LOD	:	0.009
Mo	2.117	+/-	0.022
Nb	<LOD	:	0.011
Zr	<LOD	:	0.005
Bi	<LOD	:	0.008
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	<LOD	:	0.032
Zn	0.014	+/-	0.007
Cu	0.059	+/-	0.027
Ni	10.264	+/-	0.112
Co	0.258	+/-	0.086
Fe	68.810	+/-	0.154
Mn	1.357	+/-	0.069
Cr	16.957	+/-	0.089
V	0.135	+/-	0.023
Ti	<LOD	:	0.046
Al	<LOD	:	80.000

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---

Reading No 280  
Mode General Metals  
Time 2024-04-15 09:52  
Duration 10.06  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*2.57  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE spring housing pa2  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.025
Sn	<LOD	:	0.023
Cd	<LOD	:	0.011
Pd	<LOD	:	0.007
Ag	<LOD	:	0.011
Ru	<LOD	:	0.016
Mo	2.724	+/-	0.045
Nb	<LOD	:	0.031
Zr	<LOD	:	0.009
Bi	<LOD	:	0.018
Pb	<LOD	:	0.009
Se	<LOD	:	0.009
Au	<LOD	:	0.002
W	<LOD	:	0.077
Zn	<LOD	:	0.025
Cu	0.279	+/-	0.053
Ni	*8.793	+/-	0.189
Co	<LOD	:	0.308
Fe	68.992	+/-	0.278
Mn	0.992	+/-	0.121
Cr	17.814	+/-	0.164
V	0.113	+/-	0.040
Ti	<LOD	:	0.091
Al	<LOD	:	80.000

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### Certificate of Verification

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---

Reading No 281  
Mode General Metals  
Time 2024-04-15 09:53  
Duration 31.41  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.42  
Flags  
SAMPLE body pa2  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.017
Sn	0.018	+/-	0.005
Cd	<LOD	:	0.010
Pd	<LOD	:	0.005
Ag	<LOD	:	0.006
Ru	<LOD	:	0.011
Mo	2.080	+/-	0.024
Nb	<LOD	:	0.018
Zr	<LOD	:	0.007
Bi	<LOD	:	0.008
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	0.062	+/-	0.022
Zn	<LOD	:	0.025
Cu	0.496	+/-	0.037
Ni	10.285	+/-	0.119
Co	0.183	+/-	0.091
Fe	68.003	+/-	0.165
Mn	1.639	+/-	0.075
Cr	17.079	+/-	0.095
V	0.096	+/-	0.023
Ti	<LOD	:	0.052
Al	<LOD	:	80.000

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### Certificate of Verification

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---

Reading No 282  
Mode General Metals  
Time 2024-04-15 09:54  
Duration 40.88  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE cover pa2  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

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Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.009
Sn	0.013	+/-	0.004
Cd	<LOD	:	0.005
Pd	<LOD	:	0.003
Ag	<LOD	:	0.005
Ru	<LOD	:	0.007
Mo	2.077	+/-	0.019
Nb	<LOD	:	0.013
Zr	<LOD	:	0.005
Bi	<LOD	:	0.004
Pb	<LOD	:	0.003
Se	<LOD	:	0.003
Au	<LOD	:	0.002
W	0.051	+/-	0.016
Zn	<LOD	:	0.013
Cu	0.472	+/-	0.030
Ni	10.362	+/-	0.097
Co	<LOD	:	0.147
Fe	68.336	+/-	0.133
Mn	1.665	+/-	0.060
Cr	16.782	+/-	0.077
V	0.078	+/-	0.017
Ti	<LOD	:	0.059
Al	<LOD	:	80.000

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Reading No 285  
Mode General Metals  
Time 2024-04-15 09:55  
Duration 5.30  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*2.17  
Alloy2 No Match : \*3.20  
Flags  
SAMPLE hex. nipple 0.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.030
Sn	<LOD	:	0.033
Cd	<LOD	:	0.018
Pd	<LOD	:	0.022
Ag	<LOD	:	0.020
Ru	<LOD	:	0.041
Mo	1.986	+/-	0.064
Nb	<LOD	:	0.034
Zr	0.344	+/-	0.026
Bi	<LOD	:	0.019
Pb	<LOD	:	0.027
Se	<LOD	:	0.015
Au	<LOD	:	0.002
W	<LOD	:	0.132
Zn	<LOD	:	0.042
Cu	<LOD	:	0.155
Ni	*8.997	+/-	0.306
Co	<LOD	:	0.495
Fe	70.267	+/-	0.451
Mn	0.463	+/-	0.182
Cr	17.365	+/-	0.260
V	<LOD	:	0.125
Ti	<LOD	:	0.217
Al	<LOD	:	80.000

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---

Reading No 286  
Mode General Metals  
Time 2024-04-15 09:56  
Duration 30.37  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*1.77  
Alloy2 No Match : \*3.37  
Flags  
SAMPLE t 0.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.026
Sn	<LOD	:	0.016
Cd	<LOD	:	0.011
Pd	<LOD	:	0.007
Ag	<LOD	:	0.015
Ru	<LOD	:	0.018
Mo	2.189	+/-	0.037
Nb	<LOD	:	0.021
Zr	<LOD	:	0.011
Bi	<LOD	:	0.014
Pb	<LOD	:	0.012
Se	<LOD	:	0.011
Au	<LOD	:	0.002
W	<LOD	:	0.133
Zn	<LOD	:	0.034
Cu	0.125	+/-	0.048
Ni	*9.756	+/-	0.182
Co	<LOD	:	0.281
Fe	67.883	+/-	0.263
Mn	0.807	+/-	0.110
Cr	18.849	+/-	0.154
V	0.094	+/-	0.037
Ti	0.104	+/-	0.045
Al	<LOD	:	80.000

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---

Reading No 287  
Mode General Metals  
Time 2024-04-15 09:57  
Duration 24.62  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*2.22  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE t 0.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.012
Sn	0.012	+/-	0.005
Cd	<LOD	:	0.008
Pd	<LOD	:	0.004
Ag	<LOD	:	0.010
Ru	<LOD	:	0.012
Mo	2.163	+/-	0.026
Nb	<LOD	:	0.013
Zr	<LOD	:	0.010
Bi	<LOD	:	0.010
Pb	<LOD	:	0.005
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	<LOD	:	0.057
Zn	<LOD	:	0.019
Cu	<LOD	:	0.059
Ni	*9.528	+/-	0.123
Co	0.273	+/-	0.098
Fe	68.610	+/-	0.177
Mn	0.591	+/-	0.074
Cr	18.599	+/-	0.106
V	0.124	+/-	0.026
Ti	0.063	+/-	0.028
Al	<LOD	:	80.000

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---

Reading No 288  
Mode General Metals  
Time 2024-04-15 09:58  
Duration 32.71  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.69  
Flags  
SAMPLE connector  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.010
Sn	0.011	+/-	0.005
Cd	<LOD	:	0.006
Pd	<LOD	:	0.004
Ag	<LOD	:	0.006
Ru	<LOD	:	0.014
Mo	2.059	+/-	0.022
Nb	<LOD	:	0.015
Zr	<LOD	:	0.007
Bi	<LOD	:	0.005
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	0.067	+/-	0.020
Zn	<LOD	:	0.013
Cu	0.351	+/-	0.032
Ni	10.402	+/-	0.110
Co	0.175	+/-	0.084
Fe	68.293	+/-	0.152
Mn	1.497	+/-	0.069
Cr	17.006	+/-	0.088
V	0.105	+/-	0.021
Ti	<LOD	:	0.046
Al	<LOD	:	80.000

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---

Reading No 289  
Mode General Metals  
Time 2024-04-15 09:59  
Duration 19.00  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*2.18  
Alloy2 No Match : \*3.39  
Flags  
SAMPLE elbow 0.5 fxf  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.040
Sn	<LOD	:	0.040
Cd	<LOD	:	0.019
Pd	<LOD	:	0.015
Ag	<LOD	:	0.027
Ru	<LOD	:	0.023
Mo	2.189	+/-	0.062
Nb	<LOD	:	0.038
Zr	<LOD	:	0.018
Bi	<LOD	:	0.029
Pb	<LOD	:	0.028
Se	<LOD	:	0.029
Au	<LOD	:	0.002
W	<LOD	:	0.160
Zn	<LOD	:	0.088
Cu	0.308	+/-	0.089
Ni	*9.081	+/-	0.291
Co	<LOD	:	0.463
Fe	68.365	+/-	0.426
Mn	1.356	+/-	0.186
Cr	18.041	+/-	0.246
V	0.162	+/-	0.067
Ti	<LOD	:	0.152
Al	<LOD	:	80.000

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---

Reading No 290  
Mode General Metals  
Time 2024-04-15 10:00  
Duration 32.84  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE nipple 0.5x50  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.010
Sn	0.010	+/-	0.005
Cd	<LOD	:	0.006
Pd	<LOD	:	0.004
Ag	<LOD	:	0.007
Ru	<LOD	:	0.010
Mo	2.031	+/-	0.022
Nb	<LOD	:	0.012
Zr	<LOD	:	0.007
Bi	<LOD	:	0.005
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	0.051	+/-	0.020
Zn	<LOD	:	0.015
Cu	0.387	+/-	0.033
Ni	10.246	+/-	0.112
Co	0.222	+/-	0.086
Fe	69.054	+/-	0.154
Mn	1.092	+/-	0.067
Cr	16.753	+/-	0.089
V	0.086	+/-	0.021
Ti	0.060	+/-	0.025
Al	<LOD	:	80.000

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---

Reading No 291  
Mode General Metals  
Time 2024-04-15 10:01  
Duration 26.88  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*2.22  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE plug 0.75  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.011
Sn	<LOD	:	0.013
Cd	<LOD	:	0.007
Pd	<LOD	:	0.004
Ag	<LOD	:	0.007
Ru	<LOD	:	0.009
Mo	2.013	+/-	0.024
Nb	<LOD	:	0.015
Zr	<LOD	:	0.006
Bi	<LOD	:	0.006
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	<LOD	:	0.039
Zn	<LOD	:	0.023
Cu	0.255	+/-	0.033
Ni	*9.415	+/-	0.117
Co	0.328	+/-	0.094
Fe	69.058	+/-	0.169
Mn	0.555	+/-	0.070
Cr	18.156	+/-	0.100
V	0.122	+/-	0.024
Ti	0.058	+/-	0.027
Al	<LOD	:	80.000

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Reading No 293  
Mode General Metals  
Time 2024-04-15 10:02  
Duration 30.63  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*1.76  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE elbow 0.5 mx  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.021
Sn	<LOD	:	0.020
Cd	<LOD	:	0.014
Pd	<LOD	:	0.010
Ag	<LOD	:	0.015
Ru	<LOD	:	0.019
Mo	2.186	+/-	0.040
Nb	<LOD	:	0.023
Zr	0.017	+/-	0.006
Bi	<LOD	:	0.017
Pb	<LOD	:	0.015
Se	<LOD	:	0.010
Au	<LOD	:	0.002
W	<LOD	:	0.088
Zn	<LOD	:	0.030
Cu	0.160	+/-	0.052
Ni	*9.577	+/-	0.192
Co	<LOD	:	0.298
Fe	68.132	+/-	0.277
Mn	1.017	+/-	0.118
Cr	18.507	+/-	0.163
V	0.151	+/-	0.042
Ti	<LOD	:	0.138
Al	<LOD	:	80.000

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---

Reading No 295  
Mode General Metals  
Time 2024-04-15 10:04  
Duration 32.55  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : \*1.75  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE plug 0.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.023
Sn	<LOD	:	0.022
Cd	<LOD	:	0.012
Pd	<LOD	:	0.009
Ag	<LOD	:	0.015
Ru	<LOD	:	0.018
Mo	2.017	+/-	0.040
Nb	<LOD	:	0.028
Zr	0.017	+/-	0.006
Bi	<LOD	:	0.019
Pb	<LOD	:	0.016
Se	<LOD	:	0.010
Au	<LOD	:	0.002
W	<LOD	:	0.161
Zn	<LOD	:	0.043
Cu	0.157	+/-	0.054
Ni	*9.744	+/-	0.200
Co	<LOD	:	0.304
Fe	69.777	+/-	0.289
Mn	0.544	+/-	0.113
Cr	17.335	+/-	0.162
V	0.113	+/-	0.040
Ti	<LOD	:	0.145
Al	<LOD	:	80.000

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---

Reading No 296  
Mode General Metals  
Time 2024-04-15 10:05  
Duration 30.54  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*4.14  
Flags  
SAMPLE red. nipple 0.5x0.75-I-51  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.010
Sn	0.014	+/-	0.005
Cd	<LOD	:	0.006
Pd	<LOD	:	0.004
Ag	<LOD	:	0.009
Ru	<LOD	:	0.012
Mo	2.097	+/-	0.023
Nb	<LOD	:	0.012
Zr	<LOD	:	0.007
Bi	<LOD	:	0.005
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	0.040	+/-	0.019
Zn	<LOD	:	0.015
Cu	0.598	+/-	0.036
Ni	10.293	+/-	0.112
Co	0.252	+/-	0.086
Fe	68.303	+/-	0.155
Mn	1.600	+/-	0.070
Cr	16.678	+/-	0.089
V	0.103	+/-	0.021
Ti	<LOD	:	0.066
Al	<LOD	:	80.000

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Reading No 297  
Mode General Metals  
Time 2024-04-15 10:06  
Duration 30.98  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 1.20  
Alloy2 No Match : \*3.19  
Flags  
SAMPLE union 0.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.024
Sn	<LOD	:	0.018
Cd	<LOD	:	0.013
Pd	<LOD	:	0.009
Ag	<LOD	:	0.012
Ru	<LOD	:	0.016
Mo	2.333	+/-	0.043
Nb	<LOD	:	0.026
Zr	0.016	+/-	0.007
Bi	<LOD	:	0.018
Pb	<LOD	:	0.016
Se	<LOD	:	0.010
Au	<LOD	:	0.002
W	<LOD	:	0.172
Zn	<LOD	:	0.039
Cu	0.185	+/-	0.056
Ni	9.923	+/-	0.203
Co	0.319	+/-	0.155
Fe	68.717	+/-	0.290
Mn	0.826	+/-	0.119
Cr	17.495	+/-	0.165
V	0.106	+/-	0.041
Ti	<LOD	:	0.096
Al	<LOD	:	80.000

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Reading No 298  
Mode General Metals  
Time 2024-04-15 10:08  
Duration 30.65  
Units %  
Sigma Value 2  
Sequence Final  
Alloy1 SS-316 : 0.00  
Alloy2 No Match : \*3.89  
Flags  
SAMPLE restriction orifice 1.5  
HEAT  
LOT  
BATCH  
MISC  
NOTE  
User Login User

---

Ele	%	+/-	$\pm 2\sigma$
Sb	<LOD	:	0.010
Sn	0.013	+/-	0.005
Cd	<LOD	:	0.006
Pd	<LOD	:	0.004
Ag	<LOD	:	0.006
Ru	<LOD	:	0.013
Mo	2.097	+/-	0.022
Nb	<LOD	:	0.013
Zr	<LOD	:	0.008
Bi	<LOD	:	0.005
Pb	<LOD	:	0.004
Se	<LOD	:	0.004
Au	<LOD	:	0.002
W	0.059	+/-	0.019
Zn	<LOD	:	0.020
Cu	0.478	+/-	0.034
Ni	10.376	+/-	0.111
Co	0.219	+/-	0.085
Fe	67.972	+/-	0.153
Mn	1.785	+/-	0.071
Cr	16.874	+/-	0.088
V	0.096	+/-	0.021
Ti	<LOD	:	0.046
Al	<LOD	:	80.000

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