NCS
Reference Material
(2018–2019)

NCS 钢研纳克

NATIONAL ANALYSIS CENTER FOR IRON & STEEL
NCS Testing Technology Co., Ltd.

Introduction

National Analysis Centre for Iron and Steel (NACIS) is a research and development centre of analysis & test technology for iron and steel. It is an arbitration centre of material analysis, a promoting and training centre for new analysis technology. NACIS is responsible for management of national chemical standard analysis methods of iron, steel, alloy in P. R China.

Based on China Iron and Steel Reasearch Institute group, The largest Institute in China, NACIS has advanced equipment and technology for analysis inspection.

NACIS has a long history in research of a wide variety of reference mateals and production of metal, alloy, ore, ferrousalloy CRMs etc.. NACIS which is the earliest CRM producer in China from 1952 is a comprehensive unit for CRM production, accreditation and sales. NACIS has enough qualified staffs tor CRM production and qualiy control.

From 1980, NACIS entered the international CRM market and up to now has distributors in more than 20 countries like Japan, Germany, United States, Sweden etc.. In national CRMs market, NACIS holds the largest market share and has 35 distributors.

The CRMs in this catalog are the CRMs from many producers under NACIS accreditation. You can also get CRMs which are available in China from NACIS even not listed in this catalog.

Address: No. 76 Xueyan Nanlu Haidian District
Beijing China 100081
Tel : 86-10-62176511
Fax: 86-10-62187223
E-mail: nacis @ncscrm. com
Website: www.ncsstandard.com

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Section 1 Iron, Steel & Alloy(Chip)
1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Co	(in g)
NCS HC 11003	Cast Iron	3.77	1.47	0.659	0.230	0.129									100
NCS HC 11003a	Cast Iron	3.36	1.39	0.561	0.166	0.176									100
NCS HC 11003b	Cast Iron	3.36	1.82	0.386	0.135	0.154									100
NCS HC 11004	Cast Iron	2.72	2.56	0.359	0.124	0.115									100
NCS HC 11005	Cast Iron	2.19	3.07	0.219	0.047	0.048									100
NCS HC 11006	Cast Iron	3.11	1.37	0.850	0.270	0.130									100
NCS HC 11007	Pig Iron	2.70	1.72	1.66	0.201	0.102	0.589		0.031		0.0067	0.014			100
NCS HC 11008	Pig Iron	1.90	2.72	1.96	0.060	0.097	0.766		0.041		0.0075	0.013			100
NCS HC 11009	Pig Iron	3.26	1.18	1.98	0.385	0.081	0.373		0.020		0.0074	0.024			100
NCS HC 11011b	Pure Iron	0.0023	0.0023	0.013	0.0014	0.0014	0.0066	0.0027	0.0045	(<0.0001)	(<0.0001)	(<0.0001)	0.00030	0.0012	50
NCS HC 11012	High Chromium Cast Iron	1.95	0.59	0.926	0.0084	0.0079	13.11				0.137	0.064	0.52		100
NCS HC 11013	High Chromium Cast Iron	2.35	1.05	1.05	0.010	0.0094	15.06				0.16	0.062	2.84		100

		N	Zn	Sb	Sn	As	B	Ca	Bi	Mg	Pb	Nb	W	Ta
NCS HC 11011b	Pure Iron	0.0045	0.00015	0.00029	0.00015	0.0026	0.00023	0.0003	(<0.00001)	(0.00006)	(0.00002)	(0.00004)	(0.00004)	(<0.00001)

		La#	Se#	Cd#	Te#	Zr#	Ce#	Hf#
NCS HC 11011b	Pure Iron	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	B	Ti	Co	V	W	(in g)
NCS HC 11015	Rare Earth Magnesium Cast Iron	2.74	2.32	0.473	0.022	0.0009	0.040	0.627	0.031	0.0030	0.015	0.011	0.031	0.0032	80
NCS HC 11016	Pig Iron	2.99	1.67	0.431	0.048	0.033	0.249	1.02	0.03	0.0045	0.092		0.012	0.0043	100
NCS HC 11017	Pig Iron	3.81	1.56	0.262	0.048	0.055	0.278	0.324	0.394	0.015	0.042		0.093	0.119	100

		Mo	Mg	Sn	N	La	Ce	Als	As	R_E	Sb	Nb	Alt
NCS HC 11015	Rare Earth Magnesium Cast Iron	0.0016	0.012	0.0037	0.0047	0.013	0.019	0.021	0.011	0.036	(0.0005)		
NCS HC 11016	Pig Iron	0.297		0.0054				0.0053	0.0101		0.0032	0.0061	0.0059
NCS HC 11017	Pig Iron	0.196		0.06				0.116	0.0043		0.026	0.02	0.119

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	(in g)
NCS HC 13004	High Chromium Cast Iron	2.46	0.320	1.63	0.383	0.012	12.95	0.122	0.73	0.026	0.0092	0.76	100
NCS HC 13005	High Chromium Cast Iron	2.86	0.365	1.07	0.058	0.028	22.53	0.250	0.42	0.039	0.005	1.14	100
NCS HC 13006	High Chromium Cast Iron	2.31	0.59	0.828	0.064	0.043	26.48	0.49	0.355	0.040	0.0053	2.70	100
NCS HC 13007	Alloy Cast Iron	3.95	1.30	0.271	0.129	0.233	4.31	0.029	0.011	0.012	0.016	0.36	100
NCS HC 13008	Alloy Cast Iron	3.46	3.15	1.05	0.252	0.062	0.202	0.132	0.263	0.0070	0.047	0.047	100
NCS HC 13010	Alloy Cast Iron	3.35	2.44	0.699	0.147	0.045	0.96	0.300	0.018			2.39	100
NCS HC 13011	Alloy Cast Iron	3.23	4.30	1.20	0.310	0.045	1.36	0.919	0.243			0.639	100
NCS HC 13013	Iron Powder	0.0041	0.018	0.126	0.0085	0.021							150
NCS HC 13015	Pig Iron	2.51	4.08	0.62	0.104	0.020							150
NCS HC 13016	Pig Iron	2.99	1.29	1.30	0.278	0.100							150
NCS HC 13020	Pig Iron	2.72	1.32	0.508	0.105	0.024							100
NCS HC 13021	Pig Iron	2.52	1.41	1.46	0.273	0.060							100
NCS HC 13022	Pig Iron	2.85	3.02	0.821	0.071	0.027							100
NCS HC 13024	Pig Iron	1.88	4.13	0.472	0.160	0.034							100
NCS HC 13025	Pig Iron	2.51	2.28	0.301	0.087	0.081							100
NCS HC 13026	Cast Iron	1.28	0.644	0.741	0.0285	0.0054	21.12	1.12	0.044	0.287	0.060	0.335	100
NCS HC 13027	Cast Iron	1.34	0.843	0.969	0.0310	0.0035	22.40	1.60	0.028	0.035	0.106	0.546	100
NCS HC 13028	Cast Iron	1.58	1.11	1.37	0.032	0.0038	24.73	2.07	0.0290	0.032	0.184	0842	100

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Als	V	Ti	Mo	Co	(in g)
NCS HC 14003	Pig Iron	2.03	1.50	0.402	0.077	0.042			0.085						100

Section 1 Iron, Steel & Alloy(Chip)
1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Co	(in g)
NCS HC 15002g	Pure Iron	0.0013	0.0014	0.00018	(0.0001)	0.001	0.00019	0.0052	0.00024	0.00065	(0.0001)	(0.0001)	0.0033	(0.0001)	15
NCS HC 15006	Pure Iron	0.080	0.171	0.043	0.0159	0.0075	0.043	0.147	0.135	0.088					100
NCS HC 15011	Pig Iron	2.58	2.76	1.00	0.087	0.068					N				100
NCS HC 15003a	Pure Iron	0.012	0.017	0.034	0.0019	0.020	0.016	0.030	0.021	0.060	0.015				100
NCS HC 15004a	Pure Iron	0.027	0.018	0.195	0.014	0.0063	0.048	0.116	0.089	0.290	0.016				100
NCS HC 15005a	Pure Iron	0.030	0.182	0.106	0.0061	0.025	0.147	0.162	0.123	0.205	0.011				100
NCS HC 15006a	Pure Iron	0.061	0.341	0.254	0.021	0.0058	0.114	0.182	0.168	0.412	0.012				100
NCS HC 15007a	Pure Iron	0.080	0.506	0.358	0.036	0.031	0.170	0.203	0.254	0.432	0.018				100
NCS HC 15014	Pure Iron(DT_4)	0.0208	0.0922	0.246	0.0121	0.007	0.013	0.0202	0.020	0.046					100

		Chemical Composition(Percent)								
		Ca	Mg	Cd	Zn	As	Sb	Bi	Sn	Pb
NCS HC 15002g	Pure Iron	0.0017	0.00022	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
NCS HC 15014	Pure Iron(DT_4)					0.0002	0.0005		0.0012	0.000085

Number	Name	Chemical Composition(Percent)										
		C	Si	Mn	P	S	Cu	Cr	Ni	Ai	N	
NCS HC 15015	Pure Iron	0.017	0.214	0.151	0.01	0.0022	0.118	0.017	0.105	0.413	0.0064	100
NCS HC 15016	Pure Iron	0.022	0.199	0.201	0.0072	0.0027	0.066	0.032	0.066	0.217	0.0123	100
NCS HC 15017	Pure Iron	0.061	0.166	0.319	0.04	0.005	0.02	0.022	0.02	0.284	0.0146	100
NCS HC 15018	Pure Iron	0.022	0.422	0.436	0.036	0.0032	0.2	0.205	0.323	0.515		100

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Mo	Sn	As	Sb	(in g)
NCS HC 16003b	Pig Iron	3.53	1.83	1.10	0.066	0.048			0.258	0.025					100
NCS HC 16006	Pig Iron	2.809	0.856	1.48	0.039	0.062			0.045	0.0118					100
NCS HC 16006b	Pig Iron	2.71	1.14	0.98	0.077	0.089			0.036	0.007					100
NCS HC 16008	Pig Iron	3.58	1.59	1.66	0.039	0.044			0.024	0.030					100
NCS HC 16008b	Pig Iron	3.45	1.44	1.84	0.046	0.018			0.015	0.019					100
NCS HC 16009	Pig Iron	2.202	0.378	0.528	0.0226	0.080			0.063	0.0094					100
NCS HC 16009b	Pig Iron	2.31	2.28	0.509	0.025	0.100			0.038	0.030					100
NCS HC 16010b	Pig Iron	3.90	0.93	0.414	0.044	0.044			0.010	0.001					100
NCS HC 16001b	Pig Iron	3.04	1.34	1.22	0.072	0.052			0.025	0.008					100
NCS HC 16002b	Pig Iron	2.38	0.48	0.700	0.082	0.034			0.026	0.006					100
NCS HC 16004b	Pig Iron	3.39	3.41	0.94	0.113	0.016			0.202	0.058					100
NCS HC 16022	Pig Iron	2.83	2.19	0.721	0.094	0.067									100
NCS HC 16023	Pig Iron	3.8	1.42	0.929	0.171	0.016									150
NCS HC 16024	Pig Iron	3.59	1.96	0.514	0.315	0.033									150
NCS HC 16026	Pig Iron	3.22	2.25	0.726	0.085	0.059									150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Sn	Zn	(in g)
NCS HC 16027	Pig Iron	4.06	0.725	0.094	0.038	0.029	0.010	0.0023	0.0023	0.0064	0.026	0.0027	0.00014	(0.0003)	100
NCS HC 16028	Pig Iron	4.00	1.55	0.634	0.046	0.0073	0.036	0.0045	0.0051	0.018	0.084	0.0089	0.00018	(0.0002)	100

		Pb	Bi	Sb	As
NCS HC 16027	Pig Iron	<0.0002	<0.00005	0.00013	0.0011
NCS HC 16028	Pig Iron	<0.0002	<0.00005	0.00016	0.0012

Section 1 Iron, Steel & Alloy(Chip)
1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)								Unit Size
		C	Si	Mn	P	S	As	RE	Mg	(in g)
NCS HC 18002	Cast Iron	2.67	2.94	1.36	0.051	0.031				150
NCS HC 18003	Pig Iron	3.18	1.43	0.0732	0.243	0.049	0.064			100
NCS HC 18005	Pig Iron	2.89	2.01	0.733	0.108	0.0058	0.091			100
NCS HC 18006	Pig Iron	2.65	1.99	0.75	0.114	0.0057	0.092			100
NCS HC 18008	Pig Iron	4.13	1.02	0.348	0.078	0.023	0.016			100
NCS HC 18009	Pig Iron	3.83	1.88	0.74	0.186	0.023	0.025			100
NCS HC 18010	Pig Iron	3.66	2.40	0.59	0.145	0.041	0.036	0.024	0.030	100
NCS HC 18011	Pig Iron	3.43	1.93	0.729	0.079	0.0082	0.036			100
NCS HC 18012	Pig Iron	3.23	1.93	0.74	0.079	0.0080	0.037			100
NCS HC 18013	Pig Iron	3.40	2.12	0.79	0.049	0.0087	0.013			100
NCS HC 18014	Pig Iron	3.36	2.136	0.792	0.049	0.0087	0.012			100
NCS HC 18015	Pig Iron	4.01	1.09	0.908	0.136	0.046	0.039			100
NCS HC 18016	Pig Iron	3.20	2.91	0.42	0.104	0.0092	0.092			100

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Co	(in g)
NCS HC 19002	V Ti Pig Iron	3.00	1.42	0.869	0.048	0.145	0.033	0.027	0.066	0.29	0.254		0.033	100
NCS HC 19004	V Ti Pig Iron	2.38	2.12	1.28	0.069	0.0077	0.039	0.028	0.070	0.40	0.314		0.034	100
NCS HC 19007	Nodular Cast Iron	2.855	2.615	0.977	0.050	0.021	0.0433	0.032	0.046	0.536	0.106		0.036	100
NCS HC 19008	Nodular Cast Iron	2.486	2.529	0.734	0.080	0.015	0.0425	0.030	0.044	0.394	0.096		0.035	100
NCS HC 19010	V Ti RE Spherulitic Iron	2.69	2.92	0.79	0.029	0.023	0.227	0.025	0.042	0.236	0.109	0.0016		100
NCS HC 19016	V Ti Pig Iron	2.21	3.78	0.420	0.014	0.012	0.040	0.032	0.047	0.310	0.066		0.037	100
NCS HC 19017	V Ti Pig Iron	2.77	2.52	0.570	0.015	0.014	0.042	0.031	0.046	0.356	0.072		0.037	100
NCS HC 19018	V Ti Pig Iron	2.70	3.10	0.625	0.024	0.011	0.043	0.031	0.049	0.405	0.125		0.035	100

		Ca	Mg	RE
NCS HC 19002	V Ti Pig Iron	0.0079		
NCS HC 19004	V Ti Pig Iron	0.0073		
NCS HC 19007	Nodular Cast Iron		0.036	0.040
NCS HC 19008	Nodular Cast Iron		0.0106	0.0185
NCS HC 19010	V Ti RE Spherulitic Iron		0.028	0.040
NCS HC 19016	V Ti Pig Iron		0.090	0.099
NCS HC 19017	V Ti Pig Iron		0.067	0.070
NCS HC 19018	V Ti Pig Iron		0.071	0.083

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Co	Sn	(in g)
NCS HC 28012	Cast Iron	3.06	1.36	0.77	0.071	0.094	0.0325	0.0415	0.068		0.032				150
NCS HC 28013	Cast Iron	2.65	2.29	0.575	0.450	0.098	0.041	0.0675	0.086		0.041				150
NCS HC 28014	Cast Iron	3.05	2.67	0.57	0.300	0.079	0.022	0.018	0.194						150
NCS HC 28015	Cast Iron	3.58	3.02	0.97	0.080	0.014	0.0075	0.0125	0.091						150

Section 1 Iron, Steel & Alloy(Chip)
1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Sn	(in g)
NCS HC 28025	High Phosphorus Cast Iron	2.98	1.80	0.698	1.80	0.087	0.081		0.201						150
NCS HC 28026	High Phosphorus Cast Iron	2.91	1.81	0.702	1.91	0.124	0.086		0.245						150
NCS HC 28028	Alloy Cast Iron	3.11	1.71	0.605	0.250	0.088	0.280		1.03		0.023	0.0494			150
NCS HC 28029	Alloy Cast Iron	2.84	1.91	0.85	0.086	0.0995	0.316		0.865		0.017	0.033			150
NCS HC 28034	Alloy Cast Iron	3.15	1.67	0.795	0.321	0.082	0.464		1.04			0.053	0.515		150
NCS HC 28035	Alloy Cast Iron	3.15	1.44	0.685	0.49	0.076			0.915						150
NCS HC 28041	Rare Earth Cast Iron	1.59	2.13	0.44	0.067	0.004	0.052		0.024						150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	S	Si	Mn	P	Cr	Ni	Mo	Nb	Mg	Cu	ΣRE	Ce	(in g)
NCS HC 28054	Alloy Cast Iron	3.01	0.011	2.03	0.645	0.188	0.619	1.19	0.355	0.095	0.047				100

Number	Name	Chemical Composition(Percent)						Unit Size
		C	Si	Mn	P	S	Cu	(in g)
NCS HC 30001	Cast Iron	2.26	2.21	1.28	0.178	0.025	1.01	50
NCS HC 30002	Cast Iron	3.12	0.96	0.687	0.100	0.023	0.29	50
NCS HC 30003	Cast Iron	2.62	1.64	1.68	0.120	0.032	0.52	50

Number	Name	Chemical Composition(Percent)									Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	(in g)
NCS HC 37001	High Chromium Cast Iron	3.40	1.35	0.89	0.060	0.054	13.54	0.63	1.22	1.03	80
NCS HC 37002	High Chromium Cast Iron	3.42	1.05	0.71	0.058	0.064	8.93	0.23	0.90	1.74	80
NCS HC 37003	High Chromium Cast Iron	2.95	1.32	1.72	0.062	0.034	15.39	1.05	1.06	1.12	80

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Mg	R_E	Bi	(in g)
NCS HC 37005	R_E-Mg Spherulitic Iron	1.92	3.36	0.955	0.041	0.0064			0.181	0.128	0.073	0.059		80
NCS HC 37008	R_E-Mg Spherulitic Iron	2.59	3.08	0.373	0.042	0.012			0.288	0.514	0.014	0.011		80
NCS HC 37010	Cast Iron	3.63	2.82	0.762	0.187	0.070								80
NCS HC 37011	Cast Iron	3.73	2.58	0.565	0.117	0.067								80
NCS HC 37013	Wrought Iron	2.11	1.70	0.353	0.167	0.139	0.119						0.0025	80
NCS HC 37016	High Chromium Cast Iron	3.42	1.05	0.71	0.058	0.064	8.93	0.23	0.90	1.74				80
NCS HC 37017	High Chromium Cast Iron	2.95	1.32	1.72	0.062	0.034	15.39	1.05	1.06	1.12				80
NCS HC 37018	Manganese Spherulitic Iron	2.78	5.96	6.80	0.12	0.0027					0.049	0.041		80
NCS HC 37019	Manganese Spherulitic Iron	3.06	5.80	6.72	0.11	0.0041					0.054	0.049		80
NCS HC 37020	Manganese Spherulitic Iron	2.88	3.75	6.40	0.11	0.0035					0.068	0.047		80
NCS HC 37021	Manganese Spherulitic Iron	2.79	6.58	8.77	0.10	0.0060					0.028	0.045		80

Number	Name	Chemical Composition(Percent)										Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Co	(in g)
NCS HC 28057	Nickel-iron	2.15	4.10	0.065	0.020	0.235	2.77	12.25	0.022	0.034	0.226	75
NCS HC 28058	Nickel-iron	2.87	2.07	0.072	0.110	1.00	1.68	10.19	0.033	0.027	0.236	75
NCS HC 28059	Nickel-iron	2.17	2.72	0.066	0.014	0.276	1.71	13.96	0.038	0.027	0.320	75

Section 1 Iron, Steel & Alloy(Chip)
1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Mg	R_E	Bi	(in g)
NCS HC 37029	Pig Iron	2.15	2.69	1.08	0.451	0.068	0.221		0.752					100
NCS HC 37030	Pig Iron	2.22	2.20	0.869	0.339	0.101	0.142		0.501					100
NCS HC 37032	Pig Iron	2.28	1.34	0.358	0.086	0.161	0.028		0.041					100
NCS HC 37034	Pig Iron	3.73	2.58	0.565	0.117	0.067								100
NCS HC 37035	Pig Iron	3.75	2.15	0.730	0.152	0.068								100
NCS HC 37036	Cast Iron	1.67	1.90	1.05	0.085	0.024	0.055						0.0034	100
NCS HC 37037	Cast Iron	1.90	2.34	0.780	0.110	0.055	0.024						0.0038	100
NCS HC 37038	Cast Iron	2.01	1.44	0.677	0.057	0.115	0.113						0.0015	100
NCS HC 37039	Cast Iron	2.04	3.37	1.34	0.479	0.038	0.197		0.642					100
NCS HC 37040	Cast Iron	2.15	2.69	1.08	0.451	0.068	0.221		0.752					100
NCS HC 37041	Cast Iron	2.22	2.20	0.869	0.339	0.101	0.142		0.501					100
NCS HC 37042	Cast Iron	2.04	1.86	0.670	0.226	0.103	0.054		0.176					100
NCS HC 37043	Cast Iron	2.28	1.34	0.358	0.086	0.161	0.028		0.041					100
NCS HC 37051	Cast Iron	2.69	0.59	0.65	0.072	0.088	10.51	0.43	0.63	0.50				50

		V	Ti
NCS HC 37051	Cast Iron	0.56	0.013

Number	Name	Chemical Composition(Percent)						Unit Size
		C	Si	Mn	P	S	B	(in g)
NCS HC 39001	Cast Iron	2.85	2.48	0.38	0.081	0.096		100
NCS HC 39002	Cast Iron	2.81	1.71	0.57	0.062	0.134		100
NCS HC 39003	Cast Iron	2.95	1.49	0.26	0.143	0.085		100
NCS HC 39004	Cast Iron	2.78	2.17	0.78	0.066	0.082		100
NCS HC 39008	Cast Iron	2.59	2.17	0.859	0.187	0.093		100
NCS HC 39009	Cast Iron	2.47	3.33	1.56	0.318	0.057		100
NCS HC 39010	Cast Iron	2.65	1.29	0.331	0.113	0.134		100
NCS HC 39011	Boron Cast Iron	2.96	1.67	0.57	0.082	0.058	0.061	100
NCS HC 39013	Boron Cast Iron	2.86	2.35	0.56	0.106	0.052	0.101	100

Section 1 Iron, Steel & Alloy(Chip)
1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Sn	(in g)
NCS HC 41002	DT4	0.023	0.075	0.178	0.016	0.009				0.309					150
NCS HC 41010	Cast Iron	2.64	1.49	0.540	0.089	0.029	0.086	0.030	0.056		0.011	0.024	0.021		150
NCS HC 41011	Cast Iron	2.64	2.23	0.725	0.177	0.033	0.151	0.035	0.146		0.014	0.031	0.105		150
NCS HC 41012	Cast Iron	2.52	3.86	1.24	0.635	0.032	0.115	0.037	0.114		0.017	0.033	0.071		150

		As	Sb	Pb	Ali
NCS HC 41002	DT4				0.003

Number	Name	Chemical Composition(Percent)					Unit Size
		C	Si	Mn	P	S	(in g)
NCS HC 93001	pig iron	4.01	1.49	1.15	0.097	0.069	100

Numberw	Name	Chemical Composition(Percent)											Unit Size
		C	S	Si	Mu	P	Cr	Ni	Mo	Cu	Ti	∑Re	V*	(in g)
NCS HC 93002	Alloy cast iron	1.82	0.097	3.54	1.84	0.072	0.6	0.95	0.16	0.24	0.46	0.024	0.2	100
NCS HC 93003	Alloy cast iron	2.4	0.084	2.47	1.19	0.072	0.97	0.23	0.11	2.18	0.13	0.025	0.16	100
NCS HC 93004	Alloy cast iron	3.28	0.018	2	0.48	0.34	0.21	0.33	1.1	0.82	0.035	0.01	0.06	100
NCS HC 93005	Alloy cast iron	2.76	0.058	1.37	0.69	0.14	0.39	0.59	0.65	1.36	0.15	0.007	0.3	100
NCS HC 93006	Alloy cast iron	2.64	0.079	1.21	0.29	0.43	1.92	2.65	0.25	0.35	0.029	0.044	0.02	100
NCS HC 93007	Alloy cast iron	3.94	0.028	0.82	0.14	0.058	0.14	1.56	0.42	0.49	0.08	0.027	0.58	100

Section 1 Iron, Steel & Alloy(Chip)
2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Al_t	Ti_t	(in g)
NCS HC 11101	Carbon Steel,10 #	0.127	0.219	0.481	0.017	0.024	0.0058	0.015	0.257						150
NCS HC 11102	60Mn	0.56	0.72	0.69	0.016	0.004	0.102	0.60	0.041						150
NCS HC 11102a	60Mn	0.61	0.24	0.82	0.023	0.014	0.015	0.028	0.016						150
NCS HC 11103	Carbon Steel	0.183	0.277	0.622	0.029	0.011	0.028	0.033	0.185						150
NCS HC 11110	Carbon Steel,25 #	0.239	0.187	0.552	0.014	0.018	0.026	0.039	0.202						150
NCS HC 11110a	Carbon Steel.25 #	0.242	0.260	0.506	0.014	0.023	0.078	0.048	0.119						150
NCS HC 11111	Easy Cutting Steel	0.188	0.114	0.64	0.015	0.119	0.016	0.037	0.031						150
NCS HC 11111a	Easy Cutting Steel	0.72	0.22	0.37	0.13	0.13									150
NCS HC 11111b	Easy Cutting Steel	0.09	0.27	0.96	0.094	0.12	0.090	0.049	0.091						150
NCS HC 11112	Carbon Steel,20 #	0.183	0.105	0.632	0.007	0.016	0.172	0.108	0.106						150
NCS HC 11115	Carbon Steel,15 #	0.136	0.054	0.317	0.007	0.011	0.026	0.017	0.028						150
NCS HC 11116	15Mn	0.156	0.277	0.879	0.015	0.0105	0.058	0.054	0.124						150
NCS HC 11118	Carbon Steel	0.23	0.25	0.55	0.026	0.0035									150
NCS HC 11119	65Mn	0.68	0.30	1.11	0.018	0.009	0.066	0.037	0.11						150
NCS HC 111120	Carbon Steel,35 #	0.338	0.262	0.555	0.016	0.014	0.155	0.072	0.140						150
NCS HC 11121	25MnSi	0.234	0.508	1.33	0.021	0.029	0.056	0.046	0.067						150
NCS HC 11122	20MnSi	0.201	0.748	1.32	0.026	0.027									150
NCS HC 11124	Carbon Steel	0.109	0.520	0.750	0.034	0.010	0.206	0.121	0.243	Als0.031	0.254	Tis0.015	0.036	0.016	150
NCS HC 11125	Carbon Steel	0.341	0.416	0.923	0.051	0.010	0.069	0.143	0.187	Als0.067	0.136	Tis0.054	0.072	0.055	150
NCS HC 11126	Carbon Steel	0.664	0.164	1.25	0.071	0.028	0.073	0.240	0.142	Als0.097	0.077	Tis0.093	0.099	0.093	150
NCS HC 11127	Carbon Steel	1.03	0.176	1.63	0.086	0.030	0.063	0.320	0.122	Als0.171	0.031	Tis0.154	0.174	0.156	150
NCS HC 11128	Carbon Steel	1.23	0.805	1.87	0.093	0.032	0.321	0.445	0.082	Als0.202	0.011	Tis0.263	0.206	0.266	150
NCS HC 11130	Carbon Steel	0.157	0.114	0.211	0.034	0.037	0.12	0.066	0.047	0.045	0.163	0.071			150
NCS HC 11132	Carbon Steel	0.464	0.814	0.376	0.062	0.043	0.20	0.36	0.295	0.131	0.156	0.157			150
NCS HC 11133	Carbon Steel	0.582	0.389	0.891	0.050	0.019	0.16	0.18	0.227	0.056	0.023	0.083			150
NCS HC 11134	Carbon Steel	0.741	0.821	1.39	0.012	0.056	0.016	0.016	0.0154	0.0025	0.157	0.006			150

Number	Name	Chemical Composition(Percent)									Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	As	(in g)
NCS HC 13101	Carbon Steel	0.725	0.24	1.28	0.016	0.030					150
NCS HC 13102	Carbon Steel	0.295	0.255	0.506	0.019	0.030	0.0062	0.0039	0.005		100
NCS HC 13103	Carbon Steel	0.409	0.261	0.629	0.0127	0.032	0.0076	0.0073	0.0087		100
NCS HC 13104	Carbon Steel	0.239	0.242	0.490	0.014	0.024	0.013	0.015	0.017		100
NCS HC 13105	Carbon Steel	0.153	0.222	0.457	0.0062	0.026	0.013	0.010	0.023		100
NCS HC 13106	Carbon Steel	0.480	0.271	0.653	0.016	0.028	0.0088	0.0055	0.0061		100
NCS HC 13107	Carbon Steel,30 #	0.30	0.26	0.51	0.019	0.030	0.0061	0.0038	0.0054		100
NCS HC 13108	Carbon Steel,40 #	0.41	0.26	0.63	0.013	0.032	0.0076	0.0074	0.0087		100
NCS HC 13109	Carbon Steel,25 #	0.24	0.24	0.49	0.014	0.024	0.013	0.015	0.017	0.0022	100
NCS HC 13110	Carbon Steel,15 #	0.15	0.22	0.46	0.0062	0.026	0.013	0.010	0.023	0.0034	100
NCS HC 13111	Carbon Steel,60 #	0.59	0.25	0.73	0.0098	0.025	0.014	0.008	0.015	0.0019	100
NCS HC 13112	Carbon Steel,50 #	0.48	0.27	0.65	0.016	0.028	0.009	0.006	0.006	0.0011	100
NCS HC 13114	Carbon Steel,45 #	0.47	0.26	0.70	0.019	0.030	0.008	0.004	0.006	0.005	100
NCS HC 13116	Carbon Steel	0.42	0.36	1.11	0.084	0.049					100
NCS HC 13118	Carbon Steel	0.72	0.66	0.56	0.063	0.010					100
NCS HC 13121	Carbon Steel	0.33	0.62	0.41	0.036	0.012					100

Section 1 Iron, Steel & Alloy(Chip)
2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)										Unit Size (in g)
		C	Si	Mn	P	S	Ni	Cr	Cu	As	Als	
NCS HC 13122	Carbon Steel	0.29	1.43	1.16	0.017	0.012	0.008	0.015	0.006	0.0022	0.063	100
NCS HC 13124	Carbon Steel	0.60	0.31	0.89	0.018	0.017	0.007	0.013	0.006	0.0022	0.056	100
NCS HC 13125	Carbon Steel	0.68	0.36	0.61	0.017	0.014	0.004	0.012	0.005	0.0022	0.031	100
NCS HC 13126	Carbon Steel	0.71	0.30	1.02	0.020	0.017	0.005	0.013	0.006	0.0023	0.040	100
NCS HC 13127	Carbon Steel	0.71	0.33	1.29	0.019	0.010	0.007					100

Number	Name	Chemical Composition(Percent)							Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	
NCS HC 14101	Carbon Steel	0.090	0.154	0.403	0.0146	0.049	0.020	0.026	100
NCS HC 14102	Carbon Steel	0.542	0.140	0.520	0.0205	0.022	0.237	0.031	100
NCS HC 14103	Carbon Steel	0.343	0.305	0.696	0.0231	0.037	0.056	0.130	100
NCS HC 14104	Carbon Steel	0.477	0.203	0.674	0.0244	0.031	0.0023	0.036	100
NCS HC 14105	Carbon Steel	0.596	0.303	0.699	0.0193	0.0085	0.0052	0.026	100
NCS HC 14106	Carbon Steel	0.205	0.346	0.291	0.0320	0.020	0.155	0.010	100
NCS HC 14107	Carbon Steel	0.219	0.377	0.280	0.0405	0.111	0.182	0.022	100

Numberw	Name	Chemical Composition(Percent)								Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	
NCS HC 15101	Carbon Steel	0.118	0.252	0.483	0.0132	0.017	0.020	0.020	0.022	150
NCS HC 15103	Carbon Steel	0.454	0.283	0.636	0.0223	0.010	0.016	0.0083	0.009	150
NCS HC 15104	Carbon Steel	0.265	0.282	0.590	0.0066	0.016	0.016	0.028	0.012	100
NCS HC 15105	Carbon Steel	0.467	0.295	0.624	0.027	0.012				100

Number	Name	Chemical Composition(Percent)					Unit Size (in g)
		C	Si	Mn	P	S	
NCS HC 16101	Carbon Steel	0.472	0.261	0.657	0.0136	0.012	150
NCS HC 16102	Carbon Steel	0.206	0.238	0.551	0.0103	0.009	150
NCS HC 16103	Carbon Steel	0.343	0.276	0.636	0.0144	0.010	150

Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	
NCS HC 18101	Carbon Steel	0.168	0.318	0.605	0.028	0.019	0.315	0.275	0.308	150
NCS HC 18102	Carbon Steel	0.585	0.564	0.748	0.052	0.042	0.100	0.097	0.116	150
NCS HC 18103	Carbon Steel	0.474	0.269	0.658	0.023	0.024	0.246	0.181	0.175	150
NCS HC 18104	Carbon Steel	0.324	0.252	0.573	0.033	0.016	0.124	0.036	0.203	150
NCS HC 18105	20MnSi	0.219	0.545	1.54	0.046	0.035	0.031	0.029	0.094	100
NCS HC 18106	Q235 Steel	0.203	0.254	0.418	0.011	0.022	0.033	0.022	0.078	100

Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Co	
NCS HC 19101	Carbon Steel	0.458	0.347	0.655	0.0195	0.016							100
NCS HC 19102	Carbon Structure Steel	0.73	0.243	1.22	0.014	0.030	0.015	0.029	0.078	0.012	0.0034	0.038	100

Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	
NCS HC 20104	Carbon Steel	0.181	0.294	0.147	0.0084	0.060	0.290	0.107	0.083	100
NCS HC 20106	Carbon Steel	0.341	0.194	0.585	0.012	0.028	0.220	0.055	0.209	100
NCS HC 20108	Carbon Steel	0.303	0.323	0.649	0.022	0.012	0.059	0.033	0.114	100
NCS HC 20112	Carbon Steel	0.484	0.297	0.611	0.022	0.0082	0.052	0.0451	0.088	100
NCS HC 20113	20MnSi	0.199	0.595	1.46	0.024		0.143	0.079	0.157	100

Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	W	Mo	Sn	
NCS HC 21101	Carbon Steel	0.113	0.239	0.452	0.011	0.012	0.027	0.026	0.079					100
NCS HC 21102	Carbon Steel	0.228	0.279	0.516	0.020	0.021	0.071	0.029	0.080					100
NCS HC 21103	Carbon Steel	0.449	0.317	0.660	0.019	0.014	0.066	0.033	0.088	0.012	0.0055	0.0093	0.0114	100
NCS HC 21104	20MnSi	0.205	0.759	1.376	0.0225	0.0268	0.108	0.096	0.121		0.033	0.036		100

Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	
NCS HC 22101	Carbon Steel	0.091	0.266	0.569	0.0123	0.031	0.093	0.241	0.196	0.095	0.011	0.0098	100
NCS HC 22102	Carbon Steel	0.188	0.150	0.461	0.0269	0.052	0.128	0.175	0.268	0.048	0.0048	0.028	100
NCS HC 22103	Carbon Steel	0.338	0.475	0.856	0.038	0.012	0.270	0.042	0.053	0.0079	0.0026	0.0030	100

Section 1 Iron, Steel & Alloy(Chip)
2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Mo	Co	Sn	(in g)
NCS HC 28104	Carbon Steel	0.327	0.300	0.511	0.0214	0.023	0.024	0.036	0.212	0.051		0.0060	0.0011	0.049	100
NCS HC 28106	Carbon Steel	0.736	0.292	0.673	0.0320	0.019	0.0064	0.010	0.028	0.036		0.0031	0.0076	0.0013	100
NCS HC 28107	Carbon Steel	0.523	0.287	0.726	0.0101	0.017	0.026	0.022	0.030	0.021		0.0025	0.0077	0.00085	100
NCS HC 28108	Carbon Steel	0.090	0.153	0.600	0.0165	0.025	0.0125	0.0090	0.021						100
NCS HC 28110	Carbon Steel	0.204	0.253	0.441	0.028	0.025	0.012	0.0059	0.0215						100
NCS HC 28112	Carbon Steel	0.302	0.206	0.503	0.0350	0.0165	0.011	0.0078	0.028						100
NCS HC 28113	Carbon Steel	0.463	0.262	0.638	0.0195	0.020	0.070	0.039	0.115						100
NCS HC 28114a	Carbon Steel	0.736	0.297	0.67	0.032	0.019	0.0065	0.010	0.028						100
NCS HC 28115	15Mn	0.127	0.262	0.779	0.255	0.0315	0.0105	0.010	0.0145						100
NCS HC 28116	15Mn	0.157	0.351	0.854	0.018	0.024	0.019	0.0081	0.016						100
NCS HC 28117	20Mn	0.190	0.273	0.810	0.034	0.0300	0.014	0.010	0.018						100
NCS HC 28118	70Mn	0.722	0.564	1.10	0.041	0.0255	0.202	0.096	0.109						100
NCS HC 28119	Carbon Steel	0.620	0.408	0.749	0.031	0.0255	0.333	0.227	0.127						100
NCS HC 28121	45Mn	0.422	0.298	1.631	0.015	0.017	0.0115	0.021	0.014						100
NCS HC 28122	Carbon Steel	0.263	0.065	0.778	0.0265	0.0499	0.024	0.030	0.150						150
NCS HC 28123	Carbon Steel	0.152	0.175	0.491	0.019	0.019	0.027	0.030	0.108						150
NCS HC 28125	Carbon Steel	0.327	0.304	0.515	0.0079	0.026									150
NCS HC 28126	Carbon Steel	0.670	0.417	0.978	0.0486	0.040	0.0385	0.019	0.102						150
NCS HC 28127	Carbon Steel	0.170	0.475	1.00	0.027	0.018	0.018	0.019	0.029						150
NCS HC 28128	Ship Construction Steel	0.157	0.351	0.854	0.018	0.024	0.019	0.0081	0.016						100
NCS HC 28129	Ship Construction Steel	0.190	0.273	0.810	0.034	0.030	0.014	0.010	0.018						100

		As	Sb	Pb	Bi
NCS HC 28104	Carbon Steel	0.010	0.012	0.00062	<0.00001
NCS HC 28106	Carbon Steel	0.0094	0.0010	0.00062	<0.00001
NCS HC 28107	Carbon Steel	0.0030	0.00061	0.000027	<0.00001

Number	Name	Chemical Composition(Percent)								Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	(in g)
NCS HC 31103	Carbon Steel	0.274	0.300	0.580	0.014	0.0064	0.08	0.056	0.082	100
NCS HC 31109	Carbon Steel	0.683	0.432	0.971	0.0452	0.0163	0.288	0.450	0.098	100

Number	Name	Chemical Composition(Percent)								Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	(in g)
NCS HC 37101	Carbon Steel	0.518	0.344	0.616	0.025	0.0063	0.050	0.040		100
NCS HC 37102	Carbon Steel	0.139	0.152	0.601	0.024	0.030	0.042	0.042	0.151	100
NCS HC 37103	Carbon Steel	0.170	0.224	0.407	0.036	0.049	0.052	0.044	0.127	100
NCS HC 37104	Carbon Steel	0.349	0.343	0.603	0.015	0.022	0.016	0.029	0.050	100
NCS HC 37105	Carbon Steel	0.659	0.275	0.742	0.012	0.0074	0.017	0.056	0.113	100
NCS HC 37106	Carbon Steel	0.168	0.270	0.510	0.013	0.027				100
NCS HC 37107	Carbon Steel	0.236	0.274	0.595	0.019	0.022				100
NCS HC 37108	Carbon Steel	0.168	0.270	0.510	0.013	0.027	0.222	0.052	0.118	100
NCS HC 37109	Carbon Steel	0.308	0.232	0.517						100

Section 1 Iron, Steel & Alloy(Chip)
2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co	(in g)
NCS HC 41102	Carbon Steel	0.652	0.160	0.416	0.038	0.050	0.054	0.028	0.140	0.040	0.003		0.007		150
NCS HC 41109	Carbon Steel	0.064	0.601	0.246	0.0082	0.044	0.012	0.035	0.072	0.173	0.0012		0.0061	0.009	150
NCS HC 41111b	Carbon Steel	0.233	0.254	0.404	0.011	0.016	0.121	0.031	0.132						100
NCS HC 41113	Carbon Steel	0.166	0.198	0.533	0.032	0.024	0.005	0.009	0.007		0.0007	0.0042	0.0047		150
NCS HC 41116	Carbon Steel	0.354	0.305	0.608	0.021	0.0105	0.031	0.021	0.118	0.014	0.002				150
NCS HC 41116c	Carbon Steel	0.364	0.250	0.572	0.010	0.0089	0.038	0.048	0.110						100
NCS HC 41117	Carbon Steel	0.433	0.226	0.631	0.016	0.0135	0.027	0.021	0.108	0.044	0.001				150
NCS HC 41119	Carbon Steel	0.528	0.287	0.665	0.020	0.010	0.029	0.023	0.081		0.002				100
NCS HC 41120	Carbon Steel	0.202	0.293	0.452	0.012	0.0125	0.056	0.031	0.074		0.002				150
NCS HC 41121	Carbon Steel	0.092	0.125	0.315	0.015	0.041									150
NCS HC 41122	Carbon Steel	0.158	0.221	0.459	0.011	0.012									150
NCS HC 41123	Carbon Steel	0.083	0.107	0.275	0.0097	0.038	0.056	0.032	0.089		(0.001)				150
NCS HC 41124	Carbon Steel	0.178	0.311	0.420	0.018	0.0135	0.047	0.029	0.074		(0.003)				150
NCS HC 41125	Carbon Steel	0.811	0.582	1.11	0.066	0.011	0.060	0.260	0.292		(0.005)				150
NCS HC 41126	Carbon Steel	0.420	0.249	0.610	0.048	0.074	0.186	0.186	0.205		(0.003)				150
NCS HC 41128	Carbon Steel	0.642	0.287	0.673	0.029	0.0042					(0.003)				150
NCS HC 41129	Carbon Steel	0.587	0.265	0.641	0.018	0.011	0.022	0.021	0.087		0.001				150
NCS HC 41130	Carbon Steel	0.706	0.297	0.508	0.0195	0.010	0.063	0.053	0.078		0.001				150
NCS HC 41132	20Mn Si	0.207	0.536	1.45	0.029	0.012	0.034	0.035	0.082						150
NCS HC 41133	35Si Mn	0.335	0.612	1.33	0.020	0.0085	0.032	0.030	0.068		0.0020				150
NCS HC 41134	Carbon Steel	0.112	0.367	0.644	0.033	0.017	0.426	0.033	0.030						100
NCS HC 41135	Carbon Steel	0.437	0.612	0.533	0.031	0.033	0.189	0.229	0.185						100

		Sn	As	Sb	Pb	Ns	Ali	Nt
NCS HC 41102	Carbon Steel		0.015	(<0.001)			0.007	
NCS HC 41109	Carbon Steel	0.0074	0.010				0.002	
NCS HC 41116	Carbon Steel						0.005	
NCS HC 41117	Carbon Steel						0.005	

Section 1 Iron, Steel & Alloy(Chip)
3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 11201	MoB	0.24	0.63	0.17	0.010	0.005	0.073	0.034	0.052	0.65					150
NCS HC 11202	5CrNiMo	0.58	0.34	0.80	0.031	0.004	0.54	1.71						0.29	150
NCS HC 11203	$4Cr_3$ SiMnWV	0.45	1.07	1.54	0.036	0.004	2.78	0.10	0.20		0.29		0.95		150
NCS HC 11204	Cr_2 SiMoTi	0.14	1.33	0.48	0.021	0.006	2.17	0.24	0.18			0.19		0.52	150
NCS HC 11205	38CrWVAl	0.32	0.41	0.26	0.031	0.011	1.64	0.13	0.061	0.17	0.20				150
NCS HC 11206	38CrMoAl	0.42	0.48	0.68	0.069	0.005	1.67	0.28	0.055	0.77				0.26	150
NCS HC 11207	30CrSiMoV	0.34	0.90	0.70	0.016	0.004	1.16	0.34	0.21		0.36			0.45	150
NCS HC 11208	$20Cr_3MoWV$	0.17	0.14	0.36	0.013	0.008	2.59	0.18	0.17		0.79		0.38	0.64	150
NCS HC 11209	W_3CrV	1.60	0.41	0.59	0.044		0.38				0.26		2.70		100
NCS HC 11209a	W_3MoV	1.56	0.41	0.76	0.029	0.006	0.47				0.36		3.14		150
NCS HC 11210	3CrAl	0.43	0.75	0.24	0.013		1.35	0.020	0.020	0.62					150
NCS HC 11211	9V	1.05	0.33	0.41	0.011	0.009	0.63	0.021	0.022		0.23				150
NCS HC 11212	30CrMoWV	0.30	0.22	0.55	0.017	0.006	2.65		0.12		0.75		0.65	0.56	150
NCS HC 11213	$35CrMnSiNi_2Mo$	0.35	0.96	1.15	0.018	0.004	0.84	1.96	0.059		0.058			0.33	150
NCS HC 11214	GCr15	0.997	0.281	0.287	0.013	0.007	1.53	0.019	0.028						150
NCS HC 11222	$40SiMn_2$	0.38	0.89	1.65	0.011	0.005	0.11		0.045						150
NCS HC 11222a	$40SiMn_2$	0.39	0.98	1.69	0.041	0.012	0.17	0.35	0.055						150
NCS HC 11223	20MnTiB	0.18	0.24	1.42	0.026	0.007	0.020		0.026			0.054			150
NCS HC 11224	45B	0.43	0.36	1.15	0.020	0.010	0.062	0.20	0.046	0.075					150
NCS HC 11225	18CrMnTi	0.16	0.33	1.01	0.020	0.007	1.08	0.14				0.049			150
NCS HC 11226	40Cr	0.40	0.26	0.79	0.014	0.017	1.01	0.076	0.036						150
NCS HC 11227	$60Si_2Mn$	0.60	2.05	0.84	0.051	0.008	0.016	0.039	0.046						150
NCS HC 11228	15MnVN	0.18	0.23	1.38	0.015	0.011		0.30	0.18		0.091				150
NCS HC 11229	$40Si_2V$	0.44	1.66	0.74	0.018	0.006		0.20	0.13		0.14				150
NCS HC 11230	$08MnPR_E$	0.092	0.36	1.07	0.058	0.011									150
NCS HC 11231	$14MnVTiR_E$	0.22	0.36	1.60	0.067	0.009					0.067	0.10			150
NCS HC 11232	20CrMo	0.212	0.270	0.460	0.0174	0.0117	0.972		0.031					0.191	100
NCS HC 11233	$60Si_2Mn$	0.661	1.82	0.805	0.027	0.017	0.021	0.020	0.136						150
NCS HC 11234	GCr15Si Mn	0.993	0.582	0.996	0.017	0.0060	1.47	0.053	0.152					0.029	100
NCS HC 11235	Medium Low Alloy Steel	0.658	0.069	0.120	0.0044	0.0018	0.350	0.774	0.385	1.51	0.447	0.483	0.897	0.266	150
NCS HC 11236	Low alloy	0.211	0.174	1.36	0.046	0.021	0.124	0.487	0.233	0.866	0.619	0.812	1.60	0.472	150
NCS HC 11240	Alloy steel	0.747	0.46	0.801	0.014	0.012	0.212	0.036	0.05		0.1		0.121	0.088	

		Co	B	Sn	As	Ca	Pb	N	Bi	R_E	Nb	Zr	Als	Alt	
NCS HC 11201	NoB	0.008	1.21												
NCS HC 11223	20MnTiB		0.0022												
NCS HC 11224	45B		0.0052												
NCS HC 11228	15MnVN							0.009							
NCS HC 11230	$08MnPR_E$									0.028					
NCS HC 11231	$14MnVTiR_E$									0.069					
NCS HC 11233	$60Si_2Mn$	0.011			0.016										
NCS HC 11235	Medium Low Alloy Steel	0.340		0.011	0.012						0.025	0.156			
NCS HC 11240	Alloy steel	0.026		0.0046	0.0066	(0.0004)							0.012	0.016	

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B	(in g)
NCS HC 13201	$90Mn_2$	0.91	0.056	2.09	0.054	0.030	0.105	0.076	0.20	0.015					150
NCS HC 13202	$09SiMnCr_3$	0.056	1.07	1.20	0.127	0.093	2.88	0.66	0.073	0.405					150
NCS HC 13203	$7Cr_2$	0.70	0.041	0.28	0.083	0.064	1.45	0.93	0.12	(0.0007)					150
NCS HC 13204	09MnCr	0.097	0.29	0.87	0.011	0.096	0.76	0.29	0.034	0.073					150
NCS HC 13205	$09SiMn_2CrCuAl$	0.035	0.59	1.79	0.089	0.009	1.03	0.020	0.46	0.59					150
NCS HC 13207	$30MI_2MoVTiAlB$	0.294	0.070	1.48	0.036	0.009	0.037	0.019	0.035	0.029	0.025	0.023	0.038	0.011	150
NCS HC 13208	$9Si_2MoVTiAlB$	1.085	1.42	0.308	0.013	0.004	0.045	0.021	0.036	0.115	0.50	0.30	0.89	0.016	150

Section 1 Iron, Steel & Alloy(Chip)
3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B	(in g)
NCS HC 13210	8SiMnMoVTiAlB	0.78	0.88	0.675	0.013	0.122	0.019	0.021	0.036	0.10	0.33	0.39	0.65	0.0058	100
Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B	(in g)
NCS HC 13212	09SiMoVTiAlB	0.045	0.46	0.396	0.054	0.069	(0.0095)	0.016	0.030	0.028	0.051	0.041	0.11	0.028	100
NCS HC 13214	Low Alloy Steel	0.395	0.792	1.84	0.146	0.018									100
NCS HC 13215	Low Alloy Steel	0.361	1.69	0.989	0.096	0.019									100
NCS HC 13216	Low Alloy Steel	0.214	0.389	1.37	0.056	0.020									100
NCS HC 13217	Low Alloy Steel	0.284	1.11	0.749	0.037	0.018									100
NCS HC 13219	Low Alloy Steel	0.520	1.03	1.04	0.0654	0.0247									100
NCS HC 13220	Low Alloy Steel	0.15	0.29	2.06	0.015		0.51	0.023	0.036		0.415		0.004		150
NCS HC 13221	Low Alloy Steel	0.065	0.38	0.96	0.174		0.016					0.061	0.10		150

		Nb	Zr	R_E	Co	N	Alt	Als
NCS HC 13220	Low Alloy Steel				0.008	0.030		
NCS HC 13221	Low Alloy Steel	0.165		0.014			0.085	0.081

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co	(in g)
NCS HC 14201	Low Alloy Steel	0.39	0.293	0.558	0.019	0.0105	0.84	0.035	0.215	0.047	0.007		0.193	0.023	150
NCS HC 14201a	Low Alloy Steel	0.358	0.272	0.573	0.014	0.0086	1.03	0.020	0.150				0.137		100
NCS HC 14202	Low Alloy Steel	0.118	0.405	0.433	0.017	0.012			0.421	0.389		0.519			100
NCS HC 14203	Low Alloy Steel	0.082	0.177	0.222	0.012	0.024			0.274	0.190		0.249			100
NCS HC 14204	Low Alloy Steel	0.080	0.583	0.636	0.024	0.012			0.363	0.317		0.149			100
NCS HC 14205	Low Alloy Steel	0.076	0.037	0.303	0.033	0.061			0.220	0.334		0.144			100
NCS HC 14206	Low Alloy Steel	0.089	0.389	0.540	0.013	0.022			0.314	0.465		0.089			100
NCS HC 14207	Low Alloy Steel	0.135	0.435	1.25	0.041	0.020			0.165		0.090				150
NCS HC 14208	Low Alloy Steel	0.39	1.82	0.97	0.014	0.009			0.43		0.153				150
NCS HC 14209	Low Alloy Steel	0.562	1.72	0.714	0.020	0.0054	0.173	0.201							150
NCS HC 14210	40Cr	0.445	0.308	0.659	0.027	0.0068	1.00	0.017	0.049						150
NCS HC 14211	Low Alloy Steel	0.192	0.276	1.72	0.0071	0.0022	0.283	0.194	0.311		0.093				100
NCS HC 14213	Silicon Steel	0.076	3.18	0.081	0.0090	0.023			0.066						100
NCS HC 14214	Silicon Steel	0.044	3.15	0.060	0.0081	0.025			0.162						100
NCS HC 14215	Silicon Steel	0.0032	0.477	0.256	0.080	0.0076			0.033						100

		Als	N	Ti	Ca
NCS HC 14201a	Low Alloy Steel	0.061			
NCS HC 14213	Silicon Steel	0.031	0.0081		
NCS HC 14214	Silicon Steel	0.0014	0.0040		
NCS HC 14215	Silicon Steel	0.022	0.0020		

Section 1 Iron, Steel & Alloy(Chip)
3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 15216	ML15MnVB	0.166	0.162	1.33	0.014	0.022	0.027	0.040	0.017	0.029	0.110			0.003	100
NCS HC 15217	Bearing Steel	1.005	0.584	0.905	0.009	0.005	0.032	0.033			0.245			0.301	100

		B	Bi
NCS HC 15216	ML15MnVB		0.0011

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Alt	Als	Bt	Bs	Al	N			(in g)
NCS HC 15218	Low carbon Silicon Steel	0.0045	1.54	0.247	0.010	0.0054	0.050	0.048	0.0026	0.0018					100
NCS HC 15219	Low carbon Silicon Steel	0.0070	1.54	0.227	0.0098	0.0065	0.025	0.023	0.0026	0.009					100
NCS HC 15220	Silicon Steel	0.094	0.83	0.51	0.163	0.0059					0.046				100
NCS HC 15221	Silicon Steel	0.083	1.26	0.45	0.194	0.005					0.066				100
NCS HC 15222	Silicon Steel	0.073	1.55	0.39	0.259	0.0053					0.156				100
NCS HC 15223	Silicon Steel	0.081	1.79	0.36	0.251	0.0042					0.101				100
NCS HC 15224	Silicon Steel	0.089	2.26	0.28	0.212	0.0048					0.130	0.0083			100
NCS HC 15227	Silicon Steel	0.074	2.86	0.24	0.0156	0.0045					0.021				100
NCS HC 15228	Silicon Steel	0.060	3.21	0.20	0.0146	0.0049					0.236				100
NCS HC 15229	Silicon Steel	0.063	2.96	0.192	0.0124	0.0035					0.045	0.0118			100
NCS HC 15230	Silicon Steel	0.053	3.47	0.205	0.0131	0.0021					0.164	0.0107			100
NCS HC 15231	Silicon Steel	0.038	3.66	0.154	0.0135	0.0027					0.158				100
NCS HC 15232	Silicon Steel	0.044	3.97	0.148	0.0146	0.0029					0.0163				100
NCS HC 15233	Silicon Steel	0.041	4.18	0.084	0.0110	0.0033					0.124				100
NCS HC 15234	Silicon Steel	0.0385	5.21	0.072	0.0090	0.0047					0.057				100
NCS HC 15235	Silicon Steel	0.059	4.72	0.087	0.0085	0.0053					0.055				100
NCS HC 15236	Silicon Steel	0.038	5.22	0.070	0.0092	0.0050					0.056				100
NCS HC 15237	F08	0.395	1.50	2.57	0.0143	0.0043					0.048				100

		Ni	Cu	V	Ti	W	Mo	Cr
NCS HC 15237	F08	0.029	0.062	0.142	0.041	0.29	0.486	0.017

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W	Mo	B	(in g)
NCS HC 16201	25SiMnMoV	0.25	0.195	2.20	0.0192	0.019	0.236	0.25	0.097	0.105			0.37		150
NCS HC 16202	35SiMn_2MoV	0.332	1.626	1.691	0.0182	0.0127	0.24	0.242	0.388	0.174			0.381		150
NCS HC 16204	37SiMn_2WV	0.374	0.717	1.651	0.0233	0.056	0.24	0.257	0.192	0.085		0.925	0.447		150
NCS HC 16205	30MnMoTiB	0.30	0.443	1.442	0.0207	0.015	0.305	0.316			0.0625			0.0014	150
NCS HC 16206	40MnWB	0.411	0.277	1.154	0.0213	0.013	0.137	0.171				0.611		0.0044	150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Tl	W	Mo	B	(in g)
NCS HC 16207	15SiMn_3Mo	0.121	1.160	3.320	0.0242	0.0490	0.215	0.201	0.210				0.560		150
NCS HC 16208	30Mn_2MoV	0.310	0.300	1.970	0.0174	0.024	0.283	0.300	0.239			0.740	0.460		150
NCS HC 16209	12CrMoV	0.106	0.320	0.701	0.0268	0.034	0.542	0.045	0.029	0.269			0.322		150
NCS HC 16210	20SiMnV	0.192	0.636	1.52	0.0207	0.021	0.255	0.202		0.110					150
NCS HC 16211	25Cr_2Mo2V	0.254	0.303	0.753	0.0209	0.012	2.34	0.035	0.029	0.422			1.02		150
NCS HC 16212	30Mn_2MoTi	0.301	0.309	1.56	0.0182	0.013	0.188	0.175			0.052		0.361		150
NCS HC 16213	40MnVB	0.425	0.364	1.22	0.0158	0.0020	0.072	0.035	0.034	0.106				(0.0002)	150

Section 1 Iron, Steel & Alloy(Chip)
3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 17201	SiMnB	0.0332	1.50	0.230	0.0128	0.022	0.473	0.078	0.320	0.066	0.050	0.247			100
NCS HC 17203	SiMnB	0.283	1.09	0.438	0.0220	0.023	0.300	0.224	0.247		0.144	0.171			100
NCS HC 17204	SiMnB	0.392	0.626	1.08	0.0285	0.019	0.174	0.241	0.030		0.023	0.116			100
NCS HC 17208	Low Alloy Steel	0.082	0.694	0.952	0.0155	0.057	0.371	1.80	0.034					0.569	100
NCS HC 17211	Low Alloy Steel	0.510	0.148	0.151	0.0283	0.007	1.70	0.522	0.27					0.445	100
NCS HC 17212	Low Alloy Steel	0.290	0.579	0.770	0.0143	0.012	1.28	0.858	1.06					0.298	100
NCS HC 17213	Low Alloy Steel	0.75	0.232	1.428	0.0128	0.0068	0.88	0.984			0.238	0.432			100
NCS HC 17214	Low Alloy Steel	0.619	0.303	0.884	0.0134	0.0148	0.935	1.492			0.430	0.643			100
NCS HC 17215	Low Alloy Steel	0.553	0.420	0.646	0.0137	0.0059	0.978	2.482			0.699	0.927			100
NCS HC 17216	Low Alloy Steel	0.156	0.557	0.481	0.0238	0.0092	1.652	3.47			0.114	1.455			100
NCS HC 17217	Low Alloy Steel	0.055	0.808	0.477	0.031	0.0069	1.21	4.58			0.065	2.34			100
NCS HC 17218	Low Alloy Steel	0.296	0.213	1.193	0.0117	0.002	0.702	0.431	0.42					1.05	100
NCS HC 17219	Low Alloy Steel	0.672	0.216	0.382	0.0172	0.0261	0.074	0.053	0.063					0.081	100
NCS HC 17224	18CrMnTi	0.184	0.351	0.981	0.0074	0.035	1.14	0.085	0.190						150
NCS HC 17225	45CrNi	0.476	0.273	0.675	0.0204	0.016	0.62	1.24	0.203						150
NCS HC 17226	5CrMnMo	0.558	0.507	1.47	0.0235	0.032	0.74	0.246	0.161					0.245	150
NCS HC 17227	12CrMoV	0.103	0.256	0.502	0.0204	0.024	0.51	0.176	0.184		0.25			0.298	150
NCS HC 17229	$37SiMn_2WV$	0.399	0.684	1.79	0.0251	0.0258	0.283	0.27	0.182					0.476	150
NCS HC 17232	5CrWSi	0.503	0.592	0.376	0.0212	0.015	1.14	0.140	0.028						150
NCS HC 17234	Low Alloy Steel	0.15	1.065	0.91	0.0044	0.045	1.035	0.906	0.277	0.035		0.40			150

		Nb	Zr	B	RE	Al_t	Bt
NCS HC 17201	SiMnB			0.0016		0.069	0.0067
NCS HC 17203	SiMnB			0.0041		0.132	0.0045
NCS HC 17204	SiMnB			0.0037		0.086	0.0042
NCS HC 17214	Low Alloy Steel	0.262	0.049		0.0222		
NCS HC 17215	Low Alloy Steel	0.469	0.088		0.037		
NCS HC 17216	Low Alloy Steel	0.735	0.132		0.0376		
NCS HC 17217	Low Alloy Steel	1.143	0.121		0.043		
NCS HC 17224	Low Alloy Steel			0.0069			

Section 1 Iron, Steel & Alloy(Chip)
3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Al_t	Al_s	Bt	(in g)
NCS HC 17201a	Low Alloy Steel	0.087	1.41	0.234	0.0067	0.049	0.653	0.480	0.371	0.536	0.046	0.392	0.386	0.0054	100
NCS HC 17202a	Low Alloy Steel	0.180	0.241	1.30	0.016	0.023	0.428	0.167	0.304	0.172	0.179	0.125	0.121	0.0021	100
NCS HC 17203a	Low Alloy Steel	0.337	1.06	0.449	0.031	0.067	0.267	0.111	0.251	0.147	0.248	0.193	0.188	0.0057	100
NCS HC 17204a	Low Alloy Steel	0.396	0.195	0.887	0.026	0.015	0.215	0.262	0.116	0.101	0.058	0.049	0.048	0.0040	100

		Bs
NCS HC 17201a	Low Alloy Steel	0.0044
NCS HC 17202a	Low Alloy Steel	0.0018
NCS HC 17203a	Low Alloy Steel	0.0047
NCS HC 17204a	Low Alloy Steel	0.0032

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Nb	B	(in g)
NCS HC 18208	42CrMo	0.413	0.260	0.542	0.025	0.025	0.933	0.319	0.199				0.233		150
NCS HC 18209	ZG35CrMo	0.321	0.406	0.514	0.035	0.0029	0.933	0.376	0.180				0.324		150
NCS HC 18210	40Cr	0.41	0.26	0.54	0.025	0.025	0.93	0.32	0.20						100
NCS HC 18211	$60Si_2Mn$	0.592	1.84	0.735	0.016	0.022			0.037						100
NCS HC 18212	20CrMnTi	0.219	0.417	1.02	0.016	0.015	1.14					0.060			100
NCS HC 18213	20CrMo	0.220	0.217	0.473	0.016	0.020	1.00						0.231		100
NCS HC 18214	Low Alloy Steel	0.355	0.273	0.57	0.01	0.033	0.93	0.057	0.075			0.154			100
NCS HC 18215	Low Alloy Steel	0.152	0.305	1.26	0.012	0.023	0.121	0.034	0.077						100

		Sn	As	Pb	Al_t	Al_s	Zn
NCS HC 18214	Low Alloy Steel		0.011	0.57	0.035	0.029	
NCS HC 18215	Low Alloy Steel		0.018				

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Co	B	(in g)
NCS HC 19201	20Cr	0.175	0.285	0.610	0.0203	0.020	0.81							100
NCS HC 19202	40Cr	0.435	0.274	0.698	0.0139	0.010	0.97							100
NCS HC 19204	Axle Steel	0.444	0.280	0.680	0.010	0.030	0.013	0.025	0.037	0.011		0.036		100
NCS HC 19205	09V	0.093	0.486	0.87	0.010	0.036	0.016	0.039	0.110	0.085				100
NCS HC 19206	38CrMoAl	0.402	0.364	0.430	0.0154	0.009	1.51				0.198			100
NCS HC 19207	27MnMoVB	0.306	0.232	1.33	0.0195	0.014				0.125	0.388		(0.0014)	100
NCS HC 19208	18CrMnTi	0.192	0.299	0.975	0.0104	0.010	1.22							100

Section 1 Iron, Steel & Alloy(Chip)
3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 20201	20Cr	0.209	0.298	0.609	0.015	0.014	0.808	0.093	0.089		0.0032			0.0088	100
NCS HC 20202	40Cr	0.409	0.376	0.742	0.015	0.011	1.053	0.063	0.086		0.0023			0.0088	100
NCS HC 20203	20Cr	0.21	0.30	0.61	0.015	0.014	0.81	0.094	0.090						100
NCS HC 20204	$20Mn_2$	0.201	0.313	1.63	0.022	0.018	0.300	0.265	0.169	0.021	0.0025	0.0033	0.0081	0.043	100
NCS HC 20207	15CrMnMoV	0.137	0.102	1.03	0.014	0.012	1.36	0.035	0.080	0.031	0.272	0.0045	0.032	0.910	100
NCS HC 20208	35SiMn	0.374	1.15	1.26	0.019	0.011	0.113	0.034	0.085						100
NCS HC 20210	Silicon Steel	0.057	3.36	0.225	0.0072	0.019	0.259	0.316	0.314					0.0036	100
NCS HC 20214	15MnCrNiCu	0.123	0.314	0.674	0.022	0.024	0.782	0.387	0.254	0.011	0.0032	0.0026	0.0052	0.027	100
NCS HC 20215	40CrNiMoA	0.385	0.271	0.667	0.013	0.020	0.781	1.54	0.150	0.011	0.0062	0.0038	0.0066	0.215	100

		Co
NCS HC 20204	$20Mn_2$	0.019
NCS HC 20207	15CrMnMoV	0.010
NCS HC 20214	15MnCrNiCu	0.011
NCS HC 20215	40CrNiMoA	0.011

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 21201	GCr15	1.090	0.431	0.433	0.0112	(0.0005)	1.442	0.134	0.158	0.0363		0.0074		0.060	100
NCS HC 21201b	Bearing Steel	0.990	0.239	0.315	0.0065	0.0054	1.47	0.042	0.086					0.032	100
NCS HC 21202	$GCr_{15}SiMn$	1.006	0.550	1.063		0.0065	1.506	0.046	0.126	0.042		0.0072		0.011	100
NCS HC 21203	GCr15	1.01	0.305	0.37	0.012	(0.0004)	1.55	0.046	0.081						100
NCS HC 21204	GCr15	1.019	0.151	0.338	0.020	(0.019)	1.539		0.086						100
NCS HC 21205	GCr15	0.953	0.193	0.282	0.0276	0.012	1.634		0.233						100
NCS HC 21206	$GCr_{15}SiMn$	0.98	0.404	0.99	0.023	0.005	1.38								100
NCS HC 21207	$60Si_2Mn$	0.501	2.15	0.600	0.0149	0.0174	0.362	0.276	0.195	0.065	0.043		0.77	0.160	100
NCS HC 21208	$60Si_2Mn$	0.400	2.91	0.437	0.0064	0.0029	0.159	0.064	0.064	0.113			1.18	0.012	100
NCS HC 21209	$60Si_2Mn$	0.599	1.69	1.14	0.0209	0.0291	1.13	0.124	0.095	0.018	0.084		0.025	0.091	100
NCS HC 21210	$60Si_2Mn$	0.706	1.10	0.857	0.0256	0.0374	0.760	0.393	0.3.03	0.158	0.168		0.176	0.273	100
NCS HC 21211	$60Si_2Mn$	0.666	1.74	0.752	0.0144	0.0190	0.071	0.018	0.147	0.132	0.129		0.40	0.051	100
NCS HC 21212	$H08Mo_2SiA$	0.087	0.827	1.90	0.0107	0.0156	0.035	0.061	0.091						100
NCS HC 21215	$35MoVAlTiR_E$	0.37	0.42	1.15	0.013	<0.001	0.030	0.061	0.13	0.52				1.05	100
NCS HC 21218	CrMnV+Mo	0.09	0.775	9.88	0.0464	0.012	18.80	4.97	0.0.396		0.024			3.10	100
NCS HC 21220	CrMnV	0.09	0.82	13.56	0.100	0.026	15.89	7.114	0.080		0.027				100
NCS HC 21221	20MnSi	0.218		1.28	0.020	0.025	0.239	0.094	0.136		0.094	0.028		0.061	100

		B	Sn	As	Sb	N	Ce
NCS HC 21201	GCr15		0.0273	0.023	0.025		
NCS HC 21201b	Bearin Steel		0.020	0.0092			
NCS HC 21202	$GCr_{15}SiMn$	0.0031	0.0107	0.0110	0.022		
NCS HC 21204	GCr15		0.049				
NCS HC 21205	GCr15		0.038	0.0334			
NCS HC 21206	$GCr_{15}SiMn$			0.022			
NCS HC 21210	$60Si_2Mn$	0.0012					
NCS HC 21211	$60Si_2Mn$	0.0013					
NCS HC 21218	CrMnV+Mo					0.097	
NCS HC 21220	CrMnN					0.29	

Section 1 Iron, Steel & Alloy(Chip)
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Number	Name	Chemical Composition(Percent)													Unit Size
		C	Mn	P	S	Si	Ni	Cr	Cu	Mo	W	Als	Alt	Sn	(in g)
NCS HC 21222	65Mn	0.649	1.02	0.012	0.0062	0.279	0.040	0.048	0.147	0.0069	0.0019	0.0051	0.0061	0.014	100

Number	Name	Chemical Composition(Percent)												Unit Size
		C	S	P	Si	Mn	Cr	Ni	Cu	Nb	Re	Al(s)	N	(in g)
NCS HC 22201	Alloy structure steel	0.073	0.0053	0.0253	0.438	0.675	0.090	0.096	0.089	0.044	0.048	0.093	0.013	100
NCS HC 22203	Alloy structure steel	0.124	0.0045	0.0125	0.674	0.821	0.127	0.055	0.094	0.122	0.098	0.177		100

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 23205	12CrNi$_3$	0.124	0.183	0.527	0.021	0.021	0.740	2.82	0.195	0.052			0.202	0.141	100
NCS HC 23206	30CrMnSi	0.289	1.15	0.930	0.014	0.023	0.943	0.162	0.152	0.089			0.216	0.150	100
NCS HC 23208	45CrV	0.41	0.364	0.67	0.0184	0.0165	0.96	0.139	0.095						150
NCS HC 23209	38CrMoAl	0.360	0.310	0.490	0.0310	0.0140	1.540	0.410	0.185	1.13				0.270	150
NCS HC 23210	38CrMoAl	0.39	0.335	0.425	0.0246	0.011	1.44	0.238	0.275	0.93				0.17	150
NCS HC 23211	PCrNi$_4$Mo	0.367	0.375	0.56	0.018	0.027	0.957	3.95						0.43	150
NCS HC 23214	30CrMnMoTi	0.328	0.326	0.770	0.0205	0.021	1.160	0.058	0.060					0.270	150
NCS HC 23215	6^{5}Si$_2$M^{n}W	0.691	1.836	0.813	0.019	0.0223	0.227	0.273	0.038				1.03		150
NCS HC 23217	45CrNiMoY	0.43	0.337	0.635	0.027	0.016	0.994	1.64	0.206		0.15			0.28	150
NCS HC 23218	35MnWMoVB	0.33	0.40	1.02	0.032	0.024	0.18	0.26	0.17		0.25		0.50	0.137	150
NCS HC 23220	12CrNiA	0.144	0.24	0.49	0.0247	0.011	0.82	2.41	0.11						150
NCS HC 23221	38CrA	0.375	0.345	0.69	0.026	0.0315	1.00	0.26	0.16	0.17					150
NCS HC 23222	45CrNiWV	0.467	0.47	0.687	0.022	0.0248	1.03	1.515			0.146		0.693		150
NCS HC 23223	30CrMnSiNi$_2$	0.30	1.07	0.885	0.0197	0.0186	1.03	1.56	0.161	0.080			0.195	0.126	100

		Co	Nb	Zr	B	N	RE
NCS HC 23218	35MnWMoVB			0.0034			

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	W	Mo	(in g)
NCS HC 24202	70Si$_2$CrA	0.673	1.58	0.504	0.018	0.012	0.29	0.040	0.073				100

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Mo	B	Bt	(in g)
NCS HC 28201	20Cr	0.197	0.252	0.738	0.0195	0.015	0.785	0.026	0.029						150
NCS HC 28202	40Cr	0.44	0.335	0.665	0.014	0.0055	0.998	0.053	0.741						150
NCS HC 28204	35CrMo	0.390	0.304	0.558	0.029	0.0054	0.948	0.070	0.096			0.137			100
NCS HC 28205	45Mn$_2$	0.422	0.298	1.63	0.015	0.017	0.012	0.021	0.014						100

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3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	Sn	Als	(in g)
NCS HC 28206	Bearing Steel	0.993	0.205	0.284	0.011	0.0073	1.53	0.056	0.168	0.0026	0.0015	0.011	0.010	0.012	100
NCS HC 28207	Bearing Steel	1.08	0.232	0.284	0.019	0.0097	1.36	0.051	0.180	0.0030	0.0003	0.0007	0.0093	0.0029	100
NCS HC 28208	Alloy structure Steel	0.203	0.221	0.502	0.020	0.018	0.907	0.050	0.181	0.0010	0.0024	0.194		0.012	100
NCS HC 28209	Alloy structure Steel	0.202	0.225	1.02	0.017	0.011	1.21	0.047	0.141	0.0014	0.0053	0.236		0.020	100
NCS HC 28210	Alloy structure Steel	0.224	0.288	0.764	0.026	0.0083	6.21	0.452	0.175	0.0020	0.0018	0.254		0.0051	100
NCS HC 28211	Alloy structure Steel	0.265	0.312	0.934	0.013	0.014	1.13	0.082	0.148	0.070		0.011		0.018	100
NCS HC 28212	Alloy structure Steel	0.506	0.304	0.664	0.014	0.022	1.04	0.109	0.208	0.0021		0.016		0.002	100
NCS HC 28213	Anchor Chain Steel	0.202	0.271	1.19	0.015	0.014	0.082	0.128	0.223	0.024	0.0016	0.017		0.040	100
NCS HC 28214	Anchor Chain Steel	0.312	0.292	1.35	0.023	0.017	0.069	0.117	0.243	0.023	0.0022	0.010		0.040	100
NCS HC 28215	Structural Steel	0.104	0.308	0.476	0.093	0.024	0.016	0.011	0.295	(0.004)				0.0015	100
NCS HC 28216	Carbon Steel	0.162	0.21	0.373	0.019	0.015	0.129	0.137	0.091	0.0005	0.0047	0.024	0.0046	0.0018	100
NCS HC 28217	Alloy Steel	0.345	0.318	0.424	0.022	0.011	1.58	0.099	0.116	0.0036	0.0053	0.171	0.0047	0.807	100
NCS HC 28218	Alloy Steel	0.21	0.385	1.295	0.013	0.0208	0.169	0.099	0.101	0.0009	0.161	0.015	0.0054	0.054	100
NCS HC 28219	Alloy Steel	0.118	0.237	0.257	0.023	0.023	0.147	0.154	0.354	0.109	0.013	0.02	0.0048	0.101	100
NCS HC 28220	Alloy Steel	0.397	1	0.701	0.013	0.012	1.91	1.29	0.091	0.081	1.2	0.446	0.0057	0.01	100
NCS HC 28221	Alloy Steel	0.249	0.464	0.444	0.016	0.021	1.64	1.73	0.097	0.043	0.583	0.426	0.021	0.0042	100
NCS HC 28223	Line Steel	0.055	0.29	1.81	0.011	0.0024	0.283	0.201	0.205	0.022		0.116		0.026	100
NCS HC 28224	Line Steel	0.058	0.202	1.41	0.0072	0.0063	0.049	0.012	0.013	0.016		0.0014		0.026	100
NCS HC 28225	Line Steel	0.083	0.194	0.559	0.01	0.007	0.024	0.009	0.02	0.003		0.002		0.021	100
NCS HC 28226	Line Steel	0.086	0.246	1.2	0.011	0.006	0.022	0.008	0.015	0.01		0.0012		0.015	100
NCS HC 28227	Line Steel	0.105	0.325	1.31	0.0087	0.0041	0.023	0.0089	0.016	0.02		0.0013		0.022	100
NCS HC 28228	Line Steel	0.108	0.279	1.23	0.013	0.006	0.026	0.0061	0.01	0.01		0.001		0.022	100

		Ali	Co	As	V	Nb	R_E	Sb	Alt	B	Zn	Ca	N
NCS HC 28206	Bearing Steel	0.0013	0.013	0.0099									
NCS HC 28207	Bearin Steel	0.0021	0.013	0.0097									
NCS HC 28208	Alloy Stucture Steel	0.0022	0.013		0.0025								
NCS HC 28209	Alloy Stucture Steel	0.0020	0.013		0.0035								
NCS HC 28210	Alloy Stucture Steel	0.0036	0.013		0.0033								
NCS HC 28211	Alloy Stucture Steel	0.0019	0.012		0.0038								
NCS HC 28212	Alloy Stucture Steel	0.0029	0.014		0.154								
NCS HC 28213	Anchor Chain Steel	0.0019	0.011		0.0013								
NCS HC 28214	Anchor Chain Steel	0.0021	0.013		0.0013								
NCS HC 28215	Structural Steel		0.0057		0.0034	<0.001	0.0022						
NCS HC 28216	Carbon Steel		0.0071	0.0068	0.0011			0.0019	0.0029	0.0002	0.0004		
NCS HC 28217	Carbon Steel		0.0092	0.0061	0.0034			0.002	0.824	0.0003	0.02		
NCS HC 28218	Carbon Steel		0.0064	0.0056	0.011			0.0019	0.061	0.0003	0.0006		
NCS HC 28219	Carbon Steel		0.0093	0.0067	0.0023			0.0023	0.106	0.0003	0.0023		
NCS HC 28220	Carbon Steel		0.021	0.0064	0.377			0.002	0.012	0.0013	0.0014		
NCS HC 28221	Carbon Steel		0.024	0.0087	0.218			0.0056	0.0087	0.0003	0.0014		
NCS HC 28223	Line Steel			0.004	0.0043	0.103			0.027			0.0009	0.0053
NCS HC 28224	Line Steel			0.0032	0.042	0.05			0.028			0.0012	0.004
NCS HC 28225	Line Steel			0.0034	0.0009	0.011			0.023			0.0017	0.0053
NCS HC 28226	Line Steel			0.0043	0.0014	0.022			0.016			0.0035	0.0059
NCS HC 28227	Line Steel			0.0033	0.038	0.035			0.023			0.002	0.0067
NCS HC 28228	Line Steel			0.0044	0.0012	0.023			0.023			0.0013	0.0074

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 29215	Bearing Steel	0.992	0.396	0.291	0.031	0.030	0.362	0.067	0.019	0.009		0.0086	0.090	0.010	150
NCS HC 29216	Bearing Steel	0.909	0.168	1.01	0.0202	0.0051	1.00	0.066	0.046	0.188		0.011	0.013	0.013	150

		B	Sn	As	Sb	Pb	Bt
NCS HC 29215	Bearing Steel		0.018	0.0078	0.0013	0.0005	
NCS HC 29216	Bearing Steel		0.0057	0.013	0.0020	0.0011	

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Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W				(in g)
NCS HC 30201	40Cr	0.42	0.325	0.614	0.0206	0.0123	0.96		0.222						150
NCS HC 30202	$60Si_2Ni_2$	0.613	1.71	0.628	0.0213	0.009	0.239	1.54	0.218						150
NCS HC 30204	$60Si_2MnW$	0.638	1.502	0.834	0.0124	0.0258	0.132	0.0525	0.16		0.928				150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Sn	(in g)
NCS HC 31202	30CrMoSiA	0.313	1.245	0.952	0.0147	0.010	1.05								100

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 41202	GCr_{15}	0.982	0.301	0.282	0.014	0.0061	1.52	0.42	0.064	Ali0.040	0.002	0.0073	0.0049	0.010	150
NCS HC 41203	GCr_{15} SiMn	1.01	0.529	1.11	0.0135	0.005	1.50				0.005				150
NCS HC 41204	Silicon Steel	0.054	2.33	0.183	0.017	0.0325				0.008	Ali0.005				150
NCS HC 41205	Silicon Steel	0.049	3.27	0.245	0.012	0.005				0.024	Ali0.006				150
NCS HC 41206	Silicon Steel	0.050	4.38	0.091	0.0095	0.002				0.028	Ali0.002				150
NCS HC 41207	20Cr	0.244	0.304	0.668	0.0155	0.010	0.881				0.002				100
NCS HC 41208	40Cr	0.443	0.282	0.795	0.0265	0.0105	1.004				0.003				100
NCS HC 41209	45CrV	0.425	0.277	0.667	0.024	0.0090	0.973	0.083	0.146		0.175				150
NCS HC 41210	45CrNiMoV	0.446	0.239	0.680	0.018	0.014	1.00	1.56	0.057		0.150		0.013	0.286	150
NCS HC 41211	40CrMo	0.398	0.303	0.612	0.0225	0.012	1.11	0.139	0.162		0.006		0.016	0.229	150
NCS HC 41212	38SiMnMo	0.411	1.33	1.31	0.0205	0.010								0.254	150
NCS HC 41213	$W4Cr_2MoVSiAl$	0.473	0.970	0.167	0.018	0.0051	1.47				1.05		3.85	1.29	150
NCS HC 41214	$18Cr_2ni_4W$	1.45	0.311	0.402	0.100	0.0060	1.45	4.32			0.0028		0.85		150
NCS HC 41215	20MnMo	0.205	0.317	1.37	0.021	0.0079	0.137		0.129	0.028	0.002	Ali0.0017	0.016	0.295	150
NCS HC 41216	25CrMoV	0.235	0.246	0.703	0.0072	0.0016	1.07		0.027	0.0011	0.294	Ali0.0029	0.0074	1.03	150
NCS HC 41217	$26Cr_2Ni_4MoV$	0.237	0.011	0.240	0.0062	0.0062	1.62	3.87	0.038	0.0005	0.092	Ali0.0003	0.002	0.367	150
NCS HC 41218	$5CrW_2Si$	0.489	0.633	0.263	0.017	0.0032	1.09	0.058	0.082		0.001		2.21	0.051	150
NCS HC 41219b	35CrMo	0.368	0.288	0.534	0.014	0.0085	0.934	0.051	0.164					0.156	100
NCS HC 41220	20CrMoA	0.188	0.272	0.538	0.0165	0.0063	0.931	0.130	0.086	0.011	0.002	Ali0.0049		0.202	150
NCS HC 41221	25CrMoNiSiA	0.309	1.08	1.14	0.0145	0.0060	1.13	1.62	0.087		0.004				150
NCS HC 41222	40CrNiMoA	0.447	0.329	0.693	0.0155	0.0145	0.741	1.31	0.197	0.008	0.003	Ali0.005		0.179	150
NCS HC 41223	20MnV	0.184	0.306	1.44	0.025	0.0154	0.035	0.026	0.079		0.108				150
NCS HC 41224	$60Si_2Mn$	0.603	1.76	0.710	0.019	0.011					(0.003)				150
NCS HC 41226	5CrMnMo	0.559	0.420	1.44	0.014	0.0080	0.743	0.035	0.090	0.005	0.0055	0.0033		0.237	150
NCS HC 41227	9CrSi	0.858	1.31	0.427	0.012	0.0071	0.976	0.032	0.067	0.014	0.003	0.0070		0.0077	150
NCS HC 41228	CrWMn	1.00	0.238	0.925	0.0190	0.0036	1.08	0.049	0.074		0.003		1.40		150
NCS HC 41229	35CrMoV	0.347	0.263	0.520	0.205	0.0062	1.14	0.059	0.070	Ali0.009	0.145	0.0017	0.033	0.259	100

		Co	Nb	Sn	As	Sb	Pb	N
NCS HC 41202	GCr_{15}	0.11		0.011	0.006	0.0013		
NCS HC 41215	20MnMo	0.0090		0.018	0.0090	0.0030	0.00056	0.0092
NCS HC 41216	25CrMoV	0.0053		0.0029	0.0041	0.00097	0.00006	0.0065
NCS HC 41217	$26Cr_2Ni_4Mov$	0.006		0.0066	0.0038	0.0019	0.00003	0.0048
NCS HC 41220	20CrMoA				0.0077			
NCS HC 41222	40CrNiMoA				0.010			
NCS HC 41226	5CrMnMo	0.0083		0.0081	0.010	0.0022		0.0067
NCS HC 41227	9CrSi	0.0070		0.011	0.0085	0.0020		0.0062
NCS HC 41228	CrWMn	0.010		0.010	0.010			
NCS HC 41229	35CrMoV	0.012		0.0030	0.013	0.0012		0.012

Number	Name	Chemical Composition(Percent)								Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	(in g)
NCS HC 37201	40Cr	0.414	0.220	0.638	0.026	0.026	0.969	0.038	0.135	100
NCS HC 37202	20Cr	0.233	0.356	0.683	0.023	0.017	0.907	0.084	0.124	100
NCS HC 37203	50Cr	0.527	0.312	0.599	0.018	0.027	0.833	0.046	0.126	100

Section 1 Iron, Steel & Alloy(Chip)
4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 11301	$Cr_{18}Mn_{10}Ni_5Mo_3$	0.059	0.94	10.03	0.018	0.003	17.82	5.72						2.92	100
NCS HC 11302	$4Cr_3Si_4$	0.46	4.01	0.52	0.035	0.010	3.08	0.40							100
NCS HC 11303	$Cr_{20}Al_5Co_2$	0.08	0.70	0.48	0.019		20.09	0.51		5.35					100
NCS HC 11304	$Cr_{24}AlSi$	0.11	1.34	1.08	0.020		23.27	0.13		2.08					100
NCS HC 11307	$Cr_{13}Ni_5Mn_9$	0.19	0.69	9.94	0.099	0.009	12.49	4.86	0.031						100
NCS HC 11307a	$Cr_{13}Ni_5Mn_9$	0.17	0.47	8.14	0.043	0.021	12.07	5.02	0.031		0.022				100
NCS HC 11308	$Cr_{13}Al_4$	0.11	1.43	0.61	0.018		13.54	0.10	0.019	4.05					100
NCS HC 11309	$Cr_{17}Al_4Si$	0.09	1.95	0.55	0.019		17.32	0.13	0.019	3.34					100
NCS HC 11310	$Cr_{25}Al_5$	0.094	1.86	0.51	0.020		26.96	0.20	0.019	3.54					100
NCS HC 11311	$Cr_{20}Ni_{11}Mn_6$	0.19	0.71	6.52	0.022		19.32	11.18	0.044						100
NCS HC 11312	$Cr_{18}Ni_{14}Mo_3Ti$	0.28	0.56	1.73	0.018	0.004	17.13	14.21				0.369		3.38	100
NCS HC 11313	Cr_{12}	2.03	0.306	0.268	0.021	0.012	12.34	0.102	0.100						100
NCS HC 11314	$1Cr_{18}Ni_9Ti$	0.093	0.841	1.42	0.030	0.0049	17.61	9.77	0.098		0.041	0.320			100
NCS HC 11315b	High Manganese Steel	1.14	0.666	12.34	0.059	0.0031	0.176	0.093	0.164		0.074			0.022	100
NCS HC 11316	High Manganese Steel	1.11	0.683	13.95	0.044	0.0070	0.295	0.189	0.073		0.074				100
NCS HC 11317	$Cr_{18}Ni_{11}Nb$	0.10	1.06	1.61	0.024	0.042	17.31	11.25	0.22						100
NCS HC 11318	$3Cr_{13}$	0.31	0.57	0.35	0.057	0.008	13.27	0.11							100
NCS HC 11319	$4Cr_9Si_2$	0.327	2.36	0.896	0.018	0.0084	9.11	0.129	0.068						100
NCS HC 11320	$Cr_{24}Ni_7SiN$	0.26	1.29	1.21	0.018	0.0085	24.45							0.007	100
NCS HC 11321	Cr_7Al_7	0.12	1.02	0.47	0.011		7.68			7.99					100
NCS HC 11321a	Cr_7Al_7	0.15	0.66	0.73	0.037	0.037	7.09	0.52		7.06					100
NCS HC 11322	Stainless Steel	0.084	0.788	1.62	0.029	0.0021	25.53	20.72	0.179	0.0018	0.046	0.0027	0.343	0.305	100
NCS HC 11324	Stainless Steel	0.060	0.762	1.14	0.021	0.0047	17.07	12.10	0.073	0.086	0.037	0.321	0.096	2.93	100
NCS HC 11325	Stainless Steel	0.315	2.00	2.42	0.004	0.006	28.30	23.99	0.651	0.006	0.510	0.050	0.003	0.495	100
NCS HC 11326	Stainless Steel	0.094	0.165	0.722	0.038	0.015	24.01	4.33	0.060	1.78	0.038	0.140	0.105	1.05	100
NCS HC 11327	Stainless Steel	0.052	0.515	0.851	0.014	0.016	19.98	7.43	0.820	0.549	0.140	0.398	0.301	0.110	100
NCS HC 11330	Stainless Steel	0.205	1.39	1.95	0.010	0.050	11.61	20.10	3.12	0.045	0.215	0.580	0.093	3.25	100

		Co	Nb	N	Sn	As	Pb	Alt
NCS HC 11301	$Cr_{18}Mn_{10}Ni_5Mo_3$			0.022				
NCS HC 11303	$Cr_{20}Al_5Co_2$	2.02						
NCS HC 11307a	$Cr_{13}Ni_5Mn_9$	0.027						
NCS HC 11315b	High Manganese Steel	0.021						0.038
NCS HC 11317	$Cr_{18}Ni_{11}Nb$	0.019	0.84					
NCS HC 11320	$Cr_{24}Ni_7SiN$			0.261				
NCS HC 11322	Stainless Steel	0.140						
NCS HC 11324	Stainless Steel	0.081						
NCS HC 11325	Stainless Steel	0.006	0.053	0.19	0.001	0.001	0.001	
NCS HC 11326	Stainless Steel	0.492	2.28	0.009	0.03	0.009	0.001	
NCS HC 11327	Stainless Steel	0.200	0.520	0.11	0.02	0.020	0.001	
NCS HC 11330	Stainless Steel	0.070	1.33	0.013	0.01	0.004	0.001	

Section 1 Iron, Steel & Alloy(Chip)
4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S									
NCS HC 13302	High Manganese Steel	1.28	0.48	12.68	0.063	0.017									150

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Mo	N	Co	
NCS HC 15302	$0Cr_{13}$	0.057	0.344	0.362	0.048	0.008	15.66	0.293	0.028	0.238	0.0065	0.085			100
NCS HC 15307	$2Cr_{13}$	0.181	0.424	0.482	0.0194	0.012	12.45	0.142	0.020	0.103	0.0068				100
NCS HC 15308	$1Cr_{18}Ni_9Ti$	0.053	0.630	0.971	0.0214	0.006	17.35	10.13		0.15	0.69				100
NCS HC 15309	$Cr_{23}Ni_{13}$	0.100	0.667	1.24	0.0151	0.007	22.11	14.60							100
NCS HC 15310	Stainless Steel	0.023	0.659	1.16	0.030	0.0019	17.35	11.13	0.314			2.12	0.046	0.104	100
NCS HC 15311	alloy steel	0.838	1.05	8.00	0.038	0.020	20.50	0.821	0.145		0.275	1.98	0.026		100
NCS HC 15312	alloy steel	0.170	0.684	16.13	0.020	0.0047	8.74	3.47	1.17		0.405	3.15	0.020		100
NCS HC 15313	alloy steel	0.443	0.481	1.77	0.020	0.019	29.22	1.23	0.065		0.545	0.185	0.023		100
NCS HC 15314	alloy steel	0.028	0.034	0.100	0.0066	0.0065	11.53	15.01	2.03		0.0024	0.511	0.025		100
NCS HC 15315	alloy steel	0.116	0.675	1.14	0.030	0.095	22.93	7.03	0.209		0.117	0.151	0.065		100

Number	Name	Nb	Ca	B	Sn	As	Pb	Alt	Als	Bi
NCS HC 15310	Stainless Steel							0.0039	0.0034	
NCS HC 15311	alloy steel	0.205	0.00054	0.0019	0.0011	0.0116	0.0019	0.190	0.187	0.0029
NCS HC 15312	alloy steel	0.613	0.0010	0.011	0.023	0.0043	0.0020	0.040	0.038	0.0014
NCS HC 15313	alloy steel	0.024	0.0003	0.0015	0.0058	0.0050	0.0003	0.403	0.401	0.0013
NCS HC 15314	alloy steel	0.037	0.0002	0.0004	0.058	0.0015	0.0058	0.0066	0.0051	0.0004
NCS HC 15315	alloy steel	0.062	0.0004	0.0008	0.0070	0.0035	0.0020	0.021	0.019	0.0016

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Ni	Cr	Cu	Mo	V	N	Co	As	
NCS HC18301	$M_2Al(W_6Mo_5Cr_4V_2Al)$	1.05	0.44	0.3	0.023	0.0014	0.18	4.31	0.17	5.1	1.87		0.28		100
NCS HC18302	$4Cr_4Mn_{18}$	0.42	0.48	17.1	0.016	0.042	0.06	4.03	0.1					0.014	100
NCS HC18303	$2Cr_{13}$	0.189	0.452	0.348	0.021	0.0034	0.132	12.58	0.079					0.014	100
NCS HC18304	214N	0.533	0.222	9.34	0.025	0.0059	3.92	21.14	0.159	0.057	0.066	0.42	0.08		100
NCS HC18305	318	0.254	1.31	0.547	0.023	0.0027	6.6	16.95	0.095	2.13	0.077	0.144	0.044		100
NCS HC18306	$0Cr_{17}$	0.027	0.617	0.408	0.031	0.0056	0.415	16.51	0.072					0.008	100
NCS HC18307	$4Cr_9Si_2$	0.466	2.08	0.612	0.036	0.026	0.543	8.64	0.112	0.055	0.033			0.017	100
NCS HC18308	$4Cr_{10}Si_2Mo$	0.355	2.56	0.425	0.035	0.023	0.346	10.53	0.128	0.798	0.051			0.017	100
NCS HC18309	$3Cr_2W_8V$	0.4	0.25	0.25	0.017	0.016	0.46	2.72	0.05						100
NCS HC18310	$H13(4Cr_5MoSiV_1)$	0.34	1.17	0.4	0.017	0.01	0.15	5.3	0.08	1.18	1.04			0.029	100

Number	Name	W	Al
NCS HC18301	$M_2Al(W_6Mo_5Cr_4V_2Al)$	6.18	0.96
NCS HC18309	$3Cr_2W_8V$	8.14	
NCS HC18310	$H13(4Cr_5MoSiV_1)$		0.06

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Mn	Si	P	S	Ni	Cr	Cu	Mo	Ti	Co	Al	V	
NCS HC 41313	Stainless steel	0.085	1.63	1.29	0.025	0.016	9.95	16.98	0.940	2.74	0.418	0.300	0.585	0.036	100
NCS HC 41314	Stainless steel	0.037	0.615	1.10	0.017	0.0040	4.04	15.67	2.97	0.983	0.147	0.105	0.111	0.021	100
NCS HC 41315	Stainless steel	0.122	0.927	1.85	0.031	0.022	19.27	24.56	0.293	0.396	0.077	0.194	0.514	0.057	100
NCS HC 41316	Stainless steel	0.023	0.860	0.390	0.032	0.00086	8.22	18.35	0.617	0.209	0.0060	0.128		0.066	100
NCS HC 41317	Stainless steel	0.053	1.03	0.571	0.032	0.00071	9.19	17.17	0.383	0.154	0.309	0.132		0.059	100
NCS HC 41318	Stainless steel	0.023	1.25	0.421	0.030	0.0013	4.85	22.26	0.136	3.11	0.0014	0.047		0.038	100

Number	Name	N	Nb	Sn	W	As
NCS HC 41313	Stainless steel	0.029		(0.0034)	(0.017)	(0.0042)
NCS HC 41314	Stainless steel	0.042	0.437	(0.0018)	(0.0014)	(0.0032)
NCS HC 41315	Stainless steel	0.072		(0.0057)	(0.010)	(0.0035)
NCS HC 41316	Stainless steel		0.011	0.022	0.024	0.0061
NCS HC 41317	Stainless steel		0.0095	0.013	0.018	0.0047
NCS HC 41318	Stainless steel	0.175	0.014	0.0032	0.011	0.0085

Section 1 Iron, Steel & Alloy(Chip)
4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 20301	$1Cr_{21}$	0.090	0.375	0.573	0.021	0.0077	12.94	0.102	0.051	0.0037	0.022	0.0015	0.0019	0.0088	100
NCS HC 20302	$H00Cr_{21}Ni_{10}$	0.029	0.520	1.71	0.031	0.014	20.49	9.72	0.134	0.0035	0.034	0.0036	0.011	0.158	100
NCS HC 20306	$0Cr_4Ni_{22}$	0.032	0.238	0.578	0.013	0.0036	4.04	22.43	0.030	0.0024	0.0047	0.0018	0.001	0.0019	100
NCS HC 20307	$1Cr_{11}Ni_5Mn_5Mo_3Al$	0.069	0.470	4.76	0.031	0.011	11.54	4.54	0.121	0.63	0.020	0.010	0.023	3.09	100
NCS HC 20311	$1Cr_{18}Ni_9Ti$	0.079	0.878	1.42	0.028	0.0095	17.92	8.83	0.113	0.125	0.062	0.561	0.014	0.172	100
NCS HC 20312	$YoCr_{18}Ni_9MoS_1$	0.071	0.619	1.60	0.031	0.061	17.66	8.48	0.222	0.0043	0.033		0.022	0.502	100
NCS HC 20313	$Ni_{25}Cr_{18}Mo_2Cu_2$	0.082	0.465	0.526	0.027	0.0050	17.37	26.44	1.71	0.0099	0.023		0.031	2.63	100

		Co	Sn	As	N
NCS HC 20301	$1Cr_{13}$	0.021	0.0056	0.0091	
NCS HC 20302	$H00Cr_{21}Ni_{10}$	0.369	0.0060	0.0088	
NCS HC 20306	$0Cr_4Ni_{22}$	0.011	0.0022	0.0026	0.011
NCS HC 20307	$1Cr_{11}Ni_5Mn_5Mo_3Al$	0.044	0.015	0.0093	0.040
NCS HC 20311	$1Cr_{18}Ni_9Ti$	0.086	0.010	0.0071	
NCS HC 20312	$YoCr_{18}Ni_9MoS_1$	0.176	0.012	0.0073	
NCS HC 20313	$Ni_{25}Cr_{18}Mo_2Cu_2$	0.097	0.0070	0.0052	

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 21301	$1Cr_{17}Ni_2Ti$	0.126	0.560	0.563	0.0126	0.017	16.66	1.95	0.107						100
NCS HC 21302	$R00Cr_{18}Mo_2Ca$	0.019	0.845	0.286	0.0284	0.0141	17.45	0.235	0.082		0.027			2.11	100
NCS HC 21305	Cr_{12}	2.223	0.171	0.146	0.0226	0.0094	12.18	0.095	0.041		0.030		0.028	0.0067	100
NCS HC 21306	$2Cr_{13}$	0.200	0.177	0.501	0.0238	0.0160	12.49	0.256	0.009		0.0167		0.016	0.0219	100

		Co	Sn	As	Pb	N	Ca
NCS HC 21302	$R00Cr_{18}Mo_2Ca$						0.0048

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Mn	P	S	Si	Ni	Cr	Cu	Mo	W	Als	Alt	As	(in g)
NCS HC 21309	Shape Memory Alloy	0.026	15.95	0.027	0.0008	5.21	6.69	12.04	0.086	0.257	0.099	0.047			100

		Co	Ti	V	Sn	Nb
NCS HC 21309	Shape Memory Alloy	0.031	0.015	0.035	0.0064	0.108

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 23301	$18Cr_2Ni_4W$	0.171	0.273	0.486	0.0215	0.0188	1.726	4.22					0.994		150
NCS HC 23302	$17Mn_{25}Al$	0.14	0.51	25.08	0.030	0.029				5.04					150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 24312	$Cr_{14}Mo_4VRE$	1.067	0.254	0.098	0.014	0.0036	14.83				1.35			4.06	100

		Co	Nb	Fe	R_E
NCS HC 24312	$Cr_{14}Mo_4VRE$				0.041

Section 1 Iron, Steel & Alloy(Chip)
4)Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	Sn	Als	V	(in g)
NCS HC 28302	Stainless steel	0.049	0.583	0.876	0.024	0.0057	17.23	9.47	0.063	0.0034	0.042	0.0036	0.033	0.042	100
NCS HC 28303	Stainless steel	0.196	0.776	0.324	0.017	0.0043	12.24	0.086	0.012	0.022	0.0034			0.024	100
NCS HC 28304	Die Steel	0.407	1.06	0.315	0.015	0.013	5.08	0.037	0.017	(0.0038)	1.20		0.0056	0.946	100
NCS HC 28305	Stainless steel	0.322	0.613	0.83	0.018	0.017	8.63	0.148	0.47	0.004	0.016	0.0037	0.023	0.014	100
NCS HC 28306	Stainless steel	0.329	0.397	0.433	0.018	0.027	11.95	2.66	0.08	0.0031	0.026	0.0049	0.0019	0.016	100
NCS HC 28307	Stainless Steel	0.193	0.905	0.49	0.022	0.01	19.4	6.48	0.079	0.0052	0.021	0.0028	0.034	0.029	100
NCS HC 28308	Heat resisting alloy	0.392	2.41	0.508	0.019	0.022	10.09	0.247	0.093	0.0065	1.09	0.0047	0.0031	0.015	100
NCS HC 28309	Heat resisting alloy	0.54	0.433	0.321	0.016	0.014	14.75	13.68	0.079	1.88	0.466	0.0052	0.035	0.024	100
NCS HC 28310	Heat resisting alloy	0.157	0.827	0.8	0.021	0.023	13.31	13.9	0.03	2.75	0.24	0.004	0.067	0.02	100
NCS HC 28311	Heat resisting alloy	0.182	0.865	0.37	0.019	0.025	17.3	1.33	0.074	0.0032	0.023	0.004	0.0025	0.021	100
NCS HC 28312	Heat resisting alloy	0.178	0.542	2.37	0.023	0.0084	22.71	16.2	0.058	0.0034	0.0071	0.0023	0.045	0.031	100

		Co	As	Ti	Alis	Alt	B	Zn	Sb
NCS HC 28302	Stainless steel	0.041	0.0041	0.233					
NCS HC 28303	Stainless steel	0.018	0.0022	0.0011					
NCS HC 28304	Die Steel	0.011	(0.0021)	0.0049	0.0040	0.0096			
NCS HC 28305	Stainless steel	0.019	0.0054	0.076		0.027	0.0002	0.0034	0.0018
NCS HC 28306	Stainless steel	0.057	0.0049	0.029		0.0073		0.0018	0.0016
NCS HC 28307	Stainless Steel	0.095	0.0046	0.206		0.037		0.0016	0.0015
NCS HC 28308	Heat resisting alloy	0.019	0.0054	0.0032		0.0057		0.0009	0.0021
NCS HC 28309	Heat resisting alloy	0.035	0.009	0.0011		0.038	0.0003	0.0018	0.0016
NCS HC 28310	Heat resisting alloy	0.147	0.0041	0.0011		0.074	0.0004	0.005	0.0004
NCS HC 28311	Heat resisting alloy	0.051	0.0051	0.0011		0.0061		0.002	0.0016
NCS HC 28312	Heat resisting alloy	0.186	0.0038	0.051		0.053		0.0036	0.0006

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Al(t)	Co	(in g)
NCS HC 28313	Stainless Steel	0.039	0.425	1.07	0.037	0.016	18.31	8.19	0.399	0.027	0.106	0.002*		0.208	50
NCS HC 28314	Stainless Steel	0.021	0.414	0.94	0.034	0.0028	18.21	8.11	0.043	0.025	0.089	0.006		0.216	50
NCS HC 28315	Stainless Steel	0.11	0.78	0.841	0.024	0.0082	23.71	18.02	0.089	0.115	0.077	0.003*	0.0056	0.102	50
NCS HC 28316	Stainless Steel	0.067	0.435	1.1	0.028	0.021	16.8	10.39	0.166	2.01	0.048	0.006*	0.012	0.063	50
NCS HC 28317	Stainless Steel	0.018	0.317	1.17	0.042	0.0057	16.61	10.34	0.334	2.05	0.07	0.002*		0.185	50
NCS HC 28318	Stainless Steel	0.134	0.505	0.456	0.027	0.0067	16.26	1.78	0.127	0.152	0.074	0.002		0.051	50
NCS HC 28319	Stainless Steel	0.046	0.643	0.742	0.027	0.013	15.88	3.85	3.24	0.259	0.075	0.002		0.115	50
NCS HC 28320	Stainless Steel	0.013	0.464	1.17	0.033	0.0021	19.67	24.23	1.49	4.47	0.086	0.002*	0.024	0.096	50

		Nb	Sn	Pb	As
NCS HC 28313	Stainless Steel		0.0051	0.0001*	0.0035
NCS HC 28314	Stainless Steel		0.0001*	0.0001*	0.0025
NCS HC 28315	Stainless Steel	0.016	0.0025	0.0004	0.0042
NCS HC 28316	Stainless Steel	0.027	0.0034	0.0005	0.0037
NCS HC 28317	Stainless Steel		0.0073	0.0001*	0.0055
NCS HC 28318	Stainless Steel		0.0058	0.0001*	0.0064
NCS HC 28319	Stainless Steel	0.232	0.0064	0.0002*	0.0048
NCS HC 28320	Stainless Steel	0.042	0.0043	0.0001*	0.0053

Section 1 Iron, Steel & Alloy(Chip)
4)Alloy Steel

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Al	Ti	Fe	Mo	Cu	V	(in g)
NCS HC 29322	Cr_{14}	0.077	1.487	13.49	0.074	0.0166	14.00	1.63							150
NCS HC 29323	Cr_{13} SiAl	0.153	1.086	0.646	0.029	0.029	12.46	0.510	0.702						150

Number	Name	Chemical Composition(Percent)								Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	(in g)
NCS HC 37301	High Manganese Steel	1.25	0.464	11.59	0.073	0.0056				20
NCS HC 37302b	High Manganese Steel	1.26	0.595	12.00	0.079	0.013				20
NCS HC 37303	Stainless Steel	0.032	0.78	1.45	0.026	0.019	16.14	10.30	2.28	100
NCS HC 37304	$0Cr_{18}Ni_9$	0.075	0.77	1.44	0.033	0.025	8.56			100
NCS HC 37305	$0Cr_{18}Ni_{10}Ti$	0.086	0.84	1.45	0.032	0.014	17.45			100
NCS HC 37306	$1Cr_{18}Ni_9Ti$	0.134	0.021	1.06	0.033	0.021	17.01			100
NCS HC 37307	$1Cr_{13}$	0.144	0.56	0.71	0.038	0.028	12.07			100
NCS HC 37308	$2Cr_{13}$	0.232	0.82	0.80	0.042	0.027	12.42			100

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 41301	$Ni_{80}Cr_{20}$	0.051	1.15	0.601	0.0015	0.0023	21.50	75.10	0.012	0.080		0.221			150
NCS HC 41303	$6Cr_4W_2Mo_2$	0.600	0.980	0.968	0.023	0.0079	4.45		0.084		0.938		2.14	2.44	150
NCS HC 41307c	$1Cr_{18}Ni_9Ti$	0.050	0.512	0.803	0.029	0.0050	18.56	9.86	0.179		0.057	0.473	0.057	0.151	100
NCS HC 41308	Cr_{12}	2.20	0.258	0.312	0.22	0.0105	12.62	0.109	0.088		0.054			0.094	150
NCS HC 41309	$2Cr_{13}$	0.334	0.519	0.211	0.025	0.0073	12.79	0.126	0.048		0.039			0.016	150
NCS HC 41310	CrNi	0.050	0.449	1.25	0.025	0.021	18.55	9.55	0.109		0.033			0.107	150

		Co	Sn	As	Sb	N	Fe	Alt	Als
NCS HC 41301	$Ni_{80}Cr_{20}$						1.23		
NCS HC 41307c	$1Cr_{18}Ni_9Ti$	0.052	0.017	0.0067		0.015		0.083	0.084

Section 1 Iron, Steel & Alloy(Chip)
5)Tool Steel

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo			(in g)
NCS HC 11401	$W_{18}Cr_4V$	0.71	0.33	0.33	0.024	0.006	4.10			1.44	16.13	0.14			150
NCS HC 11401a	$W_{18}Cr_4V$	0.87	0.23	0.24	0.044	0.004	3.72			1.19	19.16	0.28			150
NCS HC 11402	$W_6Mo_5Cr_4V_2$	0.72	0.10	0.28	0.027	0.007	3.90			2.09	6.77	4.88			150
NCS HC 11403	$Cr_{12}W$	2.00	0.297	0.294	0.049	0.0053	11.71	0.113			0.96				150
NCS HC 11403a	$Cr_{12}W$	1.96	0.18	0.31	0.048	0.088	11.99	0.12	0.061		0.97				150
NCS HC 11404	5CrNiMo	0.52	0.16	0.56	0.020	0.005	0.57	1.55				0.20			150
NCS HC 11405	W_2	1.14	0.274	0.287	0.014	0.0046	0.183	0.073	0.040		2.31				150
NCS HC 11405a	W_2	1.25	0.16	0.38	0.035		0.14	0.18			2.27				150
NCS HC 11406	6SiMnW	0.65	1.23	0.65	0.017	0.016	0.026				1.42				150
NCS HC 11406a	6SiMnW	0.64	0.97	0.75	0.011	0.009		0.23	0.032		1.44				150
NCS HC 11407	$3W_4Cr_2V$	0.34	0.30	0.11	0.013	0.009	2.44	0.087	0.034	0.65	3.61				150
NCS HC 11408	9V	1.07	0.18	0.44	0.044	0.006		0.24		0.41					150
NCS HC 11409	SiMnV	1.42	0.64	0.74	0.052	0.033		0.27		0.31					150
NCS HC 11410	$9Mn_2V$	0.84	0.23	2.02	0.051	0.006	0.10	0.034		0.16					150
NCS HC 11411	$5CrW_2Si$	0.50	0.60	0.40	0.030	0.031	1.15	0.14	0.048		2.30				150
NCS HC 11412	T_7	0.66	0.27	0.66	0.030	0.019	0.31	0.24	0.023						150
NCS HC 11412a	T_7	0.70	0.26	0.79	0.035	0.028	0.005	0.019	0.024						150
NCS HC 11412b	T_7	0.72	0.34	0.18	0.013	0.003		0.013	0.024						150
NCS HC 11413	T_8	0.79	0.25	0.28	0.029	0.007									150
NCS HC 11413a	T_8	0.82	0.30	0.78	0.021	0.015									150
NCS HC 11414	T_{10}	1.05	0.33	0.41	0.011	0.009	0.63	0.021	0.022	0.23					150
NCS HC 11415	T_{11}	1.15	0.24	0.34	0.019	0.005	0.050	0.039	0.023						150
NCS HC 11416	T_{12}	1.20	0.21	0.19	0.012	0.009	0.044	0.030	0.095						150

Number	Name	Chemical Composition(Percent)					Unit Size
		C	Si	Mn	P	S	(in g)
NCS HC 13401	T_8A	0.81	0.18	0.23	0.013	0.0065	150
NCS HC 13402	$T_{13}A$	1.26	0.25	0.28	0.018	0.0105	150
NCS HC 13403	$T_{11}A$	1.155	0.46	1.14	0.043	0.038	150
NCS HC 13404	$T_{12}A$	1.18	0.32	0.70	0.010	0.0065	150

Number	Name	Chemical Composition(Percent)						Unit Size
		C	Si	Mn	P	S	Cu	(in g)
NCS HC 14401	T_8	0.785	0.563	0.614	0.0115	0.029	0.064	150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co	(in g)
NCS HC 17401	$W_{18}Cr_4V$	0.762	0.241	0.280	0.0241	0.026	4.03	0.040	0.038		1.30	18.16	0.245		100
NCS HC 17402	$W_6Mo_5Cr_4V_2$	0.855	0.232	0.275	0.0261	0.011	4.08	0.046	0.041		2.02	5.99	4.84		100
NCS HC 17403	$3Cr_2W_8V$	0.359	0.170	0.298	0.0211	0.021	2.48	0.0208	0.030		0.27	8.39	0.055		100
NCS HC 17405	High Speed Steel	0.941	0.521	0.441	0.023	0.028	1.99	0.095			0.18	19.22	0.122		100
NCS HC 17406	High Speed Steel	0.78	0.230	0.427	0.024	0.020	3.64	0.134			0.44	18.72	0.176		100
NCS HC 17407	High Speed Steel	0.710	0.183	0.268	0.029	0.0064	4.29	0.187			1.05	17.64	0.266		100
NCS HC 17408	High Speed Steel	0.577	0.383	0.233	0.015	0.0043	2.70	0.231			0.81	16.24	0.330		100
NCS HC 17409	High Speed Steel	0.493	0.493	0.343	0.304	0.0048	4.78	0.278			1.49	14.96	0.411		100
NCS HC 17414	High Speed Steel	0.332	1.16	2.719	0.0228	0.0177	4.43	0.862		1.955	1.083	9.22	6.16	2.989	100

		Nb
NCS HC 17414	High Speed Steel	0.497

Section 1 Iron, Steel & Alloy(Chip)
5)Tool Steel

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Sn	Co	(in g)
NCS HC 21401	High Speed Steel	0.828	0.226	0.283	0.028	0.0065	4.08	0.083	0.140	1.33	9.23	3.13	0.017	0.018	150
		Ti	Als												
		0.0044	0.013												

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	R_E		(in g)
NCS HC 23402	$Cr_4Mo_4VR_E$	0.85	0.39	0.35	0.034	0.014	4.07			0.99		4.38	0.035		150
NCS HC 23403	$W_9Mo_3Cr_4V$	0.81	0.322	0.349	0.028	0.012	3.91	0.076	0.137	1.49	8.84	2.92			150
NCS HC 23404	$W_9Mo_3Cr_4V$	0.823	0.303	0.303	0.027	0.017	3.99	0.100	0.138	1.44	9.17	2.92			100
NCS HC 23405	High-speed tool Steel	0.888	0.267	0.308	0.026	0.018	3.99	0.103	0.147	1.94	6.13	4.85			100

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 24403	High Speed Steel	0.731	0.207	0.286	0.22	0.22	2.96	0.156	0.249		0.44		15.99	0.42	100
NCS HC 24404	High Speed Steel	0.909	0.309	0.244	0.025	0.026	3.25	0.203	0.223		0.84		14.41	0.88	100
NCS HC 24405	High Speed Steel	0.821	0.443	0.307	0.025	0.024	3.54	0.383	0.211	0.059	1.23		11.71	1.57	100
NCS HC 24407	High Speed Steel	1.09	0.352	0.405	0.034	0.034	4.26	0.201	0.248		2.77		6.85	3.75	100
NCS HC 24408	High Speed Steel	0.996	0.648	0.293	0.026	0.026	5.19	0.224	0.203	0.128	4.51		1.80	6.52	100

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Ti	(in g)
NCS HC 28401	T_{10}	0.985	0.286	0.211	0.027	0.012	0.070	0.037	0.086						100
NCS HC 28402	High Speed Steel	0.847	0.190	0.296	0.023	0.012	3.99	0.096	0.122	1.93	6.14	5.06	0.023	0.0013	100
		Als													
NCS HC 28402	High Speed Steel	0.0020													

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 41401	T_8	0.822	0.223	0.267	0.008	0.0075	0.101	0.035	0.084		0.001				150
NCS HC 41403	T_9	0.890	0.209	0.252	0.021	0.0115									150
NCS HC 41404	$W_{18}Cr_4V$	0.740	0.165	0.178	0.025	0.0015	4.18				1.30		17.97		150
NCS HC 41406	$W_6Mo_5Cr_4V_2$	0.874	0.367	0.301	0.020	0.017	4.12	0.317	0.080		1.76		6.15	4.73	150

Section 1 Iron, Steel & Alloy(Chip)
6)Superalloy, Precious Alloy & Heat Resisting Alloy

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 11501	GH49	0.032					9.60			3.56	0.30	1.83	5.82	5.45	100
NCS HC 11502	GH43	0.035	0.52	0.46			16.98			1.40		2.54	2.78	4.74	100
NCS HC 11503	GH37	0.10	0.59	0.45	0.009	0.013	16.02			2.27	0.38	2.29	6.93	4.04	100
NCS HC 11505	GH143	0.19	0.08	0.92	0.0015	0.004	15.13			4.83		1.32		5.57	100
NCS HC 11506	GH130		0.04		0.004	0.0013	14.97	37.53		1.95		2.93	5.07		100
NCS HC 11507	GH140	0.10	0.35	0.55	0.016	0.011	23.15	38.16		0.42		0.94	1.72	2.27	100
NCS HC 11508	GH131	0.08	0.72	0.73	0.012	0.003	20.94	27.75					5.66	2.96	100
NCS HC 11509	GH135	0.062	0.48	0.43	0.009	0.017	14.94	34.25		2.58		2.42	1.96	1.94	100
NCS HC 11510	GH35-1	0.13	0.80	0.75	0.016	0.016	23.00	36.43		0.50		1.19	3.38		100
NCS HC 11511	GH35-2	0.10	0.62	0.61	0.013	0.029	21.00	35.95		0.44			2.66		100
NCS HC 11512	GH36	0.37	0.43	8.56	0.012	0.029	12.81	8.52			1.41	0.06		1.28	100
NCS HC 11513	GH39	0.031	0.056	0.30		0.004	18.94		0.009	0.25		0.60		1.90	100
NCS HC 11514	GH128	0.025	0.55	0.28		0.004	20.10			0.34			8.15	8.09	100
NCS HC 11515	K3	0.15	0.06			0.003	10.92			5.53		2.72	4.91	3.98	100
NCS HC 11516	K13	0.059	0.11	0.044	0.006	0.004	14.91	35.37		1.82		3.58			100
NCS HC 11517	4J29		0.077	0.35			0.21	28.91							100
NCS HC 11518	$Cr_{14}Ni_{14}W_2MoTi$	0.09	0.66	0.80	0.027		12.34	14.03	0.23			0.48	2.20	0.58	100
NCS HC 11519	Heat Resisting Steel	0.400	1.85	0.95	0.015	0.0041	25.58	34.86			0.041		0.93	0.348	100
NCS HC 11531	GH153	0.04	0.18	0.34	0.005	0.004	19.96			0.48		0.46	8.03	8.00	100

		Co	Nb	Zr	B	N	Fe	Ce
NCS HC 11501	GH49	14.87			0.028		(0.48)	0.0023
NCS HC 11502	GH43		1.01		0.030		(4.84)	
NCS HC 11503	GH37				0.025		(4.09)	
NCS HC 11505	GH143	19.73			0.017		(1.07)	
NCS HC 11506	GH130				0.018			
NCS HC 11508	GH131		1.03		0.0015	0.11		
NCS HC 11509	GH135				0.017			
NCS HC 11510	GH35-1							0.014
NCS HC 11511	GH35-2		1.43					0.013
NCS HC 11512	GH36		0.44					
NCS HC 11513	GH39		0.82				(0.42)	
NCS HC 11514	GH128			0.032	0.007		(1.94)	0.007
NCS HC 11515	K3	5.41		0.096	0.034		(0.22)	0.015
NCS HC 11516	K13				0.100			
NCS HC 11517	4J29	17.17						
NCS HC 11531	GH153			0.12	0.002		1.12	0.005

Number	Name	Chemical Composition(Percent)															Unit Size
		C	Si	Mn	P	S	Cr	Fe	Mo	B	Al_3	Nb	Zr	Ti	Pb	Bi	(in g)
NCS HC 11530	Nickel Base Super Alloy	0.120	0.249	0.276	0.0077	0.0046	12.81	0.454	4.53	0.011	6.14	2.15	0.094	0.850	0.00023	(0.00006)	50

Number	Name	Chemical Composition(μg/g)													Unit Size
		Ag	As	Bi	Ca	Cd	In	Mg	Pb	Sb	So	Sn	Te	Ti	(in g)
NCS HC 11520	Superalloy Trace Elements	3.5	17	4.2	42	7.0	11	82	12	204	43	103	3.0	8.5	150
NCS HC 11521	Superalloy Trace Elements	4.6	11	0.4	21	4.6	2.6	16	4.1	95	16	53	11	22	150
NCS HC 11522	Superalloy Trace Elements	5.3	15	0.4	11	1.8	30	15	11	59	11	72	2.1	51	150
NCS HC 11523	Superalloy Trace Elements	0.3	72	0.5	32	1.9	0.4	53	2.2	7.4	43	1040	0.5	83	150
NCS HC 11524	Superalloy Trace Elements	0.7	72	3.4	5.3	1.6	9.2	111	91	6.2	53	92	83	8.1	150

		Zn	Ga
NCS HC 11520	Superalloy Trace Elements	24	29
NCS HC 11521	Superalloy Trace Elements	32	32
NCS HC 11522	Superalloy Trace Elements	105	108
NCS HC 11523	Superalloy Trace Elements	20	28
NCS HC 11524	Superalloy Trace Elements	6.0	63

Section 1 Iron, Steel & Alloy(Chip)
6)Superalloy, Precious Alloy & Heat Resisting Alloy

Number	Name	Chemical Composition(μg/g)													Unit Size
		Ag	As	B	Bi	Cd	Ce	Ci	Hf	Ga	Ge	In	P	Pb	(in g)
NCS HC 11525	Trace elements in superalloy	0.78	6.7	90	0.14	0.31	0.38	571	3.5	31	13	0.88	41	3.4	100
NCS HC 11526	Trace elements in superalloy	1.0	14	47	0.19	<0.02	1.8	363	7.4	34	24	7.2	36	3.7	100
NCS HC 11527	Trace elements in superalloy	2.5	96	25	1.2	<0.02	0.45	172	3.8	38	38	2.6	55	4.7	100
NCS HC 11528	Trace elements in superalloy	4.4	44	24	2.0	<0.02	0.028	94	33	52	75	31	131	8.2	100
NCS HC 11529	Trace elements in superalloy	5.4	25	13	1.8	<0.02	0.19	53	12	49	27	10	80	11	100

		Sb	Sc	Se	Sn	Te	Ti	Zn
NCS HC 11525	Trace elements in superalloy	1.4	1.3	9.8	3.2	28	0.13	12
NCS HC 11526	Trace elements in superalloy	3.3	2.7	12	8.3	31	0.16	13
NCS HC 11527	Trace elements in superalloy	16	1.2	4.1	18	7.5	4.3	14
NCS HC 11528	Trace elements in superalloy	49	1.2	2.5	45	2.3	3.9	15
NCS HC 11529	Trace elements in superalloy	33	0.6	2.2	43	1.3	1.1	13

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Ai	Ti	W	Mo	Co	(in g)
NCS HC 20503	4J29	0.0015	0.106	0.307	0.0019	0.0056	0.148	28.80	0.072		0.0040		4.13	17.77	100
NCS HC 20504	1J79	0.008	0.36	1.08	0.0009	0.0030									150
NCS HC 20505	2J64	0.73	0.25	0.26	0.009	0.004		79.56	0.072				3.98		150

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 23505	GH130	0.038	0.19	0.28	0.08	0.05	14.28	37.83		1.88		2.89	5.87		100
NCS HC 23507	G263	0.06	0.26	0.47		0.0028	20.08		0.078	0.33		2.15			100
NCS HC 23511	F176	0.057	0.61	0.91	0.023	0.059	16.05	9.20	0.12				0.04	0.75	100

		Co	Nb	Zr	B	Sb	N	Ce	Se	Fe	In	Ga
NCS HC 23505	GH130				0.016				0.106			
NCS HC 23507	G263	20.58			0.0038					0.255		

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 24513	2J9	0.070	0.61	0.74	0.0038	0.0079		0.93			8.82				100
NCS HC 24520	4J47	0.016	0.13	0.27	0.0030	0.005	1.17	47.19							100

		Co	B	Fe
NCS HC 24513	2J9	52.08		

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	(in g)
NCS HC 57511	GH4169	0.019	0.084	0.0016*	0.0012	0.0056	18.59	52.36	0.0021	0.42	0.16	0.93	0.23	3.08	100

		Co	B	Nb	Zr
NCS HC 57511	GH4169	1.03	0.011	5.09	0.018

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Fe	Ti	Co	Mo	(in g)
NCS HC 41501	Nickel-based superalloy	0.043	0.071	0.124	0.0023	0.0006	20.69	63.72		0.016	3.50	0.011		8.37	100
NCS HC 41502	Nickel-based superalloy	0.027	0.080	0.057	0.0033	0.0005	18.56	52.27	0.023	0.635	18.54	1.03	0.111	3.28	100
NCS HC 41503	Corrosion-resisting alloy	0.071	0.36	0.807	0.015	0.0006	20.72	32.27	0.038	0.299		0.49	0.050	0.297	100

		Nb	Ta*	B	Co*	Ta**
NCS HC 41501	Nickel-based superalloy	3.19			0.011	0.001
NCS HC 41502	Nickel-based superalloy	5.15	0.008	0.0025		

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Zr	B	Sn	Sb	(mm)
NCS HS 11706-3	Silicon Steel	0.106	1.03	0.546	0.045	0.029	0.187	0.571	0.146	0.026	0.017	0.012	0.019	0.0012	ø38×30
NCS HS 11706-5	Silicon Steel	0.040	4.16	1.10	0.020	0.031	0.042	0.101	0.063	0.010	0.0035	0.0054	0.0055	0.022	ø38×30

		N	Als	Al_t
NCS HS 11706-3	Silicon Steel	(0.0058)	0.779	0.783
NCS HS 11706-5	Silicon Steel	0.0026	0.065	0.068

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	W	Alt	(mm)
NCS HS 11708a-1	Alloy structure steel	0.200	0.222	0.680	0.038	0.0084	2.97	3.53	0.355	0.210	0.189	0.161	0.429	0.016	ø38X30
NCS HS 11708a-2	Alloy structure steel	0.144	0.132	3.60	0.053	0.074	0.95	4.33	0.016	0.019	0.478	0.226	0.092	0.012	ø38X30
NCS HS 11708a-3	Alloy structure steel	0.288	0.290	0.89	0.035	0.027	2.27	1.29	0.136	0.556	0.346	0.296	0.804	0.100	ø38X30
NCS HS 11708a-4	Alloy structure steel	0.046	0.051	2.42	0.048	0.017	4.40	2.54	0.441	1.40	0.449	0.035	1.98	0.0067	ø38X30
NCS HS 11708a-5	Alloy structure steel	0.251	0.605	1.04	0.025	0.031	1.36	1.77	0.046	0.864	0.118	0.073	1.23	0.0098	ø38X30
NCS HS 11708a-6	Alloy structure steel	0.315	0.391	1.88	0.029	0.049	3.27	1.02	0.245	0.118	0.273	0.136	0.201	0.147	ø38X30
NCS HS 11708a-7	Alloy structure steel	0.505	1.10	0.325	0.0062	0.065	0.703	0.773	0.518	0.305	0.013	0.028	0.602	0.311	ø38X30
NCS HS 11708a-8	Alloy structure steel	0.425	0.830	0.553	0.017	0.0009	0.177	0.621	0.636	0.423	0.055	0.061	0.362	0.602	ø38X30

		As	Sn	Pb	B	Ce	N
NCS HS 11708a-1	Alloy structure steel	0.048	0.048	(0.0008)	0.0064	(0.0002)	0.014
NCS HS 11708a-2	Alloy structure steel	0.054	0.057	(0.0003)	0.0006		0.007
NCS HS 11708a-3	Alloy structure steel	0.021	0.017	0.0034	0.0029		0.0085
NCS HS 11708a-4	Alloy structure steel	0.032	0.036	0.0015	0.0016	(0.0001)	0.020
NCS HS 11708a-5	Alloy structure steel	0.093	0.011	0.0024	0.0055	(0.00009)	0.010
NCS HS 11708a-6	Alloy structure steel	0.056	0.027	(0.0002)	0.0096		0.015
NCS HS 11708a-7	Alloy structure steel	0.0067	0.0042	0.0019	0.025	(0.0001)	0.0027
NCS HS 11708a-8	Alloy structure steel	0.0086	0.0087	0.0013	0.019	0.045	0.0028

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	Co	Sn	(mm)
NCS HS 11709a-1	Stainless Steel	0.0035	1.13	0.343	0.065	0.049	28.00	4.76	0.202	0.053	0.032	0.040	0.012	0.051	ø38×30
NCS HS 11709a-2	Stainless Steel	0.139	0.555	1.06	0.022	0.013	14.37	14.58	0.133	0.475	0.577	0.305	0.166	0.015	ø38×30
NCS HS 11709a-3	Stainless Steel	0.183	0.352	0.981	0.015	0.0098	10.66	19.13	0.057	0.577	0.735	0.606	0.222	0.0089	ø38×30
NCS HS 11709a-4	Stainless Steel	0.060	0.971	0.704	0.035	0.032	19.73	11.24	0.258	0.253	0.198	0.169	0.078	0.033	ø38×30
NCS HS 11709a-5	Stainless Steel	0.224	0.154	1.92	0.0057	0.0045	7.65	22.77	0.014	0.774	0.432	0.809	0.131	0.0027	ø38×30
NCS HS 11709a-6	Stainless Steel	0.027	1.06	0.595	0.057	0.042	24.40	7.34	0.326	0.170	0.078	0.053	0.031	0.042	ø38×30
NCS HS 11709a-7	Stainless Steel	0.084	0.765	1.31	0.039	0.025	17.57	8.72	0.405	0.336	0.873	0.973	0.265	0.018	ø38×30

		As	Pb	Al_t
NCS HS 11709a-1	Stainless Steel	0.0027	0.0004	0.107
NCS HS11709a-2	Stainless Steel	0.021	0.00017	0.029
NCS HS 11709a-3	Stainless Steel	0.024	0.00013	0.019
NCS HS 11709a-4	Stainless Steel	0.011	0.00030	0.096
NCS HS 11709a-5	Stainless Steel	0.030	0.0003	0.015
NCS HS 11709a-6	Stainless Steel	0.0066	0.0002	0.174
NCS HS 11709a-7	Stainless Steel	0.016	0.00017	0.041

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Mg	Sn	N	(mm)
NCS HS 11712a-1	Nitrogen Cast Iron	1.75	3.40	0.080	0.580	0.119	2.48	0.030	0.025	0.031	0.021	0.0006	0.0031	0.015	ø28×30
NCS HS 11712a-2	Nitrogen Cast Iron	2.22	2.44	0.301	0.043	0.058	2.13	0.341	0.458	0.087	0.055	0.0085	0.044	0.024	ø28×30
NCS HS 11712a-3	Nitrogen Cast Iron	2.55	1.50	0.878	0.071	0.045	0.417	0.519	0.641	0.354	0.085	0.024	0.021	0.024	ø28×30
NCS HS 11712a-4	Nitrogen Cast Iron	3.16	1.96	0.462	0.396	0.017	1.40	0.778	0.921	0.428	0.166	0.025	0.024	0.0073	ø28×30
NCS HS 11712a-5	Nitrogen Cast Iron	3.52	1.17	0.311	0.420	0.019	0.766	1.03	0.389	0.629	0.324	0.021	0.013	0.0047	ø28×30
NCS HS 11712a-6	Nitrogen Cast Iron	4.02	0.163	1.41	0.021	0.026	0.112	1.89	1.83	0.726	0.509	0.104	0.057	0.013	ø28×30
NCS HS 11712a-7	Nitrogen Cast Iron	3.94	0.918	1.38	0.085	0.0048	1.05	1.37	1.10	0.168	0.309	0.056	0.134	0.0063	ø28×30

		Ti	Al	La	Ce
NCS HS 11712a-1	Nitrogen Cast Iron	0.038	0.248	<0.0001	<0.0001
NCS HS 11712a-2	Nitrogen Cast Iron	0.065	0.060	0.010	0.0010
NCS HS 11712a-3	Nitrogen Cast Iron	0.027	0.034	0.0061	0.027
NCS HS 11712a-4	Nitrogen Cast Iron	0.065	0.0073	<0.0001	<0.0001
NCS HS 11712a-5	Nitrogen Cast Iron	0.161		<0.0001	<0.0001
NCS HS 11712a-6	Nitrogen Cast Iron	0.238	0.019	<0.0001	<0.0001
NCS HS 11712a-7	Nitrogen Cast Iron	0.114	0.214	<0.0001	<0.0001

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	V	Co	Alt	(mm)
NCS HS 11714-2	Low alloy steel	0.076	0.966	0.095	0.027	0.010	1.89	0.988	0.216	2.07	1.09	0.241	0.161	0.858	ø38×30
NCS HS 11714-3	Low alloy steel	0.930	1.10	1.20	0.011	0.044	3.23	0.501	0.364	0.814	0.292	0.061	0.504	0.108	ø38×30

		Als	Zr	Tit	Tis	Nb	Bt	Bs	Pb	Sn	Sb	Bi	As	Ca	Ce
NCS HS 11714-2	Low alloy steel	0.858	0.045	0.259	0.256	0.206	0.011	0.010	0.0021	0.0016	0.0007	0.0014	0.0025	0.0016	<0.0001
NCS HS 11714-3	Low alloy steel	0.102	0.011	0.322	0.317	0.248	0.015	0.013	0.0023	0.011	0.0023	0.013	0.0070	(0.0005)	<0.0001

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Co	Als	Alt	(mm)
NCS HS 11715a-1	Stainless Steel	0.298	1.89	2.56	0.0069	0.0037	27.89	23.11	0.791	0.483	0.558	0.039	(0.004)	(0.006)	ø36x30
NCS HS 11715a-2	Stainless Steel	0.084	0.289	0.629	0.033	0.020	23.62	4.68	0.282	1.10	0.087	0.459	1.77	1.80	ø36x30
NCS HS 11715a-3	Stainless Steel	0.040	0.652	0.821	0.021	0.021	20.62	8.72	1.41	0.069	0.252	0.229	0.344	0.351	ø36x30
NCS HS 11715a-4	Stainless Steel	0.011	0.980	1.19	0.026	0.028	17.94	12.11	4.13	2.13	0.440	0.158	0.085	0.088	ø36x30
NCS HS 11715a-5	Stainless Steel	0.0052	0.112	0.221	0.051	0.037	15.39	15.02	0.458	0.281	0.106	0.212	1.21	1.22	ø36x30
NCS HS 11715a-6	Stainless Steel	0.213	1.50	1.91	0.019	0.044	11.14	19.01	3.05	2.93	0.319	0.075	0.034	0.037	ø36x30

		Ti	Nb	W	As	Sn	Pb	N
NCS HS 11715a-1	Stainless Steel	0.080	0.077	(0.0007)	0.0007	0.0005	(0.00005)	0.027
NCS HS 11715a-2	Stainless Steel	(0.280)	2.42	0.217	0.0095	0.023	(0.00009)	(0.064)
NCS HS 11715a-3	Stainless Steel	0.562	0.494	0.311	0.018	0.012	(0.0003)	0.019
NCS HS 11715a-4	Stainless Steel	0.170	1.04	0.544	0.0066	0.0029	(0.0004)	0.0091
NCS HS 11715a-5	Stainless Steel	(0.623)	0.173	0.709	0.016	0.014	0.0008	(0.020)
NCS HS 11715a-6	Stainless Steel	0.742	1.41	0.160	0.0058	0.018	(0.0002)	0.0058

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Nb	Alt	(mm)
NCS HS 11716a-1	High Chromium Cast Iron	1.8	2.72	0.687	0.106	0.046	32.6	0.272	0.314	0.217	0.081	0.201	0.12	0.075	ø33x21
NCS HS 11716a-2	High Chromium Cast Iron	1.99	1.12	1.19	0.051	0.015	10.97	0.319	1.34	0.15	0.04	0.716	0.272	0.051	ø33x21
NCS HS 11716a-3	High Chromium Cast Iron	3.35	1.42	1.25	0.056	0.046	25.83	0.662	0.877	0.447	0.188	0.461	0.068	0.141	ø33x21
NCS HS 11716a-4	High Chromium Cast Iron	2.63	0.572	2.09	0.021	0.05	14.64	1.49	1.64	0.086	0.086	3.51	0.261	0.139	ø33x21
NCS HS 11716a-5	High Chromium Cast Iron	2.27	0.713	1.4	0.186	0.046	18.28	2.16	0.884	0.607	0.028	2.42	0.437	0.044	ø33x21
NCS HS 11716a-6	High Chromium Cast Iron	3.02	1.72	1.76	0.249	0.093	23.76	0.811	0.617	0.479	0.114	1.29	0.128	0.18	ø33x21

		Co	W
NCS HS 11716a-1	High Chromium Cast Iron	0.037	0.29
NCS HS 11716a-2	High Chromium Cast Iron	0.018	0.352
NCS HS 11716a-3	High Chromium Cast Iron	0.357	0.519
NCS HS 11716a-4	High Chromium Cast Iron	0.124	0.025
NCS HS 11716a-5	High Chromium Cast Iron	0.031	0.071
NCS HS 11716a-6	High Chromium Cast Iron	0.206	0.18

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Co	Pb	(mm)
NCS HS 11718a-1	Alloy Cast Iron	1.84	3.52	1.52	0.036	0.060	0.815	0.740	0.085	0.071	0.107	0.082	0.0059	0.0008	ø32X20
NCS HS 11718a-2	Alloy Cast Iron	2.53	2.59	1.04	0.066	0.029	1.49	0.118	1.79	0.153	0.158	0.042	0.0062	0.0008	ø32X20
NCS HS 11718a-3	Alloy Cast Iron	3.70	2.04	0.520	0.270	0.039	0.211	0.288	0.767	0.600	0.059	0.140	0.0027	0.0010	ø32X20
NCS HS 11718a-4	Alloy Cast Iron	3.32	1.47	0.762	0.151	0.017	0.523	0.489	1.03	0.791	0.322	0.160	0.0037	0.0004	ø32X20
NCS HS 11718a-5	Alloy Cast Iron	2.88	1.01	0.331	0.703	0.172	1.98	1.53	0.407	0.301	0.066	0.033	0.011	0.0002	ø32X20
NCS HS 11718a-6	Alloy Cast Iron	4.03	0.570	0.103	0.042	0.019	0.058	1.20	1.26	1.18	0.579	0.057	0.020	0.0004	ø32X20

		As	Alt	W	Nb	Sb	B	Sn
NCS HS 11718a-1	Alloy Cast Iron	0.012	0.018	0.76	0.114	0.103	0.0078	0.098
NCS HS 11718a-2	Alloy Cast Iron	0.030	0.098	0.076	0.068	0.0041	0.012	0.034
NCS HS 11718a-3	Alloy Cast Iron	0.0080	0.113	0.025	0.250	0.084	0.043	0.143
NCS HS 11718a-4	Alloy Cast Iron	0.013	0.154	0.283	0.5114	0.084	0.071	0.0068
NCS HS 11718a-5	Alloy Cast Iron	0.016	0.058	0.494	0.045	0.025	0.026	0.069
NCS HS 11718a-6	Alloy Cast Iron	0.0053	0.172	0.103	0.092	0.198	0.072	0.051

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Al	V	Sb	(mm)
NCS HS 11722-1	Ductile Cast Iron	2.12	3.88	0.26	0.38	0.004	0.040	0.026	0.77	0.21	0.37	0.17	0.031	0.003	ø36X15
NCS HS 11722-2	Ductile Cast Iron	2.46	1.44	1.09	0.074	0.035	0.083	0.025	0.56	1.51	0.143	0.070	0.067	0.052	ø36X15
NCS HS 11722-3	Ductile Cast Iron	3.62	1.85	0.60	0.049	0.012	0.069	0.017	0.38	0.76	0.13	0.094	0.10	0.094	ø36X15
NCS HS 11722-4	Ductile Cast Iron	3.24	2.84	0.46	0.049	0.016	0.093	0.078	0.16	0.24	0.082	0.083	0.11	0.038	ø36X15
NCS HS 11722-5	Ductile Cast Iron	2.70	2.03	0.77	0.16	0.087	0.045	0.023	0.12	1.23	0.20	0.13	0.30	0.12	ø36X15
NCS HS 11722-6	Ductile Cast Iron	4.04	0.88	0.89	0.29	0.14	0.13	0.035	0.079	0.61	0.053	0.044	0.50	0.20	ø36X15

		Sn	Mg	La	Ce
NCS HS 11722-1	Ductile Cast Iron	0.30	0.07	0.06	0.20
NCS HS 11722-2	Ductile Cast Iron	0.24	0.041	0.018	0.062
NCS HS 11722-3	Ductile Cast Iron	0.18	0.060	0.045	0.11
NCS HS 11722-4	Ductile Cast Iron	0.090	0.033	0.002	0.004
NCS HS 11722-5	Ductile Cast Iron	0.065	0.004	(0.0005)	(0.003)
NCS HS 11722-6	Ductile Cast Iron	0.016	0.007	(0.0005)	(0.003)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	V	Co	Ti	(mm)
NCS HS 11719-1	Carbon steel	0.963	0.241	0.586	0.022	0.010	0.131	0.206	0.111			0.035			ø38×30
NCS HS 11719-2	Carbon steel	0.042	0.154	0.048	0.105	0.0053	0.247	0.432	0.411			0.207			ø38×30
NCS HS 11719-3	Carbon steel	0.435	0.163	1.14	0.045	0.020	0.086	0.114	0.160			0.099			ø38×30
NCS HS 11719-4	Carbon steel	0.140	0.526	1.30	0.084	0.020	0.198	0.344	0.276			0.153			ø38×30
NCS HS 11719-5	Carbon steel	1.19	0.751	2.20	0.011	0.013	0.439	0.164	0.046			0.0082			ø38×30
NCS HS 11719-6	Carbon steel	0.0060	0.014	0.163	0.0053	0.035	0.021	0.013	0.0032			0.363			ø38×30
NCS HS 11719-7	Carbon steel	0.0048	0.055	0.145	0.0076	0.069	0.061	0.048	0.018			0.362			ø38×30

		Als	Alt	Tis	Tit
NCS HS 11719-1	Carbon steel	0.017	0.019	0.015	0.016
NCS HS 11719-2	Carbon steel	0.292	0.296	0.154	0.161
NCS HS 11719-3	Carbon steel	0.016	0.019	0.023	0.024
NCS HS 11719-4	Carbon steel	0.155	0.160	0.128	0.132
NCS HS 11719-5	Carbon steel	0.034	0.036	0.028	0.029
NCS HS 11719-6	Carbon steel	0.0016	0.0021	0.0008	0.0010
NCS HS 11719-7	Carbon steel	0.0011	0.0014	0.0012	0.0014

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Co	Mo	V	B	Ti	(mm)
NCS HS 11720-1	High Manganese Alloy	1.96	0.348	22.96	0.188	0.0063	3.01	0.045	0.025	0.0094	0.0095	0.034	0.0021	0.0041	ø30×24
NCS HS 11720-2	High Manganese Alloy	1.61	0.652	10.66	0.052	0.054	0.467	0.328	0.221	0.010	0.118	0.132	0.0038	0.047	ø30×24
NCS HS 11720-3	High Manganese Alloy	1.16	1.16	16.75	0.077	0.055	0.257	0.152	0.143	0.091	0.589	0.53	0.0013	0.03	ø30×24
NCS HS 11720-4	High Manganese Alloy	1.06	1.47	15.04	0.044	0.059	1.45	1.66	0.089	0.0093	0.881	0.567	0.0023	0.013	ø30×24
NCS HS 11720-5	High Manganese Alloy	0.75	1.01	12.2	0.118	0.037	0.68	0.838	0.449	0.007	0.302	0.273	0.0009	0.018	ø30×24
NCS HS 11720-6	High Manganese Alloy	2.38	1.69	5.36	0.029	0.108	0.084	3.43	0.474	0.107	1.51	0.837	0.017	0.218	ø30×24

		N
NCS HS 11720-1	High Manganese Alloy	0.091
NCS HS 11720-2	High Manganese Alloy	0.054
NCS HS 11720-3	High Manganese Alloy	0.033
NCS HS 11720-4	High Manganese Alloy	0.072
NCS HS 11720-5	High Manganese Alloy	0.026
NCS HS 11720-6	High Manganese Alloy	0.016

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Co	Cu	Ti	V	Alt	(mm)
NCS HS 11721-1	Stainless Steel	0.583	1.1	1.47	0.033	0.032	8.55	1.98	1.86	0.289	0.321	0.463	0.329	0.248	ø38×30
NCS HS 11721-2	Stainless Steel	0.371	0.958	1.17	0.03	0.053	10.08	1.43	0.503	0.276	0.279	0.694	0.298	0.196	ø38×30
NCS HS 11721-3	Stainless Steel	0.189	0.76	0.882	0.019	0.021	2.09	0.638	0.734	0.213	0.217	0.369	0.189	0.091	ø38×30
NCS HS 11721-4	Stainless Steel	0.093	0.506	0.531	0.029	0.026	17.43	0.632	0.089	0.176	0.169	0.288	0.241	0.124	ø38×30
NCS HS 11721-5	Stainless Steel	0.052	0.584	0.675	0.022	0.027	21.49	1.01	0.263	0.126	0.12	0.141	0.142	0.026	ø38×30
NCS HS 11721-6	Stainless Steel	0.0021	0.301	0.366	0.011	0.014	26.29	0.37	1.03	0.074	0.072	0.092	0.099	0.0065	ø38×30
NCS HS 11721-7	Stainless Steel	0.0014	0.117	0.198	0.0064	0.0055	28.38	0.04	1.57	0.0085	0.0045	0.0053	0.016	0.0026	ø38×30

		As	Sn	Pb	N	Nb
NCS HS 11721-1	Stainless Steel	0.0027	0.0042	(0.0002)	0.0084	0.55
NCS HS 11721-2	Stainless Steel	0.0051	0.01	0.00037	0.0081	0.763
NCS HS 11721-3	Stainless Steel	0.017	0.039	0.0009	0.015	0.387
NCS HS 11721-4	Stainless Steel	0.022	0.034	(0.0002)	0.023	0.291
NCS HS 11721-5	Stainless Steel	0.013	0.026	0.0007	0.037	0.137
NCS HS 11721-6	Stainless Steel	0.024	0.017	0.0007	0.043	0.092
NCS HS 11721-7	Stainless Steel	0.036	0.051	0.0021	0.01	0.009

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Mo	W	V	B_1	B_2	(mm)
NCS HS 13704-1	12CrMoWVB	0.068	0.510	1.096	0.012	0.047	0.281	1.46	0.298	0.394	0.0012	0.0010	ø35×25
NCS HS 13704-2	12CrMoWVB	0.100	0.290	0.853	0.016	0.071	0.486	1.19	0.438	0.206	0.0021	0.0016	ø35×25
NCS HS 13704-3	12CrMoWVB	0.176	0.272	0.585	0.023	0.028	0.775	0.747	0.796	0.251	0.0038	0.0030	ø35×25
NCS HS 13704-4	12CrMoWVB	0.193	0.173	0.396	0.039	0.027	1.19	0.472	1.44	0.061	0.0068	0.0058	ø35×25
NCS HS 13704-5	12CrMoWVB	0.256	0.055	0.269	0.048	0.010	1.46	0.301	1.94	0.041	0.0090	0.0081	ø35×25

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Mo	W	V	B_t	B_s	Ni	Cu	(mm)
NCS HS 13705-1	Alloy Cast Iron	1.81	3.20	1.21	0.0233	0.011	3.08	0.627	0.207	0.507	0.0031	0.0023	4.67	0.680	ø30×30
NCS HS 13705-2	Alloy Cast Iron	2.46	2.59	1.72	0.472	0.0185	0.227	0.191	0.404	0.406	0.0065	0.0060	1.92	0.206	ø30×30
NCS HS 13705-3	Alloy Cast Iron	2.97	1.99	1.48	0.313	0.0224	0.485	0.380	0.303	0.308	0.015	0.012	2.44	0.432	ø30×30
NCS HS 13705-4	Alloy Cast Iron	3.21	1.44	0.142	1.57	0.121	1.47	0.0679	0.333	0.213	0.0310	0.0294	3.02	1.24	ø30×30
NCS HS 13705-5	Alloy Cast Iron	3.33	1.02	0.947	0.142	0.0556	1.12	0.751	0.169	0.156	0.059	0.051	0.971	0.753	ø30×30
NCS HS 13705-6	Alloy Cast Iron	3.65	0.551	0.480	0.0582	0.0732	1.96	1.37	0.111	0.0746	0.0846	0.0815	0.446	1.03	ø30×30
NCS HS 13705-7	Alloy Cast Iron	3.99	0.284	1.98	0.211	0.0375	0.208	2.20	0.447	0.0321	0.124	0.105	0.0713	0.0609	ø30×30

		Ti
NCS HS 13705-1	Alloy Cast Iron	0.268
NCS HS 13705-2	Alloy Cast Iron	0.354
NCS HS 13705-3	Alloy Cast Iron	0.462
NCS HS 13705-4	Alloy Cast Iron	0.156
NCS HS 13705-5	Alloy Cast Iron	0.104
NCS HS 13705-6	Alloy Cast Iron	0.116
NCS HS 13705-7	Alloy Cast Iron	0.0213

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Mo	Als	(mm)
NCS HS 15701-1	Cr-Stainless Steel	0.057	0.344	0.362	0.048	0.008	15.66	0.293	0.028	0.0062	0.085	0.238	ø32×30
NCS HS 15701-2	Cr-Stainless Steel	0.174	0.541	0.505	0.034	0.008	13.61	0.315	0.075	0.0065	0.171	0.181	ø32×30
NCS HS 15701-3	Cr-Stainless Steel	0.261	0.748	0.648	0.028	0.063	11.91	0.090	0.188	0.0064	0.267	0.291	ø32×30
NCS HS 15701-4	Cr-Stainless Steel	0.366	0.936	1.51	0.024	0.024	8.75	0.188	0.230	0.0074	0.359	0.138	ø32×30
NCS HS 15701-5	Cr-Stainless Steel	0.502	1.38	1.17	0.016	0.042	7.85	0.240	0.263	0.0068	0.460	0.103	ø32×30

Number	Name	Chemical Composition(Percent)									Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	(mm)
NCS HS 15704a-1	Pure Iron	0.022	0.212	0.165	0.0043	0.010	0.017	0.027	0.021	0.29	ø37×55
NCS HS 15704a-2	Pure Iron	0.013	0.0020	0.026	0.0032	0.022	0.0020	0.019	0.102		ø37×55
NCS HS 15704a-3	Pure Iron	0.018	0.061	0.063	0.0073	0.0092	0.0026	0.0209	0.074	0.129	ø37×55
NCS HS 15704a-4	Pure Iron	0.020	0.074	0.216	0.0068	0.006	0.009	0.021	0.023	0.39	ø37×55
NCS HS 15704a-5	Pure Iron	0.088	0.032	0.41	0.0167	0.0097	0.0032	0.0107	0.142	0.029	ø37×55

Number	Name	Chemical Composition(Percent)										Unit Size
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	Fe	(mm)
NCS HS 16702-1	GH30	0.241	0.311	0.156	0.0010	0.0145	17.50	0.082	0.086	0.638	0.229	ø30×42
NCS HS 16702-2	GH30	0.137	0.520	0.256	0.0152	0.0051	20.56	0.100	0.267	0.214	1.579	ø30×42
NCS HS 16702-3	GH30	0.100	0.324	0.397	0.0063	0.0062	19.37	0.146	0.237	0.303	1.163	ø30×42
NCS HS 16702-4	GH30	0.230	0.895	0615	0.0015	0.0034	18.34	0.199	0.069	0.651	1.780	ø30×42
NCS HS 16702-5	GH30	0.189	0.811	0.777	0.0020	0.0036	16.81	0.245	0.065	0.495	0.702	ø30×42

Number	Name	Chemical Composition(Percent)										Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo	(mm)
NCS HS 16704-1	38CrMoAl	0.196	0.447	0.543	0.0106	0.0101	2.22	0.460	0.082	0.383	0.476	ø32×48
NCS HS 16704-2	38CrMoAl	0.141	0.581	0.790	0.0102	0.0100	1.86	0.103	0.054	0.508	0.341	ø32×48
NCS HS 16704-3	38CrMoAl	0.370	0.239	0.469	0.0166	0.0492	1.58	0.197	0.463	0.790	0.148	ø32×48
NCS HS 16704-4	38CrMoAl	0.706	0.224	0.196	0.0397	0.0375	1.97	0.479	0.07	0.247	0.391	ø32×48
NCS HS 16704-5	38CrMoAl	0.238	0.364	0.546	0.0268	0.0104	1.16	0.067	0.295	0.962	0.092	ø32×48
NCS HS 16704-6	38CrMoAl	0.532	0.310	0.421	0.0379	0.0093	0.99	0.045	0.120	1.38	0.044	ø32×48

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Ni	V	Ti	As	Mo	(mm)
NCS HS 19701-1	Pig Iron	2.45	0.099	0.072	0.011	0.019	0.513	0.183	0.009	0.006	0.005		ø30×30
NCS HS 19701-2	Pig Iron	2.98	0.937	0.329	0.033	0.038	0.08	0.194	0.044	0.216	0.024		ø30×30
NCS HS 19701-3	Pig Iron	3.29	0.689	1.22	0.044	0.056	0.03	0.045	0.071	0.043	0.009		ø30×30
NCS HS 19701-4	Pig Iron	3.7	0.45	0.857	0.087	0.076	0.118	0.032	0.158	0.03	0.002	0.031	ø30×30
NCS HS 19701-5	Pig Iron	3.67	0.18	0.596	0.072	0.117	0.17	0.504	0.335	0.066	0.002	0.68	ø30×30
NCS HS 19701-6	Pig Iron	3.93	0.99	1.46	0.168	0.124	0.388	0.094	0.506	0.105	0.002	0.112	ø30×30
NCS HS 19701-7	Pig Iron	4.13	1.85	2.06	0.306	0.111	0.157	0.026	0.822	0.403	0.043		ø30×30

Number	Name	Chemical Composition(Percent)												Unit Size
		C	S	Si	Mn	P	Ni	Cr	Cu	Mo	V	W	Nb	Ti	(mm)
NCS HS 20704-1	Pig Iron	3.09	0.032	3.52	0.248	0.111		0.039	0.394		0.117			0.329	ø30×23
NCS HS 20704-2	Pig Iron	3.67	0.090	2.74	0.403	0.63		0.172	0.153		0.370			0.143	ø30×23
NCS HS 20704-3	Pig Iron	3.65	0.149	0.907	0.538	1.08		0.104	0.87		0.627			0.56	ø30×23
NCS HS 20704-4	Pig Iron	4.03	0.074	1.76	0.90	0.106		0.212	0.494		0.470			0.070	ø30×23
NCS HS 20704-5	Pig Iron	4.03	0.084	0.378	1.20	0.46		0.065	0.75		0.226			0.174	ø30×23
NCS HS 20704-6	Pig Iron	4.56	0.037	1.21	0.251	0.045		0.325	0.368		0.699			0.200	ø30×23

		Sn	Pb	Sb	Mg	La	Ce	As	B	Co	Alt	Ca	Zr	Bi
NCS HS 20704-1	Pig Iron	0.028	0.0018	0.046				0.056	0.017					
NCS HS 20704-2	Pig Iron	0.057	0.0062	0.119				0.045	0.022					
NCS HS 20704-3	Pig Iron	0.106	0.0051	0.024				0.020	0.015					
NCS HS 20704-4	Pig Iron	0.058	0.0022	0.111				0.025	0.030					
NCS HS 20704-5	Pig Iron	0.105	0.0048	0.073				0.040	0.016					
NCS HS 20704-6	Pig Iron	0.0012	0.0013	0.0014				0.0020	0.029					

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W	Mo	Co	(mm)
NCS HS 23703-1	Cr_{13}	0.040	0.223	0.130	0.0062	0.0028	14.26	0.500	0.056	0.059	0.041	0.058	0.064	0.016	ø33×33
NCS HS 23703-2	Cr_{13}	0.245	0.420	0.337	0.0103	0.032	11.03	0.393	0.284	0.151	0.079	0.27	0.353	0.054	ø33×33
NCS HS 23703-3	Cr_{13}	0.159	0.568	0.495	0.0165	0.017	12.52	0.207	0.171	0.089	0.091	0.19	0.157	0.036	ø33×33
NCS HS 23703-4	Cr_{13}	0.340	0.772	0.740	0.0262	0.0054	9.37	0.461	0.374	0.201	0.371	0.38	0.244	0.078	ø33×33
NCS HS 23703-5	Cr_{13}	0.472	0.487	0.983	0.043	0.041	7.84	0.771	0.522	0.287	0.187	0.50	0.487	0.116	ø33×33

Number	Name	Chemical Composition(Percent)										Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	(mm)
NCS HS 23707a-1	GSiMnMoV	1.2	0.901	0.201	0.0036	0.048	0.108	0.454	0.514	0.045	0.086	ø35×35
NCS HS 23707a-2	GSiMnMoV	0.471	0.318	0.922	0.03	0.031	0.351	0.146	0.113	0.151	0.452	ø35×35
NCS HS 23707a-3	GSiMnMoV	0.176	0.083	1.25	0.043	0.011	0.45	0.107	0.086	0.434	0.563	ø35×35
NCS HS 23707a-4	GSiMnMoV	0.936	0.747	0.511	0.012	0.0094	0.24	0.356	0.274	0.335	0.252	ø35×35
NCS HS 23707a-5	GSiMnMoV	0.663	0.548	0.684	0.021	0.05	0.093	0.303	0.438	0.243	0.354	ø35×35

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	W	Co	(mm)
NCS HS 23716-1	Heat Die Steel	0.763	0.36	0.216	0.032	0.013	3.24	0.291	0.092	0.767	0.27	0.0069	1.45	0.028	ø35×30
NCS HS 23716-2	Heat Die Steel	1.11	0.29	0.104	0.038	0.005	5.6	0.407	0.075	0.5	0.05	0.0051	2	0.009	ø35×30
NCS HS 23716-3	Heat Die Steel	0.393	1.37	0.842	0.017	0.029	4.38	0.148	0.205	1.26	0.8	0.077	0.5	0.105	ø35×30
NCS HS 23716-4	Heat Die Steel	0.599	0.08	0.432	0.021	0.034	3.84	0.199	0.136	0.946	0.66	0.019	0.97	0.049	ø35×30
NCS HS 23716-5	Heat Die Steel	0.088	1.09	1.67	0.005	0.021	2.43	0.084	0.474	1.94	1.17	0.087	0.08	1.98	ø35×30
NCS HS 23716-6	Heat Die Steel	0.2	065	1.21	0.01	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.2	1.49	ø35×30

		Sn	Pb
NCS HS 23716-1	Heat Die Steel	0.0075	0.011
NCS HS 23716-2	Heat Die Steel	0.007	0.074
NCS HS 23716-3	Heat Die Steel	0.0076	0.0087
NCS HS 23716-4	Heat Die Steel	0.02	(0.0001)
NCS HS 23716-5	Heat Die Steel	0.052	0.0053
NCS HS 23716-6	Heat Die Steel	0.032	(0.0001)

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	W	Co	(mm)
NCS HS 23717-1	Cold Die Steel	2.19	0.37	0.369	0.015	0.001	11.7	0.096	0.085	0.022	0.04	0.61	0.014	ø35×30
NCS HS 23717-2	Cold Die Steel	1.57	0.29	0.333	0.019	0.014	11.5	0.194	0.172	0.574	0.64	0.47	0.064	ø35×30
NCS HS 23717-3	Cold Die Steel	1.31	0.38	0.473	0.0072	0.023	10.1	0.094	0.131	0.854	0.48	0.69	0.035	ø35×30
NCS HS 23717-4	Cold Die Steel	0.869	0.05	0.044	0.044	0.003	14.2	0.436	0.364	0.082	1.07	0.07	0.166	ø35×30
NCS HS 23717-5	Cold Die Steel	1.88	0.18	0.16	0.03	0.005	12.7	0.297	0.228	0.333	0.82	0.31	0.096	ø35×30

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt	(mm)
NCS HS 23718-1	Middle-Low alloy	0.496	0.25	0.732	0.051	0.014	0.81	1.47	0.439	0.504	0.52	0.325	0.02	ø35×30
NCS HS 23718-2	Middle-Low alloy	0.115	0.79	2.02	0.06	0.006	1.78	0.494	0.082	0.079	0.12	0.105	0.06	ø35×30
NCS HS 23718-3	Middle-Low alloy	0.201	0.7	1.24	0.015	0.049	0.4	1.02	0.299	0.251	0.22	0.232	0.661	ø35×30
NCS HS 23718-4	Middle-Low alloy	0.356	0.42	1.68	0.0042	0.089	1.35	0.238	0.144	0.107	0.34	0.402	0.142	ø35×30
NCS HS 23718-5	Middle-Low alloy	0.657	0.15	0.463	0.033	0.025	2.29	0.117	0.07	0.974	0.06	0.497	0.27	ø35×30
NCS HS 23718-6	Middle-Low alloy	0.048	0.07	0.102	0.018	0.003	0.1	2	0.561	0.686	0.03	0.011	0.569	ø35×30

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	W	Co	(mm)
NCS HS 23720-1	Middle-Low alloy	0.763	0.359	0.216	0.032	0.013	3.24	0.291	0.092	0.767	0.268	0.0069	1.45	0.028	ø35×30
NCS HS 23720-2	Middle-Low alloy	1.11	0.286	0.104	0.038	0.0047	5.60	0.407	0.075	0.50	0.053	0.0051	2.00	0.0086	ø35×30
NCS HS 23720-3	Middle-Low alloy	0.393	1.37	0.842	0.017	0.029	4.38	0.148	0.205	1.26	0.80	0.077	0.496	0.105	ø35×30
NCS HS 23720-4	Middle-Low alloy	0.599	0.080	0.432	0.021	0.034	3.94	0.199	0.136	0.946	0.66	0.019	0.97	0.049	ø35×30
NCS HS 23720-5	Middle-Low alloy	0.088	1.09	1.67	0.0050	0.021	2.43	0.084	0.474	1.94	1.17	0.087	0.082	1.98	ø35×30
NCS HS 23720-6	Middle-Low alloy	0.200	0.649	1.21	0.010	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.204	1.49	ø35×30

Section 2 Iron, Steel & Alloy(Disk)

		Sn	Pb
NCS HS 23720-1	Middle-Low alloy	0.0075	0.011
NCS HS 23720-2	Middle-Low alloy	0.0070	0.074
NCS HS 23720-3	Middle-Low alloy	0.0076	0.0087
NCS HS 23720-4	Middle-Low alloy	0.020	(0.0001)
NCS HS 23720-5	Middle-Low alloy	0.052	0.0053
NCS HS 23720-6	Middle-Low alloy	0.032	(0.0001)

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	V	Alt	(mm)
NCS HS 24703-1	High Speed steel	0.757	0.065	0.069	0.0042	0.0043	2.55	0.072	0.046	0.16	18.68	0.154		ø35×30
NCS HS 24703-2	High Speed steel	0.731	0.207	0.286	0.022	0.022	2.96	0.156	0.249	0.42	15.99	0.44		ø35×30
NCS HS 24703-3	High Speed steel	0.909	0.309	0.244	0.025	0.026	3.25	0.203	0.223	0.88	14.41	0.84	0.079	ø35×30
NCS HS 24703-4	High Speed steel	0.821	0.443	0.307	0.025	0.024	3.54	0.383	0.211	1.57	11.71	1.23	0.059	ø35×30
NCS HS 24703-5	High Speed steel	1.11	0.349	0.313	0.049	0.036	3.90	0.196	0.348	2.51	9.27	2.03	0.101	ø35×30
NCS HS 24703-6	High Speed steel	1.09	0.352	0.405	0.034	0.034	4.26	0.201	0.248	3.75	6.85	2.77		ø35×30
NCS HS 24703-7	High Speed steel	0.996	0.648	0.293	0.026	0.026	5.19	0.224	0.203	6.52	1.80	4.51	0.128	ø35×30
NCS HS 24703-8	High Speed steel	0.917	0.281	0.616	0.020	0.040	4.59	0.245	0.148	4.93	4.33	3.56		ø35×30

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Nb	Alt	(mm)
NCS HS28702a-1	Nodular Cast Iron	2.43	3.08	0.178	0.031	0.0037	1.98	3.7	1.35	2.06	0.45	0.057	0.054	0.007	ø30×30
NCS HS28702a-2	Nodular Cast Iron	2.86	1.67	0.384	0.042	0.0068	1.54	0.985	0.987	1.55	0.396	0.095	0.035	0.016	ø30×30
NCS HS28702a-3	Nodular Cast Iron	3.18	2.17	0.783	0.119	0.025	1.01	2.17	0.815	1	0.3	0.074	0.02	0.041	ø30×30
NCS HS28702a-4	Nodular Cast Iron	3.59	1.25	1.17	0.076	0.028	0.755	0.705	0.525	0.665	0.234	0.044	0.021	0.141	ø30×30
NCS HS28702a-5	Nodular Cast Iron	3.99	0.601	1.39	0.211	0.045	0.415	0.201	0.306	0.355	0.098	0.032	0.012	0.027	ø30×30
NCS HS28702a-6	Nodular Cast Iron	3.48	0.275	1.69	0.554	0.052	0.164	4.18	0.068	0.076	0.055	0.031	0.0041	0.0051	ø30×30

		Mg	Ce	B	As	Sb	Pb	La
NCS HS28702a-1	Nodular Cast Iron	0.11		0.171	0.051	0.0073	0.002	
NCS HS28702a-2	Nodular Cast Iron	0.04	0.088	0.114	0.033	0.0062	0.0017	0.011
NCS HS28702a-3	Nodular Cast Iron	0.033	0.0089	0.053	0.037	0.0052	0.0048	0.0017
NCS HS28702a-4	Nodular Cast Iron	0.017	0.044	0.028	0.024	0.015	0.011	0.0074
NCS HS28702a-5	Nodular Cast Iron	0.011	0.017	0.012	0.032	0.0071	0.0043	0.0024
NCS HS28702a-6	Nodular Cast Iron	0.0039		0.0077	0.081	0.0022	0.0006	

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	N	Nb	Ti	(mm)
NCS HS 28706-1	Line steel	0.055	0.29	1.81	0.011	0.0024	0.283	0.201	0.116	0.0043	0.205	0.0053	0.103	0.022	ø40×40
NCS HS 28706-2	Line steel	0.058	0.202	1.41	0.0072	0.0063	0.049	0.012	0.0014	0.042	0.013	0.004	0.05	0.016	ø40×40
NCS HS 28706-3	Line steel	0.083	0.194	0.559	0.01	0.007	0.024	0.009	0.002	0.0009	0.02	0.0053	0.011	0.003	ø40×40
NCS HS 28706-4	Line steel	0.086	0.246	1.2	0.011	0.006	0.022	0.008	0.0012	0.0014	0.015	0.0059	0.022	0.01	ø40×40
NCS HS 28706-5	Line steel	0.105	0.325	1.31	0.0087	0.0041	0.023	0.0089	0.0013	0.038	0.016	0.0067	0.035	0.02	ø40×40
NCS HS 28706-6	Line steel	0.108	0.279	1.23	0.013	0.006	0.026	0.0061	0.001	0.0012	0.01	0.0074	0.023	0.01	ø40×40

		As	Alt	Als	Ca
NCS HS 28706-1	Line steel	0.004	0.027	0.026	0.0009
NCS HS 28706-2	Line steel	0.0032	0.028	0.026	0.0012
NCS HS 28706-3	Line steel	0.0034	0.023	0.021	0.0017
NCS HS 28706-4	Line steel	0.0043	0.016	0.015	0.0035
NCS HS 28706-5	Line steel	0.0033	0.023	0.022	0.002
NCS HS 28706-6	Line steel	0.0044	0.023	0.022	0.0013

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	W	Mo	Ti	Al	B	Zr	(mm)
NCS HS 29708-1	GH915	0.066	0.298	0.170	(0.006)	(0.012)	12.46	43.50	3.81	1.54	4.34	2.20	0.023	(0.036)	ø35×48
NCS HS 29708-2	GH915	0.082	0.502	0.061	(0.012)	(0.003)	11.56	44.41	4.14	1.22	4.02	2.14	(0.034)	(0.026)	ø35×48
NCS HS 29708-3	GH915	0.102	0.543	0.016	(0.018)	(0.002)	10.14	45.60	4.43	0.925	3.68	2.75	0.044	0.017	ø35×48
NCS HS 29708-4	GH915	0.041	0.123	0.415	(0.001)	(0.007)	14.01	42.05	3.41	1.53	4.80	1.85	0.014	(0.015)	ø35×48
NCS HS 29708-5	GH915	0.106	0.071	0.564	(0.001)	(0.014)	12.08	44.01	4.62	2.02	3.79	2.79			ø35×48

Section 2 Iron, Steel & Alloy(Disk)

		Ce
NCS HS 29708-1	GH915	0.0054
NCS HS 29708-2	GH915	0.053
NCS HS 29708-3	GH915	0.066

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al				(mm)
NCS HS 39701-1	Carbon Steel	0.108	0.029	1.15	0.0038	0.070	0.379	0.252	0.276	0.073				ø33×35
NCS HS 39701-2	Carbon Steel	0.172	0.103	1.07	0.014	0.012	0.241	0.210	0.14					ø33×35
NCS HS 39701-3	Carbon Steel	0.29	0.156	0.62	0.032	0.026	0.153	0.181	0.193					ø33×35
NCS HS 39701-4	Carbon Steel	0.30	0.247	0.86	0.023	0.040	0.092	0.065	0.097					ø33×35
NCS HS 39701-5	Carbon Steel	0.44	0.46	0.41	0.039	0.040	0.275	0.062	0.325	0.40				ø33×35
NCS HS 39701-6	Carbon Steel	0.58	0.374	0.163	0.054	0.0033	0.34	0.343	0.38	0.463				ø33×35

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al_t	V	Ti	W	Mo	(mm)
NCS HS 11744	Low Alloy Steel	0.092	0.825	1.04	0.014	0.066	0.166	1.94	0.572	0.044	0.131	0.049	1.50	0.912	ø38×30

		Co	Nb	Zr	B	Sn	As	Sb	Pb	Bi
NCS HS 11744	Low Alloy Steel	0.397	0.050	0.0025	0.0007	0.0041	0.019	0.0023	0.0007	0.0043

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Co	W	As	(mm)
NCS HS 11751	$60Si_2Mn$	0.661	1.82	0.805	0.027	0.017	0.021	0.020	0.136			0.011		0.016	ø38×45

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Al_t	B		(mm)
NCS HS 11759	Carbon Steel	0.101	0.249	0.400	0.043	0.030	0.068	0.066	0.086			0.264	0.0014		ø37×45
NCS HS 11760	Carbon Steel	0.202	0.512	1.34	0.046	0.032	0.078	0.050	0.057			0.092	0.0012		ø37×45
NCS HS 11763	Carbon Steel	0.543	0.361	0.663	0.024	0.024	0.169	0.164	0.118			0.089	0.621		ø37×45
NCS HS 11764	Carbon Steel	0.235	0.318	0.632	0.037	0.028	0.076	0.103	0.106			0.071			ø37×40
NCS HS 11766	Low Alloy Steel	0.225	0.386	1.04	0.012	0.016	1.06	0.122	0.174		0.073	0.096	0.0016		ø37×45
NCS HS 11774	GCr_{15}	1.02	0.250	0.340	0.015	0.023	1.48	0.036	0.037	0.022					ø36×50

		Mg	La	Ce	W	Mo	Nb	Zr	Sb	Sn	As	Pb
NCS HS 11759	Carbon Steel									0.0024	0.0058	
NCS HS 11760	Carbon Steel									0.0059	0.012	
NCS HS 11763	Carbon Steel									0.0026	0.012	
NCS HS 11764	Carbon Steel								0.14	0.024	0.15	0.0011
NCS HS 11766	Low Alloy Steel									0.0031	0.0055	

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	V	As	Sn	(mm)
NCS HS 11775	Alloy Steel	0.084	0.787	1.62	0.029	0.002	25.53	20.72							ø35×20
NCS HS 11782	Gray Iron	3.21	1.64	1.09	0.088	0.035	0.061	0.014	0.042	0.0048	0.027	0.0079	0.0065		ø31×28
NCS HS 11783	Gray Iron	3.33	1.73	0.756	0.083	0.09	0.386	0.304	0.666	0.238	0.057	0.174	0.0085	0.066	ø31×28
NCS HS 11784	High phosphorus Cast Iron	3.3	2.68	0.528	0.78	0.031	0.812	0.024	0.015	0.142	0.084	0.02		0.0005	ø31×28
NCS HS 11785	High phosphorus Cast Iron	3.19	2.52	0.482	0.79	0.03	0.817	0.031	0.021	0.139	0.076	0.018		0.001	ø31×28
NCS HS 11786	High phosphorus Cast Iron	2.82	2.05	0.768	1.7	0.064	1.98	0.048	0.044	0.251	0.102	0.029		0.0062	ø31×28
NCS HS 11787	High Nickel pig Iron	2.65	2.07	1.08	0.067	0.037	1.98	19.84	0.306	0.0014	0.022	0.0096	0.0075	0.0054	ø31×28
NCS HS 11788	High Nickel pig Iron	2.97	3.29	1.62	0.191	0.01	2.56	17.77	0.51	0.0013	0.043	0.017	0.014	0.0003	ø31×28
NCS HS 11789	High Nickel pig Iron	1.97	2.58	1.08	0.048	0.076	2.51	17.8	6.39	0.062	0.011	0.0093	0.0076	0.014	ø31×28

		Sb	Nb	Pb	Bi	As	Alt	W	B	Co
NCS HS 11783	Gray Iron	0.142								
NCS HS 11784	High phosphorus Cast Iron	0.0007	0.0012*	0.0002	0.0083	0.0041	0.0012*			
NCS HS 11785	High phosphorus Cast Iron	0.0005	(0.0009)	0.0002	0.013	0.0049	0.0030*			
NCS HS 11786	High phosphorus Cast Iron	0.0008	0.012	0.0003	0.015	0.0075	0.0094*			
NCS HS 11787	High Nickel pig Iron		0.0006*		0.042*		0.085*	0.0002*	0.0007	(0.0054)
NCS HS 11788	High Nickel pig Iron		0.0006*		0.031*		(0.0023)	0.0002*	0.0008	(0.0063)
NCS HS 11789	High Nickel pig Iron		0.0005*	0.015	0.067		0.061	0.0002*	0.0008	(0.0075)

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Als	Alt	Ti	Nb	V	(mm)
NCS HS 11790	Silicon Steel	0.338	0.841	0.386	0.081	0.0066	0.73	1.52	0.027	0.536	0.538	0.234	0.278	0.035	ø37×40
NCS HS 11791	Silicon Steel	0.095	3.08	1.9	0.0063	0.023	0.032	0.022	0.066	0.34	0.35	0.012	0.0037	(0.0006)	ø37×40
NCS HS 11792	Pipe line steel	0.045	0.183	1.96	0.0075	0.0011	0.363	0.423	0.224	0.043	0.044	0.016	0.097	0.011	ø37×40
NCS HS 11793	Low alloy steel	0.037	0.257	1.59	0.126	0.015	0.452	0.08	0.15			0.239		0.064	ø37×40

		Mo	As	Sb	Sn	Zr	Ca	Bt
NCS HS 11790	Silicon Steel	0.809	0.032	0.0011	0.00073	0.013		
NCS HS 11791	Silicon Steel	0.038	0.062	0.0018	0.023	0.023		
NCS HS 11792	Pipe line steel	0.324	0.0015				0.002	(0.0003)
NCS HS 11793	Low alloy steel			0.015	0.042			

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	V	Ti	Nb	(mm)
NCS HS 93703-1	Medium-Low Alloy Steel	1.08	0.681	2.35	0.0057	(0.008)	3.98	0.028	0.048	0.0077	0.293	0.0090	0.473	0.351	ø33×35
NCS HS 93703-2	Medium-Low Alloy Steel	0.055	0.827	0.021	0.027	0.0033	3.09	1.09	0.422	1.56	1.97	0.376	0.346	0.254	ø33×35
NCS HS 93703-3	Medium-Low Alloy Steel	0.792	1.09	1.34	0.013	0.038	2.11	0.533	0.532	0.397	0.755	0.071	0.016	0.506	ø33×35
NCS HS 93703-4	Medium-Low Alloy Steel	0.475	2.57	0.612	0.015	0.015	1.31	2.01	0.687	0.977	1.48	0.709	0.035	0.167	ø33×35
NCS HS 93703-5	Medium-Low Alloy Steel	0.651	0.024	1.53	0.036	0.0052	0.021	2.98	0.236	0.631	0.05	0.231	0.111	0.0057	ø33×35
NCS HS 93703-6	Medium-Low Alloy Steel	0.246	0.274	0.211	0.045	0.0058	0.505	3.83	0.092	0.203	1.04	0.526	0.246	0.070	ø33×35

		Alt	Als	Co	Bt	Bs	Pb	Sn	As	Sb	Bi	Ca	Zr
NCS HS 93703-1	Medium-Low Alloy Steel	0.387	0.381	0.0047	0.025	0.023	0.0016	0.014	0.032	(0.0001)	0.0011	0.0009	0.0031
NCS HS 93703-2	Medium-Low Alloy Steel	0.92	0.91	0.262	0.0083	0.0080	0.0008	0.0069	0.0034	0.0020	0.0006	0.0010	0.087
NCS HS 93703-3	Medium-Low Alloy Steel	0.107	0.103	0.488	0.0041	0.0037	0.0007	0.054	0.0019	0.0040	0.0004	0.0010	0.014
NCS HS 93703-4	Medium-Low Alloy Steel	0.083	0.078	0.403	0.0050	0.0048	0.0006	0.012	0.056	0.0095	(0.0002)	(0.0001)	0.069
NCS HS 93703-5	Medium-Low Alloy Steel	(1.29)	(1.27)	0.094	0.0017	0.0015	0.0007	0.015	0.0064	0.010	0.0015	0.0007	0.41
NCS HS 93703-6	Medium-Low Alloy Steel	0.64	0.63	0.145	0.0033	0.0030	0.0011	0.017	0.011	0.0006	(0.0002)	(0.0001)	0.22

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Al_s	Cu	Al_t	V	Ti	Mo	(mm)
NCS HS 13750	Low Alloy Steel	0.131	0.175	0.523	0.0126	0.0257	0.970						0.172	ø38×38
NCS HS 13752	Low Alloy Steel	0.517	0.204	0.986	0.0261	0.0108	0.685				0.094		0.258	ø38×38
NCS HS 13753	Low Alloy Steel	0.592	0.464	0.481	0.040	0.0397	0.752				0.122	0.0084	0.302	ø38×38
NCS HS 13754	Low Alloy Steel	0.136	0.444	0.624	0.131	0.021	0.856		0.384		0.192		0.378	ø38×38
NCS HS 13755	Low Alloy Steel	0.420	0.301	0.924	0.024	0.020	0.960						0.187	ø38×38
NCS HS 13756	Low Alloy Steel	0.032	0.204	0.279	0.159	0.023				0.358	0.063			ø38×38

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Al_s	Cu	Al_t	V	Ti	Mo	(mm)
NCS HS 13758	Low Alloy Steel	0.165	0.502	1.451	0.0176	0.0221	0.34					0.173	0.143	ø38×35
NCS HS 13759	Low Alloy Steel	0.199	0.410	1.302	0.0171	0.022	0.384						0.161	ø38×35

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al_t	V	Ti	Mo	N	(mm)
NCS HS 15744	$4Cr_5MoSiV$	0.374	1.04	0.335	0.0085	0.0079	5.11	0.085	0.133		0.91		1.23		ø38×34
NCS HS 15746	Pure Iron	0.017	0.214	0.151	0.010	0.0022	0.017	0.105	0.118	0.413				0.006	ø35×30
NCS HS 15747	Pure Iron	0.022	0.199	0.201	0.0072	0.0027	0.032	0.066	0.066	0.217				0.012	ø35×30
NCS HS 15748	Pure Iron	0.061	0.166	0.319	0.040	0.0050	0.022	0.020	0.020	0.284				0.015	ø35×30

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Al_t	Al_s	Bt	Bs	Cr	Ni	Mo	Co	(mm)
NCS HS 15749	Low Carbon Siliocon steel	0.0045	1.54	0.247	0.010	0.0054	0.050	0.048	0.0026	0.0018					ø35×32
NCS HS 15752	Stainless steel	0.023	0.659	1.16	0.030	0.0019	0.0039	0.0034			17.35	11.13	2.12	0.104	ø40×40

		Ti	Cu	V	N	Sb	Sn	As
NCS HS 15752	Stainless steel		0.314		0.046			

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Al_s	Cu	Al_t	As	Ti	Mo	(mm)
NCS HS 18741	35CrMo	0.355	0.273	0.57	0.01	0.033	0.93	0.029	0.075	0.035	0.057	0.011	0.154	ø37×30
NCS HS 18742	16Mn	0.152	0.305	1.26	0.012	0.023	0.121		0.077		0.034	0.018		ø37×30

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Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Ni	Cr	W	Cu	Mo	V	N	(mm)
NCS HS18743	M2Al($W_6Mo_5Cr_4V_2Al$)	1.05	0.44	0.3	0.023	0.0014	0.18	4.31	6.18	0.17	5.1	1.87		D35X35
NCS HS18744	$4Cr_4Mn_{18}$	0.42	0.48	17.1	0.016	0.042	0.06	4.03		0.1				D35X35
NCS HS18745	$2Cr_{13}$	0.189	0.452	0.348	0.021	0.0034	0.132	12.58		0.079				D35X35
NCS HS18746	214N	0.533	0.222	9.34	0.025	0.0059	3.92	21.14		0.159	0.057	0.066	0.42	D35X35
NCS HS18747	318	0.254	1.31	0.547	0.023	0.0027	6.6	16.95		0.095	2.13	0.077	0.144	D35X35
NCS HS18748	$0Cr_{17}$	0.027	0.617	0.408	0.031	0.0056	0.415	16.51		0.072				D35X35
NCS HS18749	$4Cr_9Si_2$	0.466	2.08	0.612	0.036	0.026	0.543	8.64		0.112	0.055	0.033		D35X35
NCS HS18750	$4Cr_{10}Si_2Mo$	0.355	2.56	0.425	0.035	0.023	0.346	10.53		0.128	0.798	0.051		D35X35
NCS HS18751	$3Cr_2W_8V$	0.4	0.25	0.25	0.017	0.016	0.46	2.72	8.14	0.05				D35X35
NCS HS18752	$H_{13}(4Cr_5MoSiV_1)$	0.34	1.17	0.4	0.017	0.01	0.15	5.3		0.08	1.18	1.04		D35X35

		Co	As	Al
NCS HS18743	M2Al($W_6Mo_5Cr_4V_2Al$)	0.28		0.96
NCS HS18744	$4Cr_4Mn_{18}$		0.014	
NCS HS18745	$2Cr_{13}$		0.014	
NCS HS18746	214N	0.08		
NCS HS18747	318	0.044		
NCS HS18748	$0Cr_{17}$		0.008	
NCS HS18749	$4Cr_9Si_2$		0.017	
NCS HS18750	$4Cr_{10}Si_2Mo$		0.017	
NCS HS18751	$3Cr_2W_8V$			
NCS HS18752	$H_{13}(4Cr_5MoSiV_1)$		0.029	0.06

Number	Name	Chemical Composition(Percent)											Unit Size
		C	Si	Mn	P	S	Cr	Alt	Als	N	V	Ti	Mo	(mm)
NCS HS 20741	$1Cr_{13}Mo$	0.125	0.0045	0.957	0.017	0.0045	12.91						0.41	ø35×40
NCS HS 20742	$1Cr_{17}$	0.083	0.636	1.02	0.015	0.0035	16.58							ø35×40
NCS HS 20743	$0Cr_{11}Ti$	0.015	0.97	0.949	0.038	0.0055	11.88	0.022	0.021	0.0155		0.411		ø35×40
NCS HS 20744	(08F)	0.068	0.022	0.331	0.018	0.03								ø35×40
NCS HS 20745	10PCuRE	0.068	0.33	0.813	0.1	0.024					0.022			ø35×40
NCS HS 20747	09MnNb	0.083	0.472	0.967	0.02	0.015								ø35×40

		Cu	Ce	Nb	La
NCS HS 20745	10PCuRE	0.297	0.014		0.0076
NCS HS 20747	09MnNb			0.052	

Number	Name	Chemical Composition(Percent)										Unit Size
		Cu	Pb	Zn	P	Fe	Sn	Sb	Bi	Mn	Ni	Si	(mm)
NCS HS 28749	Lead Brass	57.09	1.74	41.11	<0.0015	0.017	0.017	<0.0015	<0.0010	0.0015	0.013	0.0012	ø38×30

Number	Name	Chemical Composition(Percent)										Unit Size
		C	S	Si	Mn	P	Cr	Ni	Mo	Cu	V	Ti	(mm)
NCS HS 37701-1	High Chromium Cast Iron	3.43	0.010	0.055	1.59	0.161	1.35	1.55	3.11	0.193	1.01	0.008	ø30×25
NCS HS 37701-2	High Chromium Cast Iron	3.00	0.016	0.56	1.42	0.133	7.23	1.43	2.48	0.324	0.88	0.015	ø30×25
NCS HS 37701-3	High Chromium Cast Iron	2.73	0.036	0.99	1.09	0.105	12.97	1.20	2.08	0.451	0.66	0.045	ø30×25
NCS HS 37701-4	High Chromium Cast Iron	2.31	0.046	1.40	0.725	0.071	17.60	0.914	1.44	0.739	0.46	0.084	ø30×25
NCS HS 37701-5	High Chromium Cast Iron	1.83	0.091	1.80	0.466	0.043	23.40	0.517	0.739	0.904	0.26	0.068	ø30×25
NCS HS 37701-6	High Chromium Cast Iron	1.45	0.123	2.38	0.254	0.024	28.96	0.216	0.213	1.15	0.13	0.084	ø30×25

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Al	Co	Ti	Mo	Cu		(mm)
NCS HS 31741	$3Cr_{13}$	0.298	0.277	0.330	0.026	0.019	12.75	0.271		0.035		0.067	0.109		ø38×30
NCS HS 31742	$1Cr_{18}Ni_9Ti$	0.096	0.566	1.27	0.030	0.005	17.25	8.22	0.098	0.112	0.555	0.132	0.307		ø38×30
NCS HS 31743	$304L(00Cr_{19}Ni_{10})$	0.028	0.445	0.98	0.050	0.009	17.94	8.18		0.144		0.298	1.23		ø38×30

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	As	Sn	V	(mm)
NCS HS 41742	Stainless steel	0.026	0.386	0.659	0.031	0.00052	25.05	6.38	3.45	0.011	0.155	0.0045	0.0039	0.049	ø38×38
NCS HS 41743	Stainless steel	0.047	0.542	0.691	0.035	0.0044	15.85	3.53	0.195	0.202	3.37	0.0097	0.013	0.067	ø38×38
NCS HS 41744	Stainless steel	0.137	0.297	7.98	0.045	0.0091	16.01	4.12	0.052		0.123	0.0043	0.0046	0.049	ø38×38

		Co	W	N
NCS HS 41742	Stainless steel	0.063	0.018	0.237
NCS HS 41743	Stainless steel	0.063	0.058	0.014
NCS HS 41744	Stainless steel	0.078	0.0055	0.049

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	Pb	As	Sn	(mm)
NCS HS 93701-1	Middle low alloy	0.062	1.23	0.093	0.024	0.0060	1.85	0.30	4.19	0.85	0.22	0.038	0.004	0.0020	ø36×30
NCS HS 93701-2	Middle low alloy	0.111	0.32	0.934	0.015	0.0041	2.48	0.59	4.05	1.04	0.177	0.017	0.011	0.0083	ø36×30
NCS HS 93701-3	Middle low alloy	0.164	0.98	0.379	0.0099	0.0133	3.86	0.813	2.43	0.72	0.109	0.012	0.0146	0.0215	ø36×30
NCS HS 93701-4	Middle low alloy	0.309	0.198	1.06	0.0081	0.0126	4.83	0.480	1.86	0.290	0.31	0.007	0.0174	0.0180	ø36×30
NCS HS 93701-5	Middle low alloy	0.429	0.71	0.76	0.0082	0.0398	3.08	0.930	2.93	0.472	0.38	0.0066	0.069	0.037	ø36×30

		Sb	Bi	Zr
NCS HS 93701-1	Middle low alloy	0.0515	0.0019	0.103
NCS HS 93701-2	Middle low alloy	0.035	0.0064	0.57
NCS HS 93701-3	Middle low alloy	0.032	0.0102	0.436
NCS HS 93701-4	Middle low alloy	0.0077	0.013	0.112
NCS HS 93701-5	Middle low alloy	0.00403	0.0203	0.234

Number	Name	Chemical Composition(Percent)							Unit Size
		C	Si	Mn	P	S	Cr	Ni	(mm)
NCS HS 93702-1	Alloy steel	0.053	1.37	5.02	0.055	0.0027	17.51	2.44	ø38×30
NCS HS 93702-2	Alloy steel	0.18	1.04	6.60	0.038	0.010	15.26	3.61	ø38×30
NCS HS 93702-3	Alloy steel	0.28	0.94	8.37	0.024	0.016	12.67	4.56	ø38×30
NCS HS 93702-4	Alloy steel	0.35	0.74	11.00	0.018	0.025	10.72	5.67	ø38×30
NCS HS 93702-5	Alloy steel	0.42	0.40	12.93	0.011	0.033	8.22	6.68	ø38×30

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt	Co	(mm)
NCS HS 28741	Stainless Steel	0.039	0.425	1.07	0.037	0.016	18.31	8.19	0.399	0.027	0.106	0.002*		0.208	ø38×35
NCS HS 28742	Stainless Steel	0.021	0.414	0.94	0.034	0.0028	18.2	8.11	0.043	0.025	0.089	0.006		0.216	ø38×35
NCS HS 28743	Stainless Steel	0.11	0.78	0.841	0.024	0.0082	23.71	18.02	0.089	0.115	0.077	0.003*	0.0056	0.102	ø38×35
NCS HS 28744	Stainless Steel	0.067	0.435	1.1	0.028	0.021	16.8	10.39	0.166	2.01	0.048	0.006*	0.012	0.063	ø38×35
NCS HS 28745	Stainless Steel	0.018	0.317	1.17	0.042	0.0057	16.61	10.34	0.334	2.05	0.07	0.002*		0.185	ø38×35
NCS HS 28746	Stainless Steel	0.021	0.51	1.87	0.031	0.0009	17.19	8.24	0.34	0.069	0.096	0.184	0.086	0.191	ø38×35
NCS HS 28747	Stainless Steel	0.132	0.502	0.453	0.027	0.0068	16.24	1.79	0.126	0.153	0.075	0.002*		0.051	ø38×35
NCS HS 28748	Stainless Steel	0.045	0.644	0.742	0.028	0.013	15.88	3.85	3.23	0.259	0.076	0.002*		0.119	ø38×35

		Nb	Sn	Pb	N	As
NCS HS 28741	Stainless Steel		0.0051	0.0001	0.069	0.0035
NCS HS 28742	Stainless Steel		0.0001*	0.0001	0.059	0.0025
NCS HS 28743	Stainless Steel	0.016	0.0025	0.0004	0.057	0.0042
NCS HS 28744	Stainless Steel	0.027	0.0034	0.0005	0.063	0.0037
NCS HS 28745	Stainless Steel		0.0073	0.0001	0.07	0.0055
NCS HS 28746	Stainless Steel		0.0065	0.0002	0.011	0.0032
NCS HS 28747	Stainless Steel		0.0057	0.0001	0.03	0.0063
NCS HS 28748	Stainless Steel	0.23	0.0063	0.0001	0.03	0.0047

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	S	Mn	Si	P	Ni	Cr	Fe	Mo	Ti	Al	Cu	V	(mm)
NCS HS 41745	Nickel-based superalloy	0.043	0.0006	0.124	0.071	0.0023	63.72	20.69	3.50	8.37	0.011	0.016			ø40×30
NCS HS 41746	Nickel-based superalloy	0.027	0.0005	0.057	0.080	0.0033	52.27	18.56	18.54	3.28	1.03	0.635	0.023		ø40×30
NCS HS 41747	Corrosion-resisting alloy	0.071	0.0006	0.807	0.36	0.015	32.27	20.72		0.297	0.49	0.299	0.038		ø38×30
NCS HS 41748	Stainless Steel	0.194	0.011	0.62	0.54	0.016	0.077	12.70		0.010			0.008	0.048	ø38×38
NCS HS 41749	Stainless Steel	0.21	0.012	0.39	0.56	0.023	1.52	12.27					1.15	0.074	ø38×38
NCS HS 41750	Stainless Steel	0.075	0.012	1.43	0.33	0.031	6.35	16.31		0.107		0.009	0.276	0.064	ø38×38
NCS HS 41751	Stainless Steel	0.039	0.200	1.81	0.353	0.035	8.12	17.22		0.044			0.124	0.121	ø38×38
NCS HS 41752	Stainless Steel	0.97	0.0016	0.46	0.48	0.023	0.192	17.61		0.057			0.082	0.088	ø38×38
NCS HS 41753	Stainless Steel	0.013	0.0057	1.45	0.42	0.025	24.40	19.27		4.29			1.51	0.093	ø38×38

		Ta*	Ta**	Co	B	Nb	Co*	Mo	N	Ti*	Al*	Pb*	Nb*
NCS HS 41745	Nickel-based superalloy		0.001			3.19	0.011						
NCS HS 41746	Nickel-based superalloy	0.008		0.111	0.0025	5.15							
NCS HS 41747	Corrosion-resisting alloy			0.050									
NCS HS 41749	Stainless Steel							0.158					
NCS HS 41750	Stainless Steel								0.058	0.001			
NCS HS 41751	Stainless Steel								0.064	0.001	0.004	0.001	
NCS HS 41752	Stainless Steel										0.032		
NCS HS 41753	Stainless Steel								0.020	0.0013	0.012		0.012

Number	Name	Chemical Composition(Percent)													Unit Size
		C	S	Mn	Si	P	Cr	Ni	Cu	Mo	Al	V	Ti	Mo	(mm)
NCS HS 41754	Alloy Structure Steel	0.197	0.0055	1.01	0.28	0.008	1.33	0.060	0.010	0.26	0.017	0.005	0.003		ø38×32
NCS HS 41755	Alloy Structure Steel	0.23	0.004	0.27	0.044	0.0046	1.64	3.40						0.37	ø38×38
NCS HS 41756	Alloy Structure Steel	0.205	0.002	0.60	0.25	0.011	0.93	0.012	0.008	0.17		0.004	0.004		ø38×32
NCS HS 41757	Easy cutting Steel	0.079	0.28	1.01	0.018	0.055	0.047	0.058	0.17	0.012					ø38×32
NCS HS 41758	Easy cutting Steel	0.079	0.30	0.986	0.015	0.056	0.023	0.051	0.15	0.049					ø38×32
NCS HS 41759	Alloy Structure Steel	0.21	0.008	0.57	0.21	0.012	0.78	0.015	0.025		0.017	0.003	0.0034		ø38×32
NCS HS 41760	Stainless steel	0.153	0.0071	0.56	0.26	0.035	16.30	1.92	0.078	0.055	0.005	0.081	0.002		ø38×38
NCS HS 41761	Alloy Structure Steel	0.121	0.0026	0.463	0.335	0.014	8.71	0.064	0.055	0.93	0.005	0.21			ø38×38

		V	Sn	Pb	As	Nb	N
NCS HS 41755	Alloy Structure Steel	0.080					
NCS HS 41757	Easy cutting Steel		0.019	0.26	0.025		
NCS HS 41758	Easy cutting Steel		0.020	0.018	0.026		
NCS HS 41760	Stainless steel					0.012	
NCS HS 41761	Alloy Structure Steel					0.072	0.040

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Ti	W	B	(mm)
NCS HS 92703-1	High Chromium Cast Iron	3.31	0.098	1.54	0.369	0.0047	1.17	2.57	1.47	0.952	0.449	/	0.015	0.177	ø30×30
NCS HS 92703-2	High Chromium Cast Iron	2.96	0.491	1.24	0.211	0.0077	9.75	1.99	2.17	0.669	1.57	0.300	1.99	0.142	ø30×30
NCS HS 92703-3	High Chromium Cast Iron	2.40	0.821	1.06	0.115	0.015	13.30	1.55	0.869	0.482	0.953	0.171	1.57	0.102	ø30×30
NCS HS 92703-4	High Chromium Cast Iron	2.00	1.16	0.803	0.090	0.025	18.28	1.07	0.598	0.380	0.738	0.087	1.05	0.086	ø30×30
NCS HS 92703-5	High Chromium Cast Iron	1.48	1.37	0.579	0.041	0.058	22.55	0.708	0.359	0.314	0.583	0.056	0.694	0.076	ø30×30
NCS HS 92703-6	High Chromium Cast Iron	1.16	1.44	0.302	0.033	0.086	25.76	0.289	0.150	0.146	0.845	0.019	0.370	0.055	ø30×30
NCS HS 92703-7	High Chromium Cast Iron	3.13	2.48	0.201	0.024	0.116	31.26	0.129	0.086	0.087	0.154	0.033	0.175	0.015	ø30×30

		Nb
NCS HS 92703-1	High Chromium Cast Iron	0.018
NCS HS 92703-2	High Chromium Cast Iron	0.182
NCS HS 92703-3	High Chromium Cast Iron	0.149
NCS HS 92703-4	High Chromium Cast Iron	0.071
NCS HS 92703-5	High Chromium Cast Iron	0.022
NCS HS 92703-6	High Chromium Cast Iron	0.014
NCS HS 92703-7	High Chromium Cast Iron	0.010

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Mg	Ti	B	(mm)
NCS HS 92744	Alloy Cast Iron	3.58	1.74	0.44	0.034	0.018	0.50	0.59	0.18	0.20	0.26	0.039	0.055	0.019	ø30×27
NCS HS 92745	Alloy Cast Iron	3.69	1.50	0.49	0.063	0.049	0.47	0.23	0.22	0.11	0.34				ø30×30
NCS HS 92746	Alloy Cast Iron	3.36	2.44	0.231	0.040	0.0060	0.16	2.24				0.033	0.073		ø30×30

		Sn	Sb	Ce
NCS HS 92744	Alloy Cast Iron	0.0045		
NCS HS 92745	Alloy Cast Iron		0.12	
NCS HS 92746	Alloy Cast Iron			0.0060

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Nb	Co	As	(mm)
NCS HS 93743	Stainless Steel	0.044	0.723	1.2	0.035	0.0013	18.45	9.21	0.148	0.405	0.068	0.504	0.118	0.004	D37X35
NCS HS 93744	Stainless Steel	0.014	0.185	0.85	0.021	0.0031	19.62	23.45	1.23	4.4	0.054	0.086	0.169	0.005	D37X35
NCS HS 93745	Stainless Steel	0.206	0.3	0.474	0.014	0.0036	10.5	0.639	0.072	O.748	0.196	0.353	0.032	0.009	D37X35

		Ti	Alt	W	Sn	N
NCS HS 93744	Stainless Steel	0.01	0.161	0.086		
NCS HS 93745	Stainless Steel				0.005	0.071

Section 3 Ferroalloy(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ca	Fe				
NCS HC 11601a	Ferro Silicon	0.073	73.75	0.26	0.023	0.003	0.085	0.031	1.14	0.34					100
NCS HC 11602	High Carbon Ferromanganese	6.72	0.43	73.88	0.152	0.005		0.080			18.14				100
NCS HC 11603a	Mn-Si Alloy	1.33	17.49	65.67	0.065	0.011									100
NCS HC 11603b	Mn-Si Alloy	1.34	17.63	66.37	0.065	0.008									100
NCS HC 11604a	Si-Ca Alloy	0.94	56.02	0.037	0.054	0.073			1.97	30.45	6.93				50
NCS HC 11606	High Carbon Ferrochromium	6.37	4.29	0.32	0.023	0.013	64.17								100

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	V	As	Cu	Ni	Al	Ta	Ti	Nb	
NCS HC 11605	Si-Ca-Ba-Sr	0.385	53.46	0.075	0.014	0.039			0.079	0.023	2.34				60
NCS HC 11607	Ferro Vanadium	0.235	1.67	0.321	0.121	0.01	49.4	0.021	0.022						70
NCS HC 11608	Ferro Vanadium	0.109	0.653	0.106	0.021	0.035	79.27	0.0024	0.0089	0.01	1.41				70
NCS HC 11609	Ferro Niobium	0.114	1.34	0.37	0.172	0.014			0.059		0.711	0.087	0.87	64.89	70
NCS HC 11610	Nitride Ferrochrome	0.04	0.525	0.313	0.02	0.042									70
NCS HC 11611	Ferrosilicon	0.035	74.03	0.25	0.02	0.0023					1.41				60
NCS HC 11612	Ferroboron	0.086	0.353	0.305	0.02	0.0018		20.82			0.018				70
NCS HC 11613	Ferroboron	0.181	0.549	0.35	0.03	0.0023		17.65			0.035				70
NCS HC 11614	Ferro Phosphorus	0.032	0.6	0.638	25.81	0.0038							2.14		70
NCS HC 11615	Ferro Phosphorus	0.13	0.382	1.07	21.49	0.061							0.62		70
NCS HC 11616	Ferro Nickel	2.12	3.25	0.051	0.039	0.283			0.022	13.34					60
NCS HC 11617	Ferro Nickel	1.85	3.11	0.041	0.037	0.213			0.021	16.45					60
NCS HC 11618	Ferro Nickel	1.65	2.54	0.053	0.032	0.211			0.021	10.7					60
NCS HC 11619	Si-Ca Alloy	0.55	61.11	0.053	0.048	0.029					2.15				50

		Cr	N	Ca	B	Co	Fe	Mg	Ba	TFe	Sr
NCS HC 11605	Si-Ca-Ba-Sr	0.054		13.22				0.022	14.02	13.57	0.235
NCS HC 11610	Nitride Ferrochrome	58.83	4.76								
NCS HC 11611	Ferrosilicon	0.063		0.208							
NCS HC 11612	Ferroboron				20.82						
NCS HC 11613	Ferroboron				17.65						
NCS HC 11616	Ferro Nickel	1.98				0.247					
NCS HC 11617	Ferro Nickel	1.87				0.241					
NCS HC 11618	Ferro Nickel	1.56				0.198					
NCS HC 11619	Si-Ca Alloy			27.15			6.61				

Number	Name	Chemical Composition(Percent)									Unit Size (in g)
		Si	Ca	Ba	Al	Mn	P	C	S	Fe	
NCS HC 13602	Si-Al-Ba-Alloy	32.01	1.17	7.41	32.55	0.197	0.017	0.27	0.0096	20.59	0.85	50

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ca	Fe	Ni	Ba	
NCS HC 14602	Si-Al-Ba	0.14	19.21	0.25	0.015	0.013	0.017	0.137	32.82	0.85	38.09	0.014	6.52	70
NCS HC 14603	Si-Al-Ba	0.13	24.12	0.14	0.015	0.015	0.085	0.061	32.84	0.71	33.54	0.042	7.57	70
NCS HC 14604	Si-Al-Ba	0.24	19.21	0.25	0.011	0.011	0.053	0.172	25.44	0.44	49.14	0.018	2.64	70
NCS HC 14605	Si-Al-Ba	0.13	25.94	0.12	0.018	0.012	0.152	0.045	36.67	1.35	24.97	0.167	9.12	60
NCS HC 14608	Si-Al-Ca-Ba Alloy	0.13	0.021	0.17	0.022	0.021	0.021	0.176	9.14	8.28	14.22	0.0061	12.39	60
NCS HC 14609	Si-Al-Ca-Ba Alloy	0.22	33.41	0.33	0.018	0.017	0.116	0.32	14.46	5.74	35.46	0.016	7.72	60
NCS HC 14610	Si-Al-Ca-Ba Alloy	0.24	40.58	0.23	0.021	0.025	0.032	0.29	13.47	8.25	23.25	0.012	10.70	60
NCS HC 14611	Si-Al-Ca-Ba Alloy	1.56	56.74	0.065	0.016	0.14	0.0044	0.0097	1.47	13.61	5.77	0.0020	17.00	60

		V	Co	Ti	B	Mo	Mg	Sn	As	O	Sr
NCS HC 14608	Si-Al-Ca-Ba Alloy		0.0022	0.084			0.21				0.132
NCS HC 14609	Si-Al-Ca-Ba Alloy			0.055			0.18				0.092
NCS HC 14610	Si-Al-Ca-Ba Alloy			0.124			0.12				0.094
NCS HC 14611	Si-Al-Ca-Ba Alloy			0.126			0.045				0.22

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Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mg	Al	Ca	Ba	TFe	(in g)
NCS HC 14612	Ferro Silicon	0.016	77.49	0.02	0.0074	0.003	0.0044	0.016	0.011		0.0074	0.0067	22.12		60
NCS HC 14613	High Carbon Ferrochromium	7.56	2.58	0.18	0.02	0.032	54.04								50
NCS HC 14614	High Carbon Ferrochromium	7.67	2.57	0.28	0.018	0.032	55.81								50
NCS HC 14615	High Carbon Ferrochromium	8.07	2.3	0.23	0.017	0.045	56.16								50
NCS HC 14615a	High Carbon Ferrochromium	8.00	1.96	0.24	0.017	0.015	57.44	0.23							

		Co	Ti	B	V	Fe
NCS HC 14612	Ferro Silicon	0.0012	0.011	0.0022		
NCS HC 14615a	High Carbon Ferrochromium				0.28	31.46

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Cu	Ai	Ca	Fe	Ni	Ti	Mo	(in g)
NCS HC 15601	Ferro Titanium	0.057	1.47	0.106	0.0071	0.0047	0.039	0.037	0.3		26.57	0.29	70.02	0.028	50
NCS HC 15602	Ferro Silicon	0.0074	75.9	0.149	0.014	0.0035	0.077	0.057	0.011	0.0013	23.65	0.026	0.027		50
NCS HC 15604	Manganese	0.154	0.92	95.52	0.032	0.019					3.37				50
NCS HC 15605	Extra carbon ferromanganese	0.056	0.19	85.95	0.030	0.011					13.83				100
NCS HC 15606	Extra carbon ferromanganese	0.047	0.47	92.92	0.020	0.012					6.64				100
NCS HC 15607	Extra carbon ferromanganese	0.135	0.73	82.59	0.033	0.0074					16.59				100

		V
NCS HC 15601	Ferro Titanium	0.011
NCS HC 15602	Ferro Titanium	0.0036

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Cu	Al	Ca	Ni	Ti	Nb	Ta	(in g)
NCS HC 18601	Ferro Silicon	0.19	72.44	0.205	0.019	0.010	0.109		2.16	0.64					50
NCS HC 18603	Si-Mn alloy	1.70	17.21	66.70	0.183	0.025									50
NCS HC 18604	Ferro Titanium	0.065	4.68	2.67	0.043	0.013		0.117	5.38			27.93			50
NCS HC 18606	Ferro Niobium	0.070	1.09	0.29	0.159	0.008			1.35			0.78	66.24	0.084	50
NCS HC 18608	Ferro Vanadium	0.403	0.76	0.26	0.049	0.043			0.158						50

		Mo	V
NCS HC 18608	Ferro Vanadium		48.93

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Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	Cr	Al	Ca	Fe	S	V	Sn	Ti	Cu	(in g)
NCS HC 19602	Ferro Silicon	0.12	69.47	0.308	0.027	0.077	2.45	2.47	23.81						50
NCS HC 19604	Ferro Titanium	0.041	3.46	1.59	0.051		10.64			0.011	0.158	0.056	43.82		100
NCS HC 19605	Ferro Titanium	0.032	4.20	0.81	0.032		8.58			0.009	0.303	0.061	38.78		100
NCS HC 19606	Ferro Vanadium	0.565	0.68	0.43	0.087	0.32	0.084			0.010	51.14				50
NCS HC 19606a	Ferrovanadium	0.171	0.901	0.39	0.042	0.194	0.70			0.028	54.68		0.079		100
NCS HC 19607	Silicon Manganese Alloy	1.56	18.41	66.2	0.126					0.022					50
NCS HC 19608	Ferro Molybdenum	0.042	0.32		0.032					0.073				0.134	50
NCS HC 19609	Ferro Molybdenum	0.039	0.039*		0.041					0.085				0.36	25
NCS HC 19610	Vanadium pentoxide		0.40		0.007	0.099			0.43	0.014					50
NCS HC 19611	Vanadium pentoxide		0.102		0.010	0.018			0.061	0.011					50
NCS HC 19612	Ferrovanadium	0.151	0.68	0.12	0.025	0.146	1.26			0.041	80.10		0.025		100

		V_2O_5	K_2O	Na_2	As	Mo	Ni
NCS HC 19606a	Ferrovanadium					0.0026	0.015
NCS HC 19608	Ferro Molybdenum					61.20	
NCS HC 19609	Ferro Molybdenum					58.13	
NCS HC 19610	Vanadium pentoxide	96.68	0.18	0.96	<0.001		
NCS HC 19611	Vanadium pentoxide	98.80	0.14	1.03	<0.001		
NCS HC 19612	Ferrovanadium					0.0016	0.008

Number	Name	Chemical Composition(Percent)													Unit Size
		TV	Si	P	S	Mn	Fe	Cr	Ti	K	Na				(in g)
NCS HC19613	Vanadium Pentoxide	54.40	0.137	0.0078	0.192	0.055	0.30	0.128	0.063	0.11	0.31				25
NCS HC19613a	Vanadium Pentoxide	54.60	0.120	0.0065	0.160	0.030	0.183	0.133	0.042	0.11	0.27				25
NCS HC19613b	Vanadium Pentoxide	54.39	0.112	0.0074	0.172	0.018	0.119	0.147	0.022	0.11	0.25				25

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	W	Mo	B	Ca	(in g)
NCS HC 25602a	Ferromolybdenum	0.020	0.20		0.031	0.042		0.159				62.19			50
NCS HC 25603b	High Carbon Ferro Chrome	7.37	1.27	0.31	0.020	0.015	65.27			0.104					50
NCS HC 25605a	Si-Mn alloy	1.09	18.28	66.3	0.145	0.0104				0.18			0.0063		50
NCS HC 25605b	Si-Mn Alloy		14.20	69.77	0.153	0.0052								2.21	50
NCS HC 25605c	Si-Mn Alloy	0.456	21.87	67.2	0.132	0.0076	0.029	0.019		0.175			0.010		50
NCS HC 25606	Ferro Tungsten	0.055	0.34	0.12	(0.028)	0.048		0.043			76.66				50
NCS HC 25606a	Ferro Tungsten	0.036	0.34	0.102	0.033	0.052		0.079			76.24				50
NCS HC 25616	Ferro Silicon	0.081	76.74	0.17	0.02	0.004	0.14		1.80					0.30	50
NCS HC 25618	Ferro Silicon	0.066	76.42	0.14	0.025	0.003	0.097		0.78					0.19	50
NCS HC 25619a	Medium Carbon Ferro Manganese	1.18	0.75	81.95	0.163	0.0018									50
NCS HC 25619b	Medium Carbon Ferro Manganese	1.2	0.75	81.74	0.163	0.0018									50
NCS HC 25620	Medium Carbon Ferro Manganese	1.50	0.94	80.48	0.153	0.0030									50
NCS HC 25621	Medium Carbon Ferro Manganese	1.40	1.51	79.44	0.344	0.0029									50
NCS HC 25627	Ferro Silicon	0.081	76.74	0.172	0.023	0.004	0.140		1.80					0.30	50
NCS HC 25629	Low Carbon Ferro Manganese	0.300	0.63	84.28	0.196	0.0018									50
NCS HC 25629a	Low Carbon Ferro Manganese	0.31	1.06	81.68	0.196	0.0022									50
NCS HC 25629b	Low Carbon Ferro Manganese	0.560	0.96	80.79	0.169	0.0024									50

		Co	Ni	V	Fe	Sn	As
NCS HC 25603b	High Carbon Ferro Chrome	0.044	0.39	0.138	24.90		
NCS HC 25605c	Si-Mn Alloy	0.020	0.013	0.040	10.01		
NCS HC 25606a	Ferro Tungsten					0.041	0.041

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Number	Name	Chemical Composition(Percent)												Unit Size
		Cr	Si	Mn	P	C	S	Al	Ca	Cu	Ni	B	Ti	N	(in g)
NCS HC 25632	High Carbon Ferro Manganese		0.69	78.41	0.204	6.68	0.0086								50
NCS HC 25633	Silicon chrome Alloy	33.90	44.06	0.29	0.013	0.045	0.002	1.00							50
NCS HC 25635	Low Carbon Ferro Chrome	67.23	1.02	0.31	0.028	0.051	0.003				0.30				50
NCS HC 25636a	Extra Low Carbon Ferro Chrome	62.81	0.32	0.39	0.028	0.028	0.028			0.032	0.34				50
NCS HC 25640	Si-Mn alloy	66.85	24.74	65.85	0.104	0.181	0.010				0.30				50
NCS HC 25640a	Si-Mn Alloy		24.47	65.50	0.117	0.197	0.0079								50
NCS HC 25641	Silicox Manganese		27.88	60.29	0.078	0.082	0.0069				0.30	0.021	0.11		50
NCS HC 25642	Nitrided Ferro Manganese		1.70	71.02	0.183	1.11	0.0065							1.92	50
NCS HC 25643	Silicon chrome	32.62	19.17	0.129	0.0083	0.018	0.0025	1.24							50
NCS HC 25644	High nitrogen Fe-Cr	62.57	0.75		0.024	0.0064	0.029							8.69	50
NCS HC 25646	Si-Mn alloy		32.90	59.34	0.043	0.018	0.0034					0.048	0.24		50
NCS HC 25647	Low carbon Fe-Si	0.010	77.42	0.074	0.012	0.0068	0.003	0.011	0.003				0.043		50
NCS HC 25648	Silicon				0.0065			0.026	0.055				0.023		50
NCS HC 25649	Silicon				0.0067			0.032	0.06				0.026		50
NCS HC 25650	Ferro niobium				0.085	0.074	0.028	0.89		0.023			0.49		50
NCS HC 25651	Medium carbon Fe-Cr	63.31	2.04	0.47	0.023	2.55	0.047								50
NCS HC 25652	Nitride Fe-Si		51.85		0.014	0.35	0.003						0.052	28.15	50
NCS HC 25653	High carbon Fe-Cr	62.49	0.15	0.11	0.025	8.70	0.024						0.016		50
NCS HC 25654	Silicon manganese		19.26	65.29	0.109	0.876	0.0122					0.022	0.19		50
NCS HC 25655	Manganese		0.28	97.43	0.018	0.080	0.016								50
NCS HC 25656	Ferro nickel	3.63	1.04		0.039	3.06	0.246				12.16				50
NCS HC 25657	Si-Mn alloy		25.03	67.96	0.065	0.58	0.011						0.18		50
NCS HC 25658	Ferro boron		1.68		0.017	0.022	0.016	0.99				20.58			50

Number	Name	Co	V	Fe
NCS HC 25636a	Extra Low Carbon Ferro Chrome	0.16	0.098	35.56

Number	Name	Chemical Composition(Percent)												Unit Size
		Cr	Si	Mn	P	C	S	Al*	Mo	Cu	Ni	V	Ti	Zn*	(in g)
NCS HC 26607b	High Carbon Ferrochrome	65.86	2.18	0.38	0.017	7.23	0.020				0.29		0.15		50
NCS HC 26608b	Ferro Vanadium	0.70	0.84	1.64	0.051	0.22	0.0044	0.002				50.57		0.0024	50
NCS HC 26608c	Ferro Vanadium	0.71	0.81	2.00	0.043	0.17	0.0040	0.0025				53.78		0.004	50
NCS HC 26610a	Ferro Molybdenum		0.10		0.044	0.021	0.077		64.84	0.33					50
NCS HC 26610b	Ferro Molybdenum		1.54		0.036	0.042	0.059		61.85	0.29					50
NCS HC 26611b	Silicon Manganese Alloy		18.24	67.44	0.080	1.24	0.009								50
NCS HC 26612a	Vanadium Pentoxide		0.080		0.022										25
NCS HC 26620	Silicon Manganese Alloy		19.15	54.97	0.060	0.40	0.011						0.24		50
NCS HC 26621	Silicon Manganese Alloy		27.49	61.49	0.072	0.039	0.009						0.24		50

Number	Name	Pb	Sn	Sb	As	W	V_2O_5	S*	K_2O	Na_2O	As*	Fe	Al	Mo*
NCS HC 26610a	Ferro Molybdenum	(0.002)	(0.002)	(0.01)	0.015	0.011								
NCS HC 26610b	Ferro Molybdenum		(0.008)	(0.002)	0.008	0.060								
NCS HC 26612a	Vanadium Pentoxide						98.99	0.001	0.12	0.58	0.0008	0.078	0.015	0.0009

Number	Name	Chemical Composition(Percent)								Unit Size
		Si	Mn	Al	Cr	P	Ca	C	S	(in g)
NCS HC 25627a	Ferrosilicon	74.58	0.179	0.74	0.48	0.023	0.056	0.075	0.0038	50

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Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	Fe	V	Mo	As	(in g)
NCS HC 26609	Ferro Titanium	0.048	5.61	2.36	0.035	0.020		0.102	6.21	27.47					50
NCS HC 26612	Ferro Vanadium		0.17		0.027	0.014					0.16			0.016	25
NCS HC 26613	Ferro Titanium	0.019	1.84	1.11	0.020	0.013		0.005		30.24		0.20			50
NCS HC 26614	Ferro Vanadium	0.39	1.35	0.27	0.060	0.013						53.71			50
NCS HC 26615	Nitride manganese		0.0086	91.56		0.031		0.0071			0.038				50

		V_2O_2	K_2O	Na_2O	Alt	Als
NCS HC 26612	Ferro Vanadium	98.09	0.15	1.11		
NCS HC 26613	Ferro Titanium				8.16	8.10
NCS HC 26614	Ferro Vanadium				0.039	

Number	Name	Chemical Composition(Percent)												Unit Size
		Cr_2O_3	SiO_2	Fe_2O_3	Crs	T.C	T.S	As	ZrO_2	Al_2O_3	CaO	MgO	TiO_2		(in g)
NCS HC 26617	Chrome oxide	96.19	0.26	0.054	1.34	0.006	0.002	(0.0001)							20
NCS HC 26618	Zirconium dioxide		0.11	0.054					99.48	0.009	0.17	0.093			20
NCS HC 26619	Titanium dioxide			0.006	1.34	0.011	0.006			0.65			98.21		20

Number	Name	Chemical Composition(Percent)													Unit Size
		Si	Mn	Ti	Fe	Ca	Mg	RE	Ce	La	P	C	S	Cr	(in g)
NCS HC 28609	R_E-Mg Alloy	43.90	0.70	0.54	(31.67)	1.01	10.20	8.66							80
NCS HC 28610	R_E-Mg Alloy	42.05	0.46	0.275	(43.4)	0.76	5.52	3.71	(1.86)	(0.88)					80
NCS HC 28611	R_E-Mg Alloy	43.22	0.55	0.362	(40.7)	0.84	5.70	5.10							80
NCS HC 28612	R_E-Mg Alloy	43.44	0.63	0.435	(36.43)	0.90	8.25	6.42							80
NCS HC 28615	Rare-earth Ferro Silicon	41.02	0.390	0.235		5.60		20.00							100
NCS HC 28616	Silicon Manganese Alloy	14.33	62.530	0.222	20.000						0.205	2.28	0.020	0.060	50
NCS HC 28617	Silicon Manganese Alloy	17.590	64.970	0.221	15.160						0.127	1.570	0.018	0.055	50
NCS HC 28618	Silicon Manganese Alloy	19.340	67.400	0.255	11.650						0.107	1.050	0.017	0.045	50
NCS HC 28619	High-Carbon Ferro Chromium	4.250	0.300	0.412	30.220						0.023	7.280	0.024	56.760	50
NCS HC 28620	High-Carbon Ferro Chromium	3.950	0.382	0.423	31.410						0.022	7.600	0.031	55.770	50
NCS HC 28621	High-Carbon Ferro Chromium	1.450	0.307	0.166	27.090						0.026	7.780	0.033	62.540	50
NCS HC 28622	High-Carbon Ferro Chromium	2.430	0.340	0.261	28.65						0.025	7.720	0.033	60.000	50
NCS HC 28623	Ferro Molybdenum	0.275	0.185		38.480						0.031	0.032	0.047	0.011	50
NCS HC 28624	Ferro Molybdenum	0.367	0.039		37.220						0.044	0.019	0.078	0.052	50
NCS HC 28625	HighCarbon Ferro Manganese	0.525	65.98	0.081	26.420		0.0006				0.805	6.140	0.0034	0.014	50
NCS HC 28626	HighCarbon Ferro Manganese	0.073	66.44	0.0035	26.620		0.0054				0.268	6.260	0.0014	0.032	50
NCS HC 28627	HighCarbon Ferro Manganese	0.208	66.27	0.027	26.600		0.004				0.428	6.230	0.0023	0.026	50
NCS HC 28628	Medium Carbon Ferromanganese	1.840	76.55	0.0065	17.860		0.0036				0.265	1.840	0.017	0.124	50
NCS HC 28629	Low Carbon Ferromanganese	0.475	82.61		16.470		0.0012				0.080	0.296	0.0022	0.033	50
NCS HC 28630	Medium Carbon Ferrochrome	1.430	0.350				0.0012				0.030	0.450	0.0015	58.65	50
NCS HC 28631	Ferroboron	0.180	0.310	0.017							0.025	0.400	0.0023	0.025	50
NCS HC 28632	Ferroboron	0.650	0.575	0.030							0.027	0.190	0.002	0.260	50
NCS HC 28633	Ferrovanadium	0.682	0.663				0.022				0.056	0.285	0.0044	0.110	50
NCS HC 28634	Ferrovanadium	1.890	0.365				0.115				0.093	0.475	0.014	0.289	50
NCS HC 28635	SiCaAl	43.60	0.095		17.53		15.18				0.051	1.000	0.040	0.054	50
NCS HC 28636	SiBaAl	50.36	0.110		16.68		1.44				0.016	0.34	0.038	0.083	50
NCS HC 28637	SiCaBaAl	52.76	0.150		10.54		11.10				0.024	0.63	0.073	0.031	50
NCS HC 28638	Ferro Titanium	4.51	0.362	27.34							0.015	0.033	0.0048	0.055	50

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		Chemical Composition(Percent)												
		Ni	Cu	V	Co	As	Sb	Pb	W	Mo	Sn	Zn	Al	B
NCS HC 28616	Silicon Manganese Alloy	0.167	0.080	0.095	0.048	0.015	0.003	0.001						
NCS HC 28617	Silicon Manganese Alloy	0.092	0.096	0.060	0.035	0.010	0.001	0.001						
NCS HC 28618	Silicon Manganese Alloy	0.036	0.051	0.063	0.017	0.0099	0.0004	0.0001						
NCS HC 28619	High-Carbon Ferro Chromium			0.203										
NCS HC 28620	High-Carbon Ferro Chromium			0.175										
NCS HC 28621	High-Carbon Ferro Chromium			0.138										
NCS HC 28622	High-Carbon Ferro Chromium			0.153										
NCS HC 28623	Ferro Molybdenum	0.033	0.368			0.016	0.004	0.006	0.034	60.61	0.0007			
NCS HC 28624	Ferro Molybdenum	0.144	1.070			0.0078	0.0059	0.0022	0.047	61.00	0.0026			
NCS HC 28625	High Carbon Ferro Manganese	0.032	0.065	0.055		0.0047		0.0092				0.0082		
NCS HC 28626	High Carbon Ferro Manganese	0.109	0.072	0.133		0.0015		0.106				0.026		
NCS HC 28627	High Carbon Ferro Manganese	0.087	0.070	0.110		0.055		0.077				0.022		
NCS HC 28628	Medium Carbon Ferromanganese	0.132	0.152	0.100		0.055		1.300				0.0017		
NCS HC 28629	Low Carbon Ferromanganese	0.0032	0.127	0.041		0.017		0.126				0.011		
NCS HC 28630	Medium Carbon Ferrochrome	0.242	0.020	0.154		0.0027		(0.0001)				0.010		
NCS HC 28631	Ferroboron	0.013	0.015	0.009									0.036	18.92
NCS HC 28632	Ferroboron	0.056	0.050	0.010									0.185	19.33
NCS HC 28633	Ferrovanadium	0.011	0.054	54.02		0.0017		0.0001					0.0026	
NCS HC 28634	Ferrovanadium	0.067	0.064	47.32		0.024		0.0004					0.0061	
NCS HC 28635	SiCaAl	0.026	0.046										16.63	
NCS HC 28636	SiBaAl	0.021	0.032										4.07	
NCS HC 28637	SiCaBaAl	0.007	0.017										5.42	
NCS HC 28638	Ferro Titanium			0.15									7.82	

		Ba	Sr	V_2O_5	K_2O	Na_2O	N	O*
NCS HC 28635	SiCaAl	1.640	0.022					
NCS HC 28636	SiBaAl	24.260	0.095					
NCS HC 28637	SiCaBaAl	15.330	0.042					

Number	Name	Chemical Composition(Percent)												Unit Size
		C	N	V	Si	Mn	P	S	Cr	Fe	Ca	Al	As	O*	(in g)
NCS HC 28639	Vanadium Nitrogen Alloy	9.22	9.44	77.58	0.4	0.0091	0.147	0.0025	0.0032	1.95	0.066	0.24	0.0074	0.5	25
NCS HC 28640	Vanadium Nitrogen Alloy	6.01	13.31	76.73	0.4	0.0045	0.142	0.0019	0.019	1.76	0.1	0.28	0.012	0.7	25
NCS HC 28641	Vanadium Nitrogen Alloy	5.71	14.13	78.04	0.26	0.0065	0.012	0.0013	0.082	0.65	0.064	0.26	0.0014	0.6	25
NCS HC 28642	Vanadium Nitrogen Alloy	3.39	16.64	77.73	0.23	0.005	0.01	0.0016	0.082	0.57	0.044	0.24	0.0012	0.6	25

Number	Name	Chemical Composition(Percent)								Unit Size
		V_2O_5	Si	P	Fe	K_2O	Na_2O	S	As	(in g)
NCS HC 28643	Vanadium Pentoxide	98.44	0.054	0.0056	0.23	0.14	0.81	0.011	0.0013	25

Number	Name	Chemical Composition(Percent)													Unit Size
		Mo	C	Si	Mn	P	S	Cr	Ni	Cu	W	Sn	As	Sb	(in g)
NCS HC 28644	Ferro Molybdenum	59.36	0.017	0.11	0.004	0.037	0.127	0.0072	0.016	0.133	0.144	0.04	0.116	0.017	50
NCS HC 28645	Ferro Molybdenum	57.44	0.014	0.033	0.003	0.047	0.11	0.0065	0.017	0.167	0.164	0.049	0.152	0.013	50

		Pb	Fe
NCS HC 28644	Ferro Molybdenum	0.0015	39.87
NCS HC 28645	Ferro Molybdenum	0.0017	41.78

Section 3 Ferroalloy(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size
		Mn	Si	P	C	S	N	Cr	V_2O_5	Fe	Na_2O	K_2O	As	S*	(in g)
NCS HC 35601	Medium Carbon Ferromanganese	77.7	0.91	0.169	1.81	0.0022									50
NCS HC 35602	Medium Carbon Ferromanganese	79.4	1.26	0.159	1.36	0.0022									50
NCS HC 35603	Medium Carbon Ferromanganese	83.92	1.08	0.153	0.61	0.0024									50
NCS HC 35604	Silicon Manganese Alloy	62.42	27.2	0.07	0.076	0.0096									50
NCS HC 35605	Silicon Manganese Alloy	66.93	18.7	0.142	1.13	0.014									50
NCS HC 35606	Nitrided Ferro Manganese	75.78	1.25	0.147	0.8	0.0082	5.63								50
NCS HC 35607	High-Carbon FerroChromium	0.22	1.18	0.037	8.12	0.022		56.54							50
NCS HC 35608	Vanadium Pentoxide		0.18	0.03					98.05	0.12	0.42	0.17	0.0011	0.0009	50
NCS HC 35609	Ferro Nickel	0.16	2.3	0.054	2.58	0.288		2.25							50
		Cu	Co	Ni											
NCS HC35609	Ferro Nickel	0.023	0.29	10.01											

Number	Name	Chemical Composition(Percent)							Unit Size
		Si	Mn	P	Cr	Al	Fe	Ca	(in g)
NCS HC 37601	Ferro Silicon	68.91	0.177	0.024	0.142	2.18	26.88		80
NCS HC 37602	Ferro Silicon	73.29	0.140	0.022		2.74	21.37	0.616	80

Number	Name	Chemical Composition(Percent)							Unit Size
		Ca	Si	Mn	Ti	Fe	RE	Mg	(in g)
NCS HC 39601	R_E-Mg Alloy	3.21	40.31	2.72	1.50	20.81	20.09	9.50	75
NCS HC 39602	R_E-Mg Alloy	1.98	37.18	3.43	1.92	22.18	21.20	10.56	75
NCS HC 39603	R_E-Mg Alloy	2.65	43.55	2.23	1.35	21.78	18.10	8.51	75

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Co	Sn	As	Sb	(in g)
NCS HC 41601	Ferro Manganese	0.86	0.948	83.35	0.180	0.003	0.335	0.080	0.107	0.03	0.145	0.0019	0.048	0.015	150
		Pb	N	Zn	Fe	Bi									
NCS HC 41601	Ferro Manganese	0.068	0.018	0.12	13.48	0.00005									

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	P	S	Cu	Mo	Mn	Ti	Cr	B	V	Al	Ca	(in g)
NCS HC 37603	Ferro Molybdenum	0.054	0.30	0.046	0.071	0.126	61.41								50
NCS HC 37604	Ferro Molybdenum	0.044	0.71	0.046	0.069	0.117	57.65								50
NCS HC 37605	Si-Mn Alloy	1.55	17.67	0.14	0.024			65.64							50
NCS HC 37606b	Silicon Manganese Alloy	2.26	13.87	0.42	0.040			60.13	0.25						50
NCS HC 37607	Low carbon ferro Chrome	0.086	1.39	0.034	0.005			0.35		64.32					40
NCS HC 37608	Low carbon ferro Chrome	0.243	0.99	0.039	0.019			0.34		64.06					40
NCS HC 37609	High carbon ferro Chrome	8.49	2.15	0.024	0.015			0.20	0.24	61.54					50
NCS HC 37611	High Carbon Ferro manganese	6.57	0.64	0.382	0.009			65.75							50
NCS HC 37612	Silicon Manganese Alloy	1.1	18.96	0.178	0.016			67.02	0.276						50
NCS HC 37614	Ferro Manganese	0.939	1.71	0.130				81.11				0.075			100
NCS HC 37615	High Carbon Ferrochrome	8.78	0.78	0.023	0.025				0.097	63.50					50
NCS HC 37616	Ferro Vanadium	0.081	0.50	0.016	0.012			0.58				49.72	5.18		50
NCS HC 37617	High Carbon Ferrochrome	8.32	1.91	0.021	0.040					59.35					50
NCS HC 37618	High Carbon Ferrochrome	8.44	0.30	0.026	0.026					69.12					50
NCS HC 37619	Carbon Chromium Alloy	12.53	0.22		0.008					83.83					50
NCS HC 37620	Si-Ca Alloy	0.68	60.09	0.017	0.033									30.70	50
NCS HC 37621	Si-Ca Alloy	0.71	60.19	0.031	0.020									25.25	50
		Als													
NCS HC 37620	Si-Ca Alloy	1.09													
NCS HC 37621	Si-Ca Alloy	1.55													

Number	Name	Chemical Composition(%)											Unit Size
		C	S	Si	Mn	P	Cr	Ni	Cu	Al	Fe	Ca	Ti		(in g)
NCS HC 93616	Ferrosilicon	0.208	0.0033	73.61	0.237	0.023	0.022	0.0069	0.019	2.14	21.06	2.05	0.121		80
NCS HC 93617	Ferrosilicon	0.220	0.0039	76.34	0.237	0.025	0.027	0.0056	0.015	1.75	19.43	1.31	0.119		80

Section 3 Ferroalloy(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	S	Si	Mn	P	Cr	Al	Ca	Fe	Cu	Ni	Ti	Mo	(in g)
NCS HC 93601	Ferrosilicon	0.148	0.0026	75.46	0.588	0.021	0.044	1.4	1.15	20.23	0.019	0.0093	0.097		50
NCS HC 93602	Ferrosilicon	0.196	0.0052	74.8	11.09	0.024	0.052	1.28	0.986	20.96	0.013	0.0071	0.106		50
NCS HC 93603	Ferrosilicon	0.095	0.0023	76.53	0.281	0.019	0.043	1.52	1.373	19.07	0.025	0.012	0.085		50
NCS HC 93604	Micro Carbon Ferrochrome	0.038	0.015	0.466	0.103	0.022	68.13					0.26	0.016		50
NCS HC 93605	High Carbon Ferrochromium	8	0.037	2.94	0.308	0.037	59.71					0.312	0.41		50
NCS HC 93606	Ferro Molybdenum	0.073	0.044	0.19		0.037					0.494			56.12	50
NCS HC 93607	Ferro Niobium	0.101	0.013	1.04		0.194		1.5			0.038		0.585		50
NCS HC 93608	Ferro Titanium	0.095	0.015	0.3	0.255	0.014		3			0.281		32.22		50
NCS HC 93609	High Carbon Ferrochromium	8.36	0.068	1.15	0.207	0.023	58.28								50
NCS HC 93610	High Carbon Ferrochromium	7.99	0.03	0.26	0.225	0.018	70.15								50
NCS HC 93611	High Carbon Ferrochromium	8.13	0.059	0.92	0.21	0.022	60.42								50
NCS HC 93612	Si-Ca Alloy	2.44	0.1325	5.31		0.019		1.88	28.25	6.08					50
NCS HC 93613	Si-Ca Alloy	1.30	0.088	56.2		0.018		1.77	31.67	5.58					50
NCS HC 93622	Ferro Phosphorus	0.228	0.017	0.156	0.70	27.50	0.226						0.53		50
NCS HC 93623	Ferroboron	0.45	0.0044	0.44		0.025		0.083					0.019		50
NCS HC 93624	Silicon Manganese Alloy	1.79	0.024	16.87	64.86	0.120									50
NCS HC 93625	Silicon Manganese Alloy	1.66	0.026	17.19	65.74	0.151									50
NCS HC 93626	Silicon Manganese Alloy	1.91	0.020	16.42	63.80	0.097									50
NCS HC 93627	Si-Ca Alloy	1.02	0.045	57.43		0.030		1.76	28.02	6.94					50
NCS HC 93628	Ferro Vanadium	0.130	0.016	0.730	0.474	0.042		6.10							30
NCS HC 93628a	Ferro Vanadium	0.152	0.017	0.730	0.475	0.043		6.03							30
NCS HC 93629	Ferro Vanadium	0.032	0.014	0.86	0.046	0.036		1.33							25
NCS HC 93630	Vanadium Nitride Alloy	3.96	0.0014	0.061	0.082	0.0075		0.164							25
NCS HC 93631	Si-Ca-Ba-Al Alloy	0.78	0.044	37.19	0.43	0.032		13.46	5.16	27.56					50
NCS HC 93632	Si-Ba Alloy	0.99	0.13	47.56	0.16	0.024		2.78		11.75					50
NCS HC 93633	Si-Al Alloy	0.45	0.022	28.31	0.426	0.023		29.67		37.44					50
NCS HC 93634	Si-Ba-Ca Alloy	0.64	0.204	52.62	0.104	0.022		1.82	14.08	12.97					50
NCS HC 93635	SiAlFe	1.90	0.015	27.36	0.18	0.072		38.51		26.23					50
NCS HC 93636	SiAlFe	0.11	0.0071	26.11	1.70	0.021		36.22							50
NCS HC 93637	Silicon Manganese Alloy	1.80	0.023	17.54	65.70	0.023									100
NCS HC 93638	Ferrosilicon	0.9	0.037	65.74	0.182	0.025	0.099	1.27	3.15	18.67	0.054	0.029	0.131		50
NCS HC 93639	Ferrosilicon	0.73	0.01	41.29	0.256	0.03	0.11	2.4	0.28	52.26	0.132	0.056	0.209		50
NCS HC 93640	Ferrosilicon	1.12	0.055	63.21	0.15	0.022	0.088	1.33	4.4	16.85	0.069	0.024	0.125		50
NCS HC 93641	Ferrosilicon	0.44	0.013	71.2	0.242	0.028	0.089	1.21	1.26	22.07	0.033	0.035	0.137		50
NCS HC 93642	Ferrosilicon	0.56	0.013	73.39	0.216	0.032	0.084	1.12	1.14	18.96	0.032	0.046	0.135		50
NCS HC 93643	Nitrided Ferro Silicon	0.52	0.019	49.67		0.018		0.72	0.45	15.08			0.071		50

		Sb	Nb	Ta	B	V	N	Ba	Mg	Sr	Si_3N_4
NCS HC 93606	Ferro Molybdenum	0.036									
NCS HC 93607	Ferro Niobium		64.6	0.097							
NCS HC 93623	Ferroboron				18.69						
NCS HC 93628	Ferro Vanadium					50.24					
NCS HC 93628a	Ferro Vanadium					50.09					
NCS HC 93629	Ferro Vanadium					80.90					
NCS HC 93630	Vanadium Nitride Alloy					77.73	14.57				
NCS HC 93631	Si-Ca-Ba-Al Alloy							10.00	0.098		
NCS HC 93632	Si-Ba Alloy							27.54			
NCS HC 93634	Si-Ba-Ca Alloy							14.14	0.051	0.063	
NCS HC 93643	Nitrided Ferro Silicon										29.65

Number	Name	Chemical Composition(%)			Unit Size
		Si	Al	Fe	(in g)
NCS HC 93614	SiAlFe	33.75	31.91	27.84	50
NCS HC 93615	SiAlFe	29.87	34.80	30.47	50

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	SiO_2	Al_2O_3	MnO	FeO	P	S	Cu	K_2O	Na_2O	MgO	CaO	Pb	(in g)
NCS DC 11001	Magnetite	44.73	18.22	0.75	0.20	12.91	0.013	1.50				4.18	7.14		60
NCS DC 11013	Iron ore	34.07	48.27	0.74	0.093	20.15	0.054	0.118	0.0031	0.165	0.065	2.86	0.99	0.028	70
NCS DC 11015	Iron ore	69.58	2.67	0.31	0.061	29.37	0.0064	0.048	0.0021	0.035	0.017	0.26	0.19	0.0004	70
NCS DC 11017	Iron ore	63.33	5.56	1.13	0.086	1.76	0.011	0.003	0.0045	0.115	0.07	1.3	1.05	0.0006	70
NCS DC 11018	Iron ore	56.02	4.5	2.20	0.355	7.78	56.02	0.023	0.0044	0.038	0.057	2.87	9.89	0.0031	70

		Zn	TiO_2	As
NCS DC 11013	Iron ore	0.0045	0.043	0.0003
NCS DC 11015	Iron ore	0.0039		
NCS DC 11017	Iron ore	0.0059		0.0006
NCS DC 11018	Iron ore	0.065		0.0014

Number	Name	Chemical Composition(Percent)											Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	P	S	FeO	Cu	C	Fe_2O_3	L.O.I	(in g)
NCS DC 11003a	Dolomite		0.098	0.083	31.49	21.06	0.0016	0.011				0.024	46.71	70
NCS DC 11004a	Iron ore	54.86	8.27	2.85	0.63	0.524	0.119	0.258	1.17	0.068	0.31			60
NCS DC 11005a	Iron ore	63.34	3.36	0.52	0.12	0.146	0.016	0.107	0.07#	0.034	0.119			60
NCS DC 11006a	Iron ore	54.74	8.53	1.48	1.02	0.657	0.036	0.439	3.9	0.102	0.227			60
NCS DC 11007a	Iron ore	52.24	10.2	6.84	0.561	0.606	0.346	0.094	4.21	0.015	0.549			60
NCS DC 11008a	Iron ore	57.54	7.08	2.14	1.25	0.75	0.073	0.442	8.42	0.095	0.204			60
NCS DC 11009a	Iron ore	61.96	4.92	0.914	0.375	0.364	0.027	0.212	15.13	0.063	0.128			60

		Pb	Zn	Na_2O	K_2O	MnO	As	TiO_2	BaO	Co	Ti	Sr
NCS DC 11003a	Dolomite			0.017	0.0030	0.061					0.0043	0.021
NCS DC 11004a	Iron ore	0.101	0.144	0.047	0.26	1.04	0.096	0.12	0.86*	0.0054		
NCS DC 11005a	Iron ore	0.035	0.026	0.02	0.07	0.84	0.0044	0.034	0.62*	0.0031		
NCS DC 11006a	Iron ore	0.182	0.3	0.048	0.214	1.31	0.215	0.154	1.08*	0.0086		
NCS DC 11007a	Iron ore	0.034	0.066	0.093	0.61	0.194	0.051	0.237	0.028*	0.0043		
NCS DC 11008a	Iron ore	0.192	0.362	0.042	0.24	0.623	0.291	0.199	0.42*	0.011		
NCS DC 11009a	Iron ore	0.042	0.054	0.024	0.093	0.947	0.011	0.447	0.71*	0.0061		

Number	Name	Chemical Composition(Percent)											Unit Size
		TMn	MnO_2	TFe	SiO_2	Al_2O_3	CaO	MgO	TiO_2	K_2O	Na_2O	Cr	FeO	(in g)
NCS DC 11019	Manganese ore	18.36	25.59	8.89	21.94	5.66	2.83	0.611	0.206	1.04	0.045	0.012		60
NCS DC 11020	Manganese ore	22.31	30.34	9.66	28.11	7.69	2.36	1.72	0.27	1.11	0.056	0.026		60
NCS DC 11021	Manganese ore	26.53	36.6	11.01	22.1	6.99	2.31	0.774	0.247	1.01	0.064	0.019		60
NCS DC 11022	Manganese ore	29.48	41.76	10.22	19.84	6.49	1.82	0.65	0.224	0.89	0.062	0.018		60
NCS DC 11023	Manganese ore	35.54	52.73	10.25	13.03	3.8	2.34	0.78	0.143	0.396	0.053	0.0053		60
NCS DC 11024	Sintered Ore			55.37	5.64	2.19	10.76	2.14		0.082	0.045		(8.20)	70
NCS DC 11025	Pellet Ore			61.37	6.59	1.35	1.04	0.80		0.111	0.105		(1.92)	70

		Ni	Cu	V	P	Pb	As	Zn	BaO	S	MnO	TiO_2
NCS DC 11019	Manganese ore	0.049	0.014	0.014	0.202	0.08	0.031	0.118	0.43	0.114		
NCS DC 11020	Manganese ore	0.089	0.021	0.02	0.171	0.12	0.034	0.1	0.54	0.109		
NCS DC 11021	Manganese ore	0.073	0.021	0.02	0.163	0.124	0.052	0.164	0.8	0.084		
NCS DC 11022	Manganese ore	0.072	0.018	0.02	0.15	0.107	0.062	0.143	1.04	0.082		
NCS DC 11023	Manganese ore	0.023	0.011	0.016	0.105	0.058	0.112	0.066	1.62	0.052		
NCS DC 11024	Sintered Ore				0.056			0.0062		0.017	0.36	0.125
NCS DC 11025	Pellet Ore				0.093			0.012		0.021	0.120	1.61

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Number	Name	(×10^{-2})											Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	P	S	K_2O	Na_2O	MnO	TiO_2	V_2O_5	(in g)
NCS DC11014a	Iron ore concentrate	66.67	6.08	0.32	0.097	0.046	0.017	0.0083	0.016	0.0077	0.27	0.491	0.25	70
NCS DC11015a	Iron ore concentrate	69.47	0.64	0.323	0.67	0.222	0.094	0.22	0.011	0.0068	0.28	0.51	0.26	70
NCS DC11016a	Iron ore concentrate	67.55	3.08	0.783	0.356	0.42	0.048	0.098	0.076	0.014	0.272	0.505	0.25	70
NCS DC11024a	Sintered ore	56.64	5.04	2.12	10.3	1.21	0.088	0.02	0.059	0.074	0.311	0.195		70
NCS DC11024b	Sintered ore	55.08	5.45	1.11	9.98	3.56	0.035	0.017	0.088	0.072	0.67	0.559	0.113	70
NCS DC11025a	Pellet ore	62.4	7.7	0.839	0.651	1.17	0.017	0.0023	0.075	0.094	0.199	0.191	0.028	70
NCS DC11025b	Pellet ore	65.53	3.01	0.61	0.545	2	0.014	0.011	0.087	0.221	0.046	0.088		70

		Zn	FeO
NCS DC11014a	Iron ore concentrate	0.027	26.3
NCS DC11015a	Iron ore concentrate	0.029	27.41
NCS DC11016a	Iron ore concentrate	0.028	26.57
NCS DC11024a	Sintered ore		8.16
NCS DC11024b	Sintered ore	0.049	10.19
NCS DC11025a	Pellet ore	0.013	(0.97)
NCS DC11025b	Pellet ore		(0.82)

Number	Name	(×10^{-2})											Unit Size
		TMn	MnO_2	TFe	SiO_2	Al_2O_3	CaO	MgO	TiO_2	K_2O	Na_2O	Cr	Ni	(in g)
NCS DC11026	Nickel ore			18.01	39.80	2.93	0.89	15.86	0.041	0.007	0.068	0.76	1.74	35
NCS DC11027	Mangnaese	48.93	72.89	5.07	6.16	3.20	0.10	0.12	0.15	1.32	0.19	0.0074	0.011	70
NCS DC11028	Mangnaese	42.44	62.66	7.76	9.08	5.56	0.17	0.11	0.23	1.76	0.25	0.011	0.0077	70
NCS DC11029	V Ti Magnetite			51.67	4.06	4.99	0.52	2.02	13.54	0.0081	0.023			70
NCS DC11030	V Ti Magnetite			49.12	5.52	5.1	1.16	2.3	12.8	0.023	0.073			70
NCS DC11031	V Ti Magnetite			46.74	8.19	5.49	1.18	2.6	12.24	0.021	0.057			70
NCS DC11032	Iron ore concentrate			70.69	0.293	0.32	0.066	0.045	0.535	0.012	0.01			70

		Cu	V	P	Pb	Co	Zn	BaO	S	MnO	V_2O_5	FeO
NCS DC11026	Nickel ore		0.010	(0.0021)		0.037	0.017		0.011	0.43		
NCS DC11027	Mangnaese	0.0067	0.041	0.089	0.0063	0.017	0.015	0.99	0.0084			
NCS DC11028	Mangnaese	0.0056	0.042	0.066	0.0072	0.014	0.013	0.32	0.0073			
NCS DC11029	V Ti Magnetite			0.046			0.045		0.259	0.238	0.59	27.3
NCS DC11030	V Ti Magnetite			0.179			0.044		0.382	0.24	0.553	26.44
NCS DC11031	V Ti Magnetite			0.101			0.041		0.21	0.226	0.539	24.39
NCS DC11032	Iron ore concentrate			0.012			0.03				0.258	27.98

Number	Name	(×10^{-2})											Unit Size
		Zn	TFe	SiO_2	Al_2O_3	MnO	FeO	P	S	TiO_2	K_2O	Na_2O	MgO	(in g)
NCS DC 13019c	Iron Concentrate	0.0030	68.96	3.98	0.174	0.049	28.98	0.010	0.0277	0.0174	0.0068	0.0060	0.268	50
NCS DC 13033	Iron Ore		35.36	48.50	0.11	0.125	5.18	0.022	0.0064	0.007			0.20	50
NCS DC 13034	Iron Ore		58.70	14.47	0.54	0.061	26.09	0.584	0.047	0.014			0.30	50

		CaO	Pb
NCS DC 13019c	Iron Concentrate	0.196	0.0052
NCS DC 13033	Iron Ore	0.13	
NCS DC 13034	Iron Ore	1.77	

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Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	SiO_2	Al_2O_3	MnO	FeO	P	S	Cu	K_2O	Na_2O	MgO	CaO	Ni	(in g)
NCS DC 14001a	Iron Ore	64.88	3.48	1.59		(0.37)	0.055	0.015		0.085	0.012	0.044	0.080		50
NCS DC 14003d	Sintered Iron Ore	51.69	7.39	1.79		6.88	0.057	0.044	0.029	0.17	0.098	4.12	12.06		50
NCS DC 14004b	Pellet Iron Ore	62.79	5.31	1.32		0.72	0.016	0.012	0.071	0.25	0.112	1.58	1.16		50
NCS DC 14006a	Siderite	43.66	3.99	0.60		37.96	0.034	1.46	0.088	0.20	0.024	3.84	3.38	0.0060	50
NCS DC 14007a	Hematite	61.73	9.82	0.48		1.51	0.024	0.036	0.061	0.056	0.0056	0.055	0.11	0.0023	50
NCS DC 14010a	Iron Ore	58.52	7.77	2.71		19.03	0.019	0.092	0.048	0.272	0.057	1.31	1.82		50
NCS DC 14011a	Iron Ore	49.86	9.79	2.46		20.20	0.057	2.11	0.059	0.32	0.144	2.30	4.28		50
NCS DC 14013a	Iron Ore	55.56	8.10	1.98		22.60	0.029	1.84	0.40	0.33	0.075	2.13	3.33		50
NCS DC 14014a	Limestone		0.22	0.093	0.005		0.0011	0.043		0.019	0.007	0.29	55.34		50
NCS DC 14017a	Limestone		1.13	0.51	0.014		0.0013	0.201		0.093	0.020	0.56	53.93		50
NCS DC 14019a	Dolomite		0.021	0.017	0.032		0.0010	0.018		0.0010	0.023	20.37	32.11		50
NCS DC 14020a	Dolomite		0.25	0.11	0.020		0.0012	0.046		0.019	0.015	15.38	37.59		50
NCS DC 14021a	Dolomite		0.048	0.025	0.020		0.0012	0.009		0.0011	0.013	17.88	35.02		50
NCS DC 14022	Fluorspar		4.72				0.0025	0.029		0.019	0.005				65
NCS DC 14022a	Fluorspar	0.166	3.06				0.014	0.35		0.026	0.006				65
NCS DC 14023	Fluorspar		8.35				0.0031	0.090		0.026	0.005				65
NCS DC 14024	Fluorspar		6.84				0.0024	0.043		0.029	0.006				65
NCS DC 14024a	Fluorspar	0.22	5.44				0.0014	0.009		0.040	0.006				65
NCS DC 14025	Fluorspar		14.15				0.0013	0.045		0.044	0.005				65
NCS DC 14033	Hematite	61.68	9.82	0.48		1.43	0.024	0.036	0.061	0.055	0.006	0.054	0.11	0.0023	50
NCS DC 14038	Siderite	43.66	3.99	0.60		37.96	0.034	1.46	0.087	0.20	0.024	3.85	3.37	0.0058	50
NCS DC 14043	Hematite	57.78	11.18	1.52			1.48	0.046	0.187	0.066	0.22	0.023	0.54	0.56	50

		Chemical Composition(Percent)											
		Mn	Ti	L.O.I	Fe_2O_3	SrO	CaF_2	$CaCO_3$	Co	TiO_2	Pb	Zn	As
NCS DC 14001a	Iron Ore	0.056	0.044										
NCS DC 14003d	Sintered Iron Ore	0.369	0.084										
NCS DC 14004b	Pellet Iron Ore	0.13								0.113		0.042	
NCS DC 14006a	Siderite	0.235	0.013						0.016				
NCS DC 14007a	Hematite	0.027	0.041						0.0048				
NCS DC 14010a	Iron Ore	0.63								0.121	0.008	0.134	
NCS DC 14011a	Iron Ore	0.143								0.150		0.030	0.024
NCS DC 14013a	Iron Ore	0.31								0.103	0.009	0.062	0.035
NCS DC 14014a	Limestone			43.16	0.085								
NCS DC 14017a	Limestone			42.88	0.258								
NCS DC 14019a	Dolomite			46.98	0.224								
NCS DC 14020a	Dolomite			45.88	0.459								
NCS DC 14021a	Dolomite			46.73	0.495								
NCS DC 14022	Fluorspar				0.096		94.91	(0.02)					
NCS DC 14022a	Fluorspar						93.68	0.30					
NCS DC 14023	Fluorspar				0.124		90.87	(0.02)					
NCS DC 14024	Fluorspar				0.124		92.57	(0.02)					
NCS DC 14024a	Fluorspar						93.28	0.62					
NCS DC 14025	Fluorspar				0.209		85.21	(0.02)					
NCS DC 14033	Hematite	0.026	0.048						0.0048				
NCS DC 14038	Siderite	0.235	0.013						0.016	0.077			
NCS DC 14043	Hematite	0.104	0.070										

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Number	Name	Chemical Composition(Percent)												Unit Size
		CaF_2	SiO_2	$CaCO_3$	S	P	K_2O	Na_2O	TFe	Al_2O_3	FeO	TiO_2	MgO	CaO	(in g)
NCS DC 14047	Fluospor	65.80	31.04	0.060	0.26	0.0027	0.093	0.009	0.49						65
NCS DC 14048	Fluospor	76.79	21.10	0.34	0.11	0.0021	0.081	0.007	0.40						65
NCS DC 14049	Iron Ore		4.62		0.020	0.037	0.33	0.027	63.86	2.04	0.25	0.12	0.056	0.082	65
NCS DC 14050	Limestone		7.97		0.039	0.0033	0.021	0.015		0.36			9.45	42.62	50

		Mn	Fe_2O_3	MnO	L.O.I	Ti	Sr
NCS DC 14049	Iron Ore	0.17					
NCS DC 14050	Limestone		0.260	0.015	38.80	0.0096	0.017

Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	P	TiO_2	S	K_2O	Na_2O	Cu	(in g)
NCS DC 14009a	Sintered Ore	55.58	20.06	9.95	2.38	3.62	5.99	0.097	0.017	0.266	0.106	0.316	0.068	0.017	50
NCS DC 14014b	Limestone			0.073	0.079	55.12	0.73	0.0058	0.0013		0.010	0.0030	0.0075		50
NCS DC 14015b	Limestone			2.06	0.74	51.41	2.31	0.013	0.0021		0.273	0.0062	0.0073		50
NCS DC 14017b	Limestone			0.85	0.61	54.11	0.79	0.0074	0.0017		0.182	0.0038	0.021		50
NCS DC 14018b	Dolomite			0.77	0.23	31.96	19.92	0.031	0.0023		0.010	0.030	0.033		70
NCS DC 14019b	Dolomite			1.30	0.18	34.82	17.34	0.0072	0.0057		0.009	0.027	0.019		70
NCS DC 14020b	Dolomite			4.21	0.92	35.73	15.28	0.022	0.0032		0.030	0.017	0.015		70
NCS DC 14028d	Magnetite Concentrate	64.37	20.96	2.95	1.10	1.17	1.30		0.013		0.371	0.036	0.017		100

		Zn	Fe_2O_3	L.O.I	Ti	Sr	Mn
NCS DC 14009a	Sintered Ore	0.011					
NCS DC 14014b	Limestone		0.341	43.53	0.0010	0.025	
NCS DC 14015b	Limestone		0.838	41.79	0.0071	0.023	
NCS DC 14017b	Limestone		0.319	42.79	0.0021	0.024	
NCS DC 14018b	Dolomite		0.269	46.24	0.011	0.0081	
NCS DC 14019b	Dolomite		0.447	45.37	0.085	0.021	
NCS DC 14020b	Dolomite		0.533	42.69	0.025	0.026	
NCS DC 14028d	Magnetite Concentrate				0.294		0.147

Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	P	S	Cu	Mn	Ti	K_2O	Na_2O	(in g)
NCS DC 14202	Sintering ore	52.77	6.55	7.51	2.54	11.33	2.02	0.060	0.033	0.012	0.199	0.062	0.078	0.033	50
NCS DC 14203	Sintering ore	57.63	10.80	5.38	1.37	8.17	1.65	0.102	0.025	0.0063	0.174	0.113	0.065	0.046	50
NCS DC 14204	Sintering ore	54.62	9.26	7.94	1.49	9.29	1.74	0.039	0.024	0.014	0.193	0.092	0.046	0.019	50
NCS DC 14205	Sintering ore	53.99	9.34	6.61	2.69	10.28	2.31	0.061	0.017	0.0087	0.190	0.099	0.078	0.037	50
NCS DC 14206	Sintering ore	51.13	9.22	8.58	2.44	9.46	4.40	0.066	0.059	0.007	0.179	0.094	0.080	0.040	50
NCS DC 14208	Iron Ore	65.56	26.01	6.09	0.28	0.11	0.11	0.0155	0.0045	0.001	0.135	0.283	0.009	0.006	50

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Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	P	S	K_2O	Na_2O	TMn	TiO_2	MnO_2	As	(in g)
NCS DC 14209	Manganese Ore	8.83	21.83	5.57	12.70	0.60	0.199	0.115	1.04	0.046	18.26	0.20	25.41	0.031	50
NCS DC 14210	Manganese Ore	9.66	28.05	7.47	2.46	1.67	0.171	0.100	1.11	0.061	22.09	0.26	30.28	0.034	50
NCS DC 14211	Manganese Ore	10.96	21.85	6.91	2.30	0.74	0.163	0.084	0.99	0.059	26.25	0.24	36.87	0.051	50
NCS DC 14212	Manganese Ore	10.16	19.80	6.48	1.87	0.65	0.149	0.079	0.86	0.058	29.40	0.22	42.13	0.059	50
NCS DC 14213	Manganese Ore	10.28	13.04	3.77	2.47	0.75	0.104	0.053	0.40	0.056	35.71	0.14	53.06	0.107	50

Number	Name	Chemical Composition(Percent)											Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	P_2O_5	MnO	K_2O*	Na_2O	TiO_2	L.O.I	(in g)
NCS DC 14214	Magnesia	0.595	0.507	0.53	1.24	96.75	0.058	0.052	0.005	0.025	0.019	0.19	50
NCS DC 14215	Magnesia	2.09	0.26	0.819	1.63	94.1	0.125	0.052	0.005	0.009	0.018	0.89	50
NCS DC 14216	Magnesia	6.55	0.714	0.799	2.42	87.26	0.037	0.051	0.009	0.034	0.027	2.07	50

Number	Name	Chemical Composition(Percent)										Unit Size
		TFe	SiO_2	Al_2O_3	MnO	P	S	Cu	TiO_2	MgO	CaO	(in g)
NCS DC 15001	Iron Ore	62.52	4.88	2.66	0.061	0.056	0.0152	0.0016	0.104	0.044	0.023	100
NCS DC 15002a	Iron Ore	55.81	13.00	1.93	0.026	0.011	0.469	0.134	0.083	0.36	1.10	50
NCS DC 15004	Zhao-Cheng Iron Ore	47.86	27.95	1.12	0.082	0.032	0.235	0.0023	0.068	0.96	1.72	100
NCS DC 15005	Import Iron	62.36	4.69	2.56	0.112	0.073	0.022	0.0019	0.113	0.062	0.050	100
NCS DC 15006	Magnetite	64.97	6.80	0.27	0.053	0.022	0.76	0.0020	0.055	0.42	0.52	100
NCS DC 15007	Sintered Ore	51.63	7.61	2.01	0.115	0.066	0.072	0.0025	0.127	1.24	15.79	100

		K_2O	Na_2O	FeO	As	Pb	Zn
NCS DC 15002a	Iron Ore	0.433	0.33	1.86	0.23	0.319	0.161
NCS DC 15004	Zhao-Cheng Iron Ore	0.062	0.043	21.99			
NCS DC 15005	Import Iron	0.015	0.015	0.48			
NCS DC 15006	Magnetite	0.028	0.015	29.84			
NCS DC 15007	Sintered Ore	0.104	0.035	12.85			

Number	Name	Chemical Composition(Percent)											Acid	Unit Size
		TFe	SiO_2	Al_2O_3	Mn	P	S	MgO	FeO	CaO	MnO	TMn	B_2O_3	insoluble	(in g)
NCS DC 16002	Iron Concentrate	71.79	0.36	0.069	0.053	0.0022	0.055	0.038	28.69						100
NCS DC 16004	Manganese ore	3.65	10.76	1.21		0.314		1.11		15.95	44.24	30.16			60
NCS DC 16005	Iron ore	52.98	4.51			0.016	1.242	11.64	26.13	0.149			5.65	4.72	100
NCS DC 16006	Limestone		3.72	0.885		0.0054	0.101	4.55		65.20	0.013				15

		K_2O	Na_2O	Fe_2O_3	L.O.I
NCS DC 16006	Limestone	0.19	0.021	0.46	25.06

Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	SiO_2	Al_2O_3	MnO	FeO	P	S	TiO_2	K_2O	Na_2O	MgO	CaO	(in g)
NCS DC 18011	Iron Ore	61.80	4.52	3.05	0.170	0.30	0.076	0.022	0.134			0.102	0.051	100
NCS DC 18012	Iron Ore	55.51	7.62	5.54	0.455	9.04	0.376	0.023	0.129	0.069		0.67	0.42	100
NCS DC 18014	Iron Ore	65.87	3.15	1.39	0.042	0.43	0.073	0.021	0.061	0.197		0.023		100
NCS DC 18016	Iron Ore	52.31	7.10	3.02	0.215	7.69	0.074	0.038	0.90	0.134	0.043	2.69		100
NCS DC 18017	Sintering ore	48.44	8.40	2.98	0.81	11.17	0.065	0.155	0.23			2.32		100
NCS DC 18018	Sintering ore	54.90	5.81	2.34	0.29	7.87	0.064	0.036	0.50			2.41		100
NCS DC 18019	Sintering ore	54.03	6.11	2.57	0.70	7.98	0.073	0.027	0.24			2.71		100
NCS DC 18020	Sintering ore	41.81	10.21	3.23	1.80	21.87	0.159	0.302	0.50			4.85		100

		CaO	As	Zn	Pb
NCS DC 18014	Iron Ore	0.15			
NCS DC 18015	Iron Ore	9.25			
NCS DC 18016	Iron Ore	11.18			
NCS DC 18017	Sintering ore	15.52	0.030	0.13	0.061
NCS DC 18018	Sintering ore	10.36			
NCS DC 18019	Sintering ore	10.50	0.021		
NCS DC 18020	Sintering ore	18.30	0.051	0.223	0.208

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	SiO_2	Al_2O_3	MnO	P	TiO_2	MgO	CaO					
NCS DC 19013	Iron Ore	42.89	22.08	4.1	1.66	0.099	0.26	0.51	0.124					50

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		SiO_2	Al_2O_3	CaO	MgO	V_2O_5	FeO	MnO	TFe	K_2O	Cr_2O_3	P	S	Zn	
NCS DC19008a	V-Ti Magnetite	28.36	11.11	10.71	11.79	0.158	13.92	0.268	18.54	0.189		0.108	0.285		100
NCS DC 19003b	V-Ti Iron Concentrate	1.4	3.36	0.055	1.34	0.78	26.53	0.43	59.51		0.042	0.0049	0.013	0.028	70
NCS DC 19003c	V-Ti-Iron Concentrate	2.96	3.33	0.326	3.14	0.708	33.43	0.434	56.68	0.012	0.033	0.0042	0.406		100
NCS DC 19016	V-Ti Pellet	6.43	3.07	1.08	1.88	0.51	1.01	0.199	55.23	0.123	0.34	0.037	0.0087	0.033	100
NCS DC 19017	Titanium concentrate	5.99	1.64	1.75	5.18	0.09	32.56	0.709	29.12		0.014	0.117	0.008		100
NCS DC 19018	Titanium concentrate	11.73	4.47	3.14	6.88	0.101	29.7	0.524	27.3		0.0085	0.558	0.028		100
NCS DC 19019	Titanium concentrate	0.578	0.53	0.028	0.32	0.137	25.05	1.55	34.56		0.054	0.0048	0.01		100
NCS DC 19020	V-Ti sintered Ore	5.50	3.28	9.94	3.05	0.481	7.76	0.426	49.42	0.166		0.028	0.026		100

		Co	Ni	TiO_2	Na_2O	Co*	Cu*	Ni*	Cr*
NCS DC19008a	V-Ti Magnetite			7.56	0.735	0.010	0.012	0.008	0.002
NCS DC 19003b	V-Ti Iron Concentrate	0.015	0.014	10.21					
NCS DC 19003c	V-Ti-Iron Concentrate		0.025	10.25	0.036				
NCS DC 19016	V-Ti Pellet	0.01	0.021	7.69	0.173				
NCS DC 19017	Titanium concentrate			45.71					
NCS DC 19018	Titanium concentrate			33.94					
NCS DC 19019	Titanium concentrate			49.78					
NCS DC 19020	V-Ti sintered Ore			7.12	0.061				

Number	Name	Chemical Composition(Percent)										Unit Size (in g)
		TFe	SiO_2	Al_2O_3	MnO	P	S	TiO_2	MgO	CaO	L.O.I	
NCS DC 21001	Serpentinite	5.47	41.37	3.34	0.131	0.012	0.066	0.180	34.25	2.97	8.86	50

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	SiO_2	Al_2O_3	P	S	MgO	CaO	Cr_2O_3	Ca	Al	Fe	Mn	Ti	
NCS DC 25002	Chromite	9.71	11.71	10.97	0.0072	0.0017	20.59	0.82	36.31						100
NCS DC 25007	Silicon used in Industry									0.34	0.24	0.39			50
NCS DC 25008	Manganese Ores		9.51	6.81	0.091		0.077	0.071				3.21	45.47	0.087	50

		B
NCS DC 25008	Manganese Ores	0.0018

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TMn	TFe	SiO_2	P	CaO	MgO	Al_2O_3	MnO_2	Ti	Zn	Pb	Co	Cu	
NCS DC 26701	Manganese ore	44.95	10.50	5.41	0.033	7.53	1.05	0.37	(32.31)	0.010	0.013	0.013	0.008	0.009	50
NCS DC 26702	Manganese ore	48.53	4.93	5.56	0.080	0.37	0.25	3.28	(72.64)	0.102	0.016	0.012	0.014	0.005	50
NCS DC 26703	Manganese ore	58.80	1.45	5.63	0.009	0.37	0.17	0.74	(62.07)	0.025	0.219	0.018	0.0014	0.024	50
NCS DC 26704	Manganese ore	45.2	6.03	5.55	0.127	0.103	0.097	6.88	(67.71)	0.092	0.052	(0.007)	0.096	0.033	50
NCS DC 26705	Ilmenite concentrate		31.40	1.98	0.045	0.16	0.84	0.75							40
NCS DC 26706	Nickel Iron Ore		47.72	5.16	0.0027	0.13	2.34	4.65					0.14		25

		Ni	C	S	TiO_2	FeO	MnO	V_2O_5	Cr_2O_3	Mn	Cr
NCS DC 26701	Manganese ore	(0.002)	1.22	0.18							
NCS DC 26702	Manganese ore	0.012	0.085	0.017							
NCS DC 26703	Manganese ore	0.0024	0.034	0.003							
NCS DC 26704	Manganese ore	0.039	0.09	0.028							
NCS DC 26705	Ilmenite concentrate		0.043	0.004	51.35	23.81	0.90	0.22	(0.07)		
NCS DC 26706	Nickel Iron Ore	1.05	0.25	0.12						0.89	2.34

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Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	SiO_2	Al_2O_3	MnO	FeO	P	S	TiO_2	K_2O	Na_2O	MgO	CaO	Mn	(in g)
NCS DC 28002a	Iron ore	60.37	7.40	3.54	0.236	21.03	0.043	0.016	0.751	0.090	0.102	1.23	1.49		50
NCS DC 28003a	Iron ore	62.65	4.20	0.39	0.113	24.53	0.011	0.114	0.117	0.040	0.013	4.73	0.71		50
NCS DC 28003b	Iron ore	63.07	3.38	0.64	1.08	23.93	0.016	0.024	0.224	0.025	0.016	4.82	0.71		50
NCS DC 28005a	Iron ore	66.18	2.90	0.54	0.103	27.01	0.0067	0.059	0.077	0.054	0.031	2.64	0.74		50
NCS DC 28005b	Iron ore	67.84	5.32	0.45	0.030	29.72	0.0025	0.106	0.097	0.055	0.018	0.202	0.155		50
NCS DC 28005c	Iron ore	68.38	2.25	0.58	0.086	28.80	0.0035	0.034	0.057	0.050	0.026	1.15	0.78		50
NCS DC 28006	Limonite	40.24	8.40	0.65			0.041	0.087	0.031	0.20	(0.006)	1.17	11.95	1.2	100

		As	Cu	Zn	Cr
NCS DC 28002a	Iron ore	0.0012	0.0080	0.016	0.068
NCS DC 28003a	Iron ore		0.0071	0.0085	
NCS DC 28003b	Iron ore			0.055	
NCS DC 28005a	Iron ore		0.0050	0.0070	
NCS DC 28005b	Iron ore			0.0020	0.0075
NCS DC 28005c	Iron ore		0.0037	0.0055	

Number	Name	Chemical Composition(Percent)													Unit Size
		SiO_2	Al_2O_3	MnO	P	S	TiO_2	K_2O	Na_2O	MgO	CaO	Fe_2O_3	SrO	L.O.I	(in g)
NCS DC 28007a	Limestone	0.132	0.045	0.01	0.0014	0.025	0.0041	0.0076	0.0044	0.5	55.31	0.14	0.048	43.7	50
NCS DC 28008a	Limestone	1.07	0.36	0.0061	0.0032	0.004	0.022	0.125	0.006	8.96	44.42	0.3	0.023	44.32	50
NCS DC 28009	Limestone	2.08	0.364	0.0053	0.0026	0.115	0.0205	0.080	0.011	10.62	42.77	0.200	0.027	42.57	50
NCS DC 28009a	Limestone	2.56	0.47	0.0049	0.0033	0.021	0.024	0.272	0.012	6.65	45.9	0.235	0.02	43.48	50
NCS DC 28009b	Limestone	2.92	0.473	0.004	0.0029	0.034	0.022	0.28	0.008	4.42	48.69	0.195	0.02	42.85	50
NCS DC 28010a	Limestone	3.42	0.5	0.0047	0.003	0.018	0.022	0.308	0.008	8.08	44.02	0.24	0.018	43.16	50
NCS DC 28011a	Limestone	7.62	1.9	0.02	0.016	0.012	0.097	0.47	0.0083	4.51	44.3	1.01	0.012	39.86	50

Number	Name	Chemical Composition(Percent)													Unit Size
		SiO_2	CaO	MgO	Fe_2O_3	Al_2O_3	MnO	P	TiO_2	SrO	K_2O	Na_2O	S	L.O.I	(in g)
NCS DC 28012a	Dolomite	1.48	30.94	20.92	0.26	0.23	0.011	0.014	0.008	0.007	0.085	0.012	0.003	45.58	50
NCS DC 28013a	Dolomite	2.65	31.12	19.1	0.504	0.73	0.011	0.0034	0.034	0.0064	0.13	0.034	0.007	45.49	50
NCS DC 28014a	Dolomite	2.97	31.46	18.6	0.472	0.81	0.012	0.0061	0.041	0.0058	0.29	0.021	0.019	44.94	50
NCS DC 28015a	Dolomite	4.89	33.6	15.5	0.641	1.4	0.0085	0.011	0.074	0.006	0.35	0.019	0.013	43.24	50

Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	P	TiO_2	S	K_2O	Na_2O	Cu	(in g)
NCS DC 28020a	Pellet Ore	63.07	(0.04)	5.22	1.47	1.34	0.96	0.303	0.028	0.258	0.0084	0.078	0.103	0.0089	50
NCS DC 28020b	Pellet Ore	61.81	(0.18)	6.88		1.3	1	0.31	0.032	0.251	0.0055	0.066	0.099	0.0089	50
NCS DC 28020c	Pellet Ore	60.46	0.33	6.12	0.76	0.75	5.15	0.13	0.013	0.154	0.029	0.081	0.036	0.01	50
NCS DC 28021a	Pellet Ore	57.88	6.53	7.92	2.54	3.15	3.11	0.126	0.016	0.207	0.115	0.265		0.018	50
NCS DC 28023a	Sintered Ore	53.1	7.49	6.49	2.76	11.78	2.69	0.74	0.059	0.144	0.042	0.079	0.049		50
NCS DC 28023b	Sintered Ore	53.74	8.52	7.11	3.05	9.67	3.45	0.185	0.036	0.29	0.022	0.145	0.09	0.017	50
NCS DC28023c	Sintered Ore	53.96	8.2	5.72	1.08	13.5	3.24		0.018	0.064	0.062	0.05	0.041	0.0062	50

		Zn	V	As	Pb	Cr	C	Co	Mn
NCS DC 28020a	Pellet Ore	0.012							
NCS DC 28020b	Pellet Ore	0.012	0.155						
NCS DC 28020c	Pellet Ore	0.012							
NCS DC 28021a	Pellet Ore	0.039		0.0012	0.0047				
NCS DC 28023a	Sintered Ore								
NCS DC 28023b	Sintered Ore	0.018		0.02	0.012	0.021			
NCS DC 28023c	Sintered Ore	0.0075	0.0058	0.0027	0.0008	0.0036	0.056	0.0033	0.073

Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	P	TiO_2	S	K_2O	Na_2O	Cu	(in g)
NCS DC 28046a	Sintered Ore	55.49	7.93	4.85	1.84	11.66	2.83	0.289	0.045	0.109	0.04	0.045	0.034	0.0034	50

		Zn
NCS DC 28046a	Sintered Ore	0.0078

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Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	Ni	Cr	Co	TiO_2	Mn	P	S	(in g)
NCS DC 28064	High Cr, Ni Iron ore	51.48	0.25	2.30	5.65	0.014	0.70	0.72	1.80	0.10	0.15	0.70	0.0045	0.17	50
NCS DC 28065	High Cr, Ni Iron ore	39.68	0.10	10.00	9.98	0.30	2.54	1.30	1.71	0.085	0.14	0.59	0.010	0.23	50
NCS DC 28066	High Cr, Ni Iron ore	12.97	0.33	46.34	1.40	0.41	19.98	2.00	0.58	0.037	0.024	0.23	0.0017	0.012	50
NCS DC 28067	High Cr, Ni Iron ore	51.36	0.26	3.11	4.16	0.022	1.05	0.94	2.00	0.098	0.091	0.80	0.0055	0.095	50
NCS DC 28068	High Cr, Ni Iron ore	16.83	0.10	34.93	2.06	0.16	21.32	1.74	0.81	0.064	0.043	0.40	0.0018	0.025	50
NCS DC 28069	High Cr, Ni Iron ore	34.18	0.11	18.28	2.39	0.12	12.12	1.50	1.48	0.13	0.030	0.78	0.0015	0.082	50
NCS DC 28070	High Cr, Ni Iron ore	19.43	10.20	28.78	7.10	20.02	11.58	1.07	0.81	0.055	0.24	0.50	0.024	0.35	50
NCS DC 28071	High Cr, Ni Iron ore	25.15	20.15	29.18	6.68	11.80	12.48	1.41	1.16	0.066	0.17	0.54	0.017	0.22	50

Number	Name	Chemical Composition(Percent)													Unit Size
		S	Ni	Ti	TFe	SiO_2	Al_2O_3	CaO	MgO	Cr	Cu	Mn	Co	Zn	(in g)
NCS DC 28072	Nickel ore	2.51	5.71	0.15	23.73	21.1	3.91	6.47	1.14	0.015	0.27	0.037	0.042	4.65	50
NCS DC 28073	Nickel ore	0.024	1.17	0.024	18.57	37.41	2.9	0.82	20.75	0.95	0.0049	0.327	0.042	0.019	50
NCS DC 28074	Nickel ore	0.288	0.892	0.145	46.99	2.52	10.29	0.033	0.51	1.84	0.012	0.149	0.014	0.023	50
NCS DC 28075	Nickel ore	0.014	1.7	0.039	14.92	38.77	2	0.385	21.05	0.8	0.0025	0.294	0.043	0.019	50
NCS DC 28076	Nickel ore	0.016	1.86	0.015	15.2	34.7	1.04	0.1	25.7	0.92	0.0017	0.282	0.065	0.021	50
NCS DC 28077	Nickel ore	0.016	1.97	0.017	14.84	36	1.03	0.14	25.49	0.823	0.0016	0.263	0.06	0.021	50
NCS DC 28078	Nickel ore	0.034	2.18	0.027	14.89	39.2	1.59	0.46	21.28	0.76	0.0058	0.254	0.055	0.079	50
NCS DC 28079	Nickel ore	1.41	3.98	0.098	20.74	27.48	3.55	4.54	8.67	0.364	0.169	0.147	0.041	2.85	50
NCS DC 28080	Nickel ore	0.18	1.3	0.092	34.55	15.48	6.53	0.07	10.54	1.38	0.0071	0.192	0.033	0.022	50

		Pb	P	Cd
NCS DC 28072	Nickel ore	0.04	1.61	0.047
NCS DC 28073	Nickel ore	0.0024	<0.007	<0.0015
NCS DC 28074	Nickel ore	0.0023	0.03	<0.0020
NCS DC 28075	Nickel ore	0.0013	0.0043	<0.0015
NCS DC 28076	Nickel ore	0.0016	<0.007	<0.0015
NCS DC 28077	Nickel ore	0.0015	0.0043	<0.0015
NCS DC 28078	Nickel ore	0.002	0.029	<0.0015
NCS DC 28079	Nickel ore	0.03	1.08	0.028
NCS DC 28080	Nickel ore	0.0019	0.02	<0.0025

Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	P	TiO_2	S	K_2O	Na_2O	As	(in g)
NCS DC 28081	Iron ore	57.41	1.89	7.31	5.11	0.34	0.142	0.228	0.054	0.23	0.018	0.15	0.045	0.0014	50
NCS DC 28082	Iron ore	49.53	0.05	7.44	7.45	0.032	0.107	3.39	0.083	0.370	0.029				50
NCS DC 28082a	Iron ore	48.00	0.05	12.74	3.44	0.15	0.268	3.40	0.076	0.146	0.111				50
NCS DC 28082b	Iron ore	51.98	0.15	9.35	3.4	0.27	0.27		0.068	0.093	0.041	0.304	0.076	0.011	50
NCS DC 28083	Iron ore	50.98	8.92	9.40	5.03		1.05	0.306	0.963	0.125	0.112				50
NCS DC 28091	Iron ore	44.95	0.2	13.18	3.81	4.02	1.53		0.08	0.139	0.122	0.421	0.141	0.0095	50
NCS DC 28092	Iron ore	52.85	14.34	14.13	2.76	2.38	1.77		0.049	0.635	0.144	0.333	0.33	0.0033	50
NCS DC 28093	Iron ore	60.15	14.74	5.34	1.2	2.23	2.63		0.14	0.082	0.271	0.13	0.109	0.0028	50
NCS DC 28094	Iron ore	54.41	3.19	8.1	2.7	0.88	0.98		0.09	0.092	0.108	0.25	0.086	0.0089	50
NCS DC 28095	Iron ore	58.67	14.71	7.09	1.51	2.29	2.42		0.12	0.198	0.247	0.172	0.151	0.0031	50

		Cu	Zn	Cr	C	Pb	V	Co	Mn
NCS DC 28081	Iron ore	0.0038	0.0027	0.032					
NCS DC 28082	Iron ore				0.071				
NCS DC 28082a	Iron ore		0.49		0.072	0.283			
NCS DC 28082b	Iron ore	0.037	0.028	0.0036	0.203	0.02	0.0073	0.0041	1.12
NCS DC 28083	Iron ore				0.89				
NCS DC 28091	Iron ore	0.062	0.015	0.0056	1.05	0.0073	0.012	0.0052	1.54
NCS DC 28092	Iron ore	0.014	0.034	0.027	0.474	0.0056	0.087	0.0044	0.248
NCS DC 28093	Iron ore	0.01	0.0026	0.0013	0.46	0.0005	0.036	0.0073	0.047
NCS DC 28094	Iron ore	0.03	0.02	0.0029	0.278	0.014	0.015	0.0051	0.8
NCS DC 28095	Iron ore	0.011	0.0089	0.0072	0.457	0.0015	0.045	0.0067	0.085

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Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	FeO	SiO_2	CaO	MgO	Al_2O_3	Ti	Mn	P	S	K_2O	Na_2O	Cu	(in g)
NCS DC 28021	Pellet	59.95	4.20	7.89	1.75	1.82	2.16	0.084	0.113	0.019	0.048				100
NCS DC 28024	Iron Ore	61.53	0.24	3.43	0.118	0.109	2.12	0.052	0.276	0.068	0.038	0.026	0.034	0.0014	50
NCS DC 28025	Iron Ore	62.11	0.58	2.92	0.021	0.101	2.06	0.051	0.65	0.067	0.013	0.023	0.013	0.0018	50
NCS DC 28026	Iron Ore	62.27	0.59	4.2	0.144	0.156	2.39	0.055	0.17	0.078	0.02	0.023	0.024	0.0015	50
NCS DC 28027	Iron Ore	66.34	0.07	1.02	0.02	0.063	1.42	0.057	0.48	0.034	0.0071	0.013	0.0055	0.0085	50
NCS DC 28028	Iron Ore	66.47	0.58	1.79	0.028	0.091	1.36	0.046	0.137	0.055	0.0066	0.014	0.005	0.0014	50
NCS DC 28029	Iron Ore	72.01	28.63	0.158	0.025	0.042	0.095	0.028	0.043	0.0013	0.0028	0.0068	0.0008	0.0007	70
NCS DC 28030	Iron Ore	60.82	0.21	3.45	0.035	0.112	2.27	0.056	0.298	0.073	0.041	0.022	0.026		70
NCS DC 28031	Iron Ore	61.82	0.55	2.94	0.024	0.085	2.26	0.054	0.61	0.073	0.012	0.024	0.012		70
NCS DC 28032	Iron Ore	68.29	0.24	0.85	0.074	0.025	0.74	0.050	0.096	0.028	0.0028	0.0063	0.015		70
NCS DC 28033	Iron Ore	66.17	26.04	7.21	0.21	0.18	0.260	0.024	0.043	0.012	0.044	0.014	0.0015		70
NCS DC 28034	Iron Ore	53.42	15.27	5.22	0.31	11.21	0.57	0.044	0.065	0.018	0.192	0.086	0.25		70
NCS DC 28035	Iron Ore	65.66	0.54	1.92	0.056	0.102	1.64	0.048	0.135	0.060	0.022	0.018	0.007		70
NCS DC 28036	Iron Ore	59.71	0.62	5.18	0.317	0.233	2.76	0.066	0.192	0.078	0.090	0.042	0.086		70
NCS DC 28037	Iron Ore	66.54	0.21	0.962	0.031	0.054	1.43	0.051	0.482	0.034	0.0071	0.012	0.015		70
NCS DC 28038	Iron Ore	55.19	6.23	6.79	9.19	2.22	1.83	0.123	0.222	0.057	0.028	0.070	0.057		70
NCS DC 28039	Iron Ore	72.02	28.78	0.14	0.026	0.043	0.095	0.029	0.043	0.0016	0.0030	0.0064	0.0008		70
NCS DC 28040	Iron Ore	58.04	3.11	5.06	4.41	1.17	2.04	0.084	0.269	0.063	0.038	0.048	0.039		70
NCS DC 28041	Manganese Ores	0.85		56.03	2.07	0.6	8.25			0.011	0.012	3.74	0.48		50
NCS DC 28042	Manganese Ores	10.62		24.73	6.2	3.14	2.8			0.074	0.044	0.83	0.049		50
NCS DC 28043	Manganese Ores	10.68		17.3	1.15	0.7	6.4			0.171	0.1	0.65	0.058		50
NCS DC 28044	Manganese Ores	6.9		17.7	3.3	1.29	2.08			0.105	0.021	0.49	0.076		50
NCS DC 28045	Manganese Ores	2.75		16	0.195	0.182	2.35			0.23	0.0086	1.48	0.034		50

		Co	As	Pb	Cr	Zn	B_2O_3	TMn	MnO_2	TiO_2	BaO	Ni	V
NCS DC 28024	Iron Ore	0.0009	0.0011	0.0008	0.0054	0.002							
NCS DC 28025	Iron Ore	0.0015	0.0011	0.0008	0.0038	0.0026							
NCS DC 28026	Iron Ore	0.001	0.0013	0.0004	0.0027	0.0026							
NCS DC 28027	Iron Ore	0.0009	0.0004	0.0013	0.0015	0.0032							
NCS DC 28028	Iron Ore	0.0008	0.0012	0.0013	0.003	0.0044							
NCS DC 28029	Iron Ore	0.0008	0.00012	0.0002	0.0062	0.0026							
NCS DC 28034	Iron Ore						3.62						
NCS DC 28041	Manganese Ores		0.013	0.0025		0.015		14.45	20.66	0.177	0.064		
NCS DC 28042	Manganese Ores		0.032	0.0066	0.0023	0.012		22.18	18.35	0.123	0.164	0.0044	0.0044
NCS DC 28043	Manganese Ores		0.089	0.11	0.013	0.235		30.99	45.61	0.215	1.11	0.083	0.019
NCS DC 28044	Manganese Ores		0.039	0.0083	0.0018	0.027		36.31	45.01	0.085	0.41	0.01	0.0075
NCS DC 28045	Manganese Ores		0.042	0.011	0.038	0.07		44.97	67.67	0.105	0.058	0.079	0.018

Number	Name	Chemical composition(percent)													Unit Size
		TFe	SiO_2	Sb	S	Cu	MgO	As	Pb	Zn	Bi	Ag	WO_3	Sn	(in g)
NCS DC 35001	Tin Concentrate	21.33		0.024	0.183			0.574	2.89	0.264	0.034	0.00255		45.80	100
NCS DC 35002	Tin Concentrate	9.53	0.930	0.016	0.090	0.043		0.306	1.62	0.120	0.020		0.182	62.49	100
NCS DC 35008	Tin Ore	22.62		0.013		0.037		0.084	2.07	0.51		19.8(g/t)		0.125	60
NCS DC 35009	Tin Ore		4.99			1.09		2.17	0.095	1.49	1.20			0.930	60
NCS DC 35011	Sn Ore					0.077		0.046							70
NCS DC 35012	Sn Ore					0.109		0.097							70
NCS DC 35014	Tin Concentrate		(1.10)	0.019		0.067	(0.13)	0.414	2.20	0.196	0.028				100
NCS DC 35015	Manganese Ore	3.97				0.006		0.015	0.015	0.0036					80

		Fe	Ni	Co	MnO_2	TMn
NCS DC 35014	Tin Concentrate	14.77				
NCS DC 35015	Manganese Ore		0.014	0.025	68.28	49.00

Number	Name	Chemical composition(percent)								Unit Size
		Zn	Pb	Fe	Cd	As	SiO_2	CaO	MgO	(in g)
NCS DC 35017	Zinc Concentrate	46.93	1.69	0.432	0.199	0.013	6.65	2.65	1.46	50

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Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	Mn	Ti	P	S	K_2O	Na_2O	(in g)
NCS DC 28046	Sintered Ore	56.14	9.17	5.54	2.07	10.35	2.21	0.227	0.076	0.064	0.032	0.125	0.048	70
NCS DC 28047	Sintered Ore	50.04	8.07	7.6	2.11	13.72	2.08	0.39	0.067	0.028	0.125	0.091	0.53	70
NCS DC 28048	Sintered Ore	54.16	8.52	6.04	2.23	10.93	3.05	0.21	0.075	0.068	0.052	0.076	0.19	70
NCS DC 28049	Sintered Ore	52.16	8.06	6.92	2.17	13.05	1.63	0.44	0.067	0.024	0.096	0.082	0.38	70
NCS DC 28050	Sintered Ore	53.26	9.53	6.24	2.24	11.31	2.7	0.286	0.082	0.049	0.075	0.084	0.44	70
NCS DC 28051	Pellet Iron Ore	63.56	0.35	4.57	0.926	1.12	1.48	0.134	0.071	0.018	0.015	0.13	0.07	70
NCS DC 28052	Pellet Iron Ore	64.53	0.28	5.65	0.77	0.3	0.32	0.075	0.122	0.025	0.0053	0.038	0.054	70
NCS DC 28053	Pellet Iron Ore	61.68	0.24	10.32	0.84	0.33	0.38	0.042	0.063	0.017	0.02	0.071	0.046	70

Number	Name	Chemical Composition(Percent)												Unit Size
		Cu	S	MgO	As	Zn	Pb	Ag(g/t)	Sb	Au(g/t)	Fe	Mn	Cd	Ni	(in g)
NCS DC 28054	Copper Ore	6.78	0.082	12.51	0.209	0.456	0.106	126.1		0.05	15.39	0.124	0.0021	<0.005	50
NCS DC 28055	Copper Ore	12.79	1.54	0.18	4.68	0.64	0.037	85.9	0.25	0.04	3.22	0.11	0.0067	0.017	50
NCS DC 28056	Copper Ore	8.46	0.86	7.04	2.14	0.503	0.087	109.9	0.22	0.05	10.44	0.169	0.0064	0.011	50
NCS DC 28057	Copper Concentrate	10.71	25.05	4.01	0.034	0.052	0.019	12		6.16	29.34	0.084	<0.001	0.072	20
NCS DC 28058	Copper Concentrate	20.56	22.87	7.63	0.012	0.194	0.015	17.1		4.68	24.7	0.013	<0.001	0.093	20
NCS DC 28059	Copper Concentrate	16.6	23.92	5.81	0.02	0.131	0.017	14.8		5.1	26.39	0.044	<0.001	0.082	20

		F	Bi
NCS DC 28054	Copper Ore	1.15	0.283
NCS DC 28055	Copper Ore	0.028	0.023
NCS DC 28056	Copper Ore	0.53	0.19
NCS DC 28057	Copper Concentrate	0.036	
NCS DC 28058	Copper Concentrate	0.056	
NCS DC 28059	Copper Concentrate	0.052	

Number	Name	Chemical Composition(Percent)											Unit Size
		TMn	TFe	SiO_2	Al_2O_3	CaO	MgO	K_2O	Na_2O	S	P	MnO_2	(in g)
NCS DC 28060	Manganese Ore	18.22	5.86	38.94	10.39	1.22	0.84	2.34	0.054	0.025	0.082	27.06	50
NCS DC 28061	Manganese Ore	22.93	6.71	31.42	9.88	1.11	0.94	1.95	0.053	0.23	0.073	33.45	50
NCS DC 28062	Manganese Ore	34.67	8.05	10.7	9.97	0.48	0.87	1.14	0.063	0.011	0.05	51.64	50
NCS DC 28063	Manganese Ore	27.45	8.1	20.96	10.05	0.99	1.16	1.57	0.064	0.6	0.059	39.38	50

Number	Name	Chemical Composition(Percent)											Unit Size
		CaF_2	SiO_2	$CaCO_3$	Fe_2O_3	S	P	K_2O	Na_2O	MgO	Al_2O_3	Mn	(in g)
NCS DC 28084	Fluorspar	46.59	28.89	9.08	0.52	0.071	0.0071	0.34	0.061	5.51	0.99	0.051	50
NCS DC 28085	Fluorspar	60.16	27.17	3.73	1.32	0.52	0.021	0.41	0.067	1.99	1.29	0.034	50
NCS DC 28086	Fluorspar	73.73	19.27	2.06	0.87	0.28	0.023	0.38	0.054	0.73	1.07	0.027	50
NCS DC 28087	Fluorspar	83.12	13.74	1.06	0.36	0.05	0.018	0.28	0.031	0.14	0.69	0.0099	50
NCS DC 28088	Fluorspar	96.87	1.76	0.14	0.173	0.092	0.015	0.036	0.019	0.015	0.14	0.04	50

Number	Name	Chemical Composition(Percent)													Unit Size
		SiO_2	CaO	MgO	Fe_2O_3	Al_2O_3	MnO	P_2O_5	TiO_2	SrO	K_2O	Na_2O	S	L.O.I	(in g)
NCS DC 28089	Magnesite	4.13	1.52	43.45	1.74	1.14	0.095	0.036	0.041	0.0013	0.037	0.018	0.015	47.35	50
NCS DC 28089a	Magnesite	4.95	1.26	43.44	1.66	1.46	0.083	0.037	0.048	0.0014	0.044	0.02	0.015	46.57	50
NCS DC 28090	Magnesite	0.32	0.53	46.4	0.65	0.1	0.016	0.013	0.006	0.0005	0.005	0.017	0.0027	51.58	50

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Number	Name	Chemical Composition(g/T)		Unit Size (in g)
		Au	Ag	
NCS DC 28101	Gold ore	1.7	4.2	500
NCS DC 28102	Gold ore	2.5	2.2	500
NCS DC 28103	Gold ore	1.8	3.1	500
NCS DC 28104	Gold ore	63.4	62.2	250
NCS DC 28105	Gold ore	5	5.8	500
NCS DC 28106	Gold ore	11	11	500
NCS DC 28107	Gold ore	20	20.4	250

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO_2	S	P	Ti	TiO_2	Al_2O_3	MgO	K_2O	Na_2O	Mn	Cu	
NCS DC 28108	MAGNETIC IRON ORE	46.93	19.95	14.75	0.637	0.039	0.067	0.112	2.05	5.54	0.33	0.22	0.058	0.119	70
NCS DC 28109	MAGNETIC IRON ORE	66.52	27.91	3.26	0.064	0.0062	0.037	0.061	0.62	1.96	0.091	0.032	0.07	0.01	70
NCS DC 28110	MAGNETIC IRON ORE	62.63	23.21	3.15	0.255	0.017	0.096	0.16	1.19	5.21	0.068	0.023	0.17	0.018	70
NCS DC 28111	MAGNETIC IRON ORE	50.94	20.67	13.83	0.43	0.033	0.065	0.108	1.42	3.95	0.204	0.14	0.098	0.305	70
NCS DC 28112	MAGNETIC IRON ORE	56.23	24.15	7.81	0.369	0.023	0.62	1.03	1.39	4.89	0.133	0.07	0.132	0.527	70
NCS DC 28113	MAGNETIC IRON ORE	64.42	27	3.56	0.381	0.011	0.315	0.522	0.9	3.28	0.099	0.034	0.109	0.047	70
NCS DC 28114	MAGNETIC IRON ORE	65.71	27.14	2.07	0.158	0.013	0.418	0.697	0.83	3.33	0.048	0.015	0.127	0.016	70
NCS DC 28115	MAGNETIC IRON ORE	68.29	28.25	2.08	0.041	0.0047	0.034	0.057	0.43	1.25	0.06	0.021	0.061	0.0065	70
NCS DC 28116	LEAD ORE	6.78		7.92	19.26				2.56	1.28			0.029	0.85	25

		Zn	As	CaO	Pb	Ag	Cd	Sb	Bi
NCS DC 28108	MAGNETIC IRON ORE	0.0038		7.12					
NCS DC 28109	MAGNETIC IRON ORE	0.0052		1.1					
NCS DC 28110	MAGNETIC IRON ORE	0.01		1.09					
NCS DC 28111	MAGNETIC IRON ORE	0.017	0.083	4.85					
NCS DC 28112	MAGNETIC IRON ORE	0.037	0.167	2.73					
NCS DC 28113	MAGNETIC IRON ORE	0.0096	0.013	1.06					
NCS DC 28114	MAGNETIC IRON ORE	0.008		0.72					
NCS DC 28115	MAGNETIC IRON ORE	0.0037		0.7					
NCS DC 28116	LEAD ORE	1.44	0.068	17.16	15.09	0.022	0.0097	0.0084	0.085

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		St,d	Ad	Vd	SiO_2	Fe_2O_3	CaO	MgO	Al_2O_3	TiO_2	MnO	K_2O	Na_2O	P_2O_5	
NCS DC 28117	Graphite	0.17	3.47	1.33	1.76	0.46	0.19	0.18	0.63	0.014	0.005	0.17	0.009	0.004	50
NCS DC 28118	Graphite	0.49	11.45	1.87	5	1.98	0.91	1	1.92	0.085	0.021	0.19	0.088	0.007	50
NCS DC 28119	Graphite	0.02	29	2.88	15.66	2.09	0.23	0.55	8.13	0.44	0.032	1.33	0.28	0.087	50
NCS DC 28120	Graphite Ore	1.06	95.62	2.22	52.73	5.34	11.81	8.79	10.93	0.39	0.048	2.39	1.5	0.083	50
NCS DC 28121	Graphite Ore	0.99	90.65	2.48	50.28	5	11.12	8.43	10.72	0.36	0.047	2.32	1.38	0.083	50

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		TFe	TiO_2	SiO_2	Al_2O_3	CaO	MgO	S	P	V_2O_5	Cr_2O_3	FeO	MnO	Ni	
NCS DC 28122	Vanadium-titanium-Magnetic Iron Ore	56.26	14.48	1.72	2.73	0.42	2.22	0.014	0.061	0.56	0.076	29.22	0.546	0.0058	70
NCS DC 28123	Vanadium-titanium-Magnetic Iron Ore	54.89	9.63	7.44	1.20	4.06	0.83	0.203	0.081	0.251	0.018	26.56	0.331	0.0041	70
NCS DC 28124	Vanadium-titanium-Magnetic Iron Ore	55.23	11.71	5.15	1.80	2.54	1.42	0.118	0.074	0.368	0.040	27.48	0.421	0.0044	70
NCS DC 28125	Vanadium-titanium-Magnetic Iron Ore	50.16	13.92	7.16	3.33	1.69	2.78	0.015	0.080	0.623	0.068	26.05	0.50	0.0063	70
NCS DC 28126	Vanadium-titanium-Magnetic Iron Ore	58.18	12.24	1.59	2.18	0.366	1.90	0.016	0.052	0.834	0.055	29.06	0.481	0.0053	70
NCS DC 28127	Vanadium-titanium-Magnetic Iron Ore	52.26	10.32	8.10	2.98	1.88	2.50	0.014	0.092	0.715	0.040	25.80	0.411	0.0058	70

		Cu	Co	Zn
NCS DC 28122	Vanadium-titanium-Magnetic Iron Ore	0.0048	0.010	0.061
NCS DC 28123	Vanadium-titanium-Magnetic Iron Ore	0.0070	0.0066	0.0085
NCS DC 28124	Vanadium-titanium-Magnetic Iron Ore	0.0061	0.010	0.028
NCS DC 28125	Vanadium-titanium-Magnetic Iron Ore	0.0065	0.015	0.055
NCS DC 28126	Vanadium-titanium-Magnetic Iron Ore	0.0042	0.015	0.050
NCS DC 28127	Vanadium-titanium-Magnetic Iron Ore	0.0058	0.012	0.040

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Number	Name	Chemical Composition(Percent)													Unit Size
		Cr_2O_3	TFe	SiO_2	Al_2O_3	CaO	MgO	S	P	Ti	V	Mn	Ni	K_2O	(in g)
NCS DC 28128	Chromite Ore	27.55	9.76	12.55	18.94	1.27	20.48	0.035	0.0029	0.145	0.077	0.114	0.169	0.043	50
NCS DC 28129	Chromite Ore	33.00	12.90	12.19	13.94	1.00	17.27	0.021	0.0030	0.136	0.089	0.180	0.162	0.035	50
NCS DC 28130	Chromite Ore	46.74	20.34	0.79	14.53	0.053	9.79	0.003	0.0027	0.373	0.215	0.156	0.092	0.014	50
NCS DC 28131	Chromite Ore	45.10	19.66	2.93	13.70	0.18	10.37	0.0029	0.0033	0.344	0.207	0.150	0.094	0.015	50
NCS DC 28132	Chromite Ore	36.50	14.83	7.70	16.22	0.69	15.32	0.022	0.0028	0.244	0.143	0.133	0.134	0.033	50
NCS DC 28133	Chromite Ore	40.20	16.74	4.73	15.97	0.46	13.41	0.017	0.0037	0.294	0.162	0.142	0.121	0.023	50

		Co	Zn
NCS DC 28128	Chromite Ore	0.016	0.049
NCS DC 28129	Chromite Ore	0.027	0.102
NCS DC 28130	Chromite Ore	0.025	0.071
NCS DC 28131	Chromite Ore	0.025	0.065
NCS DC 28132	Chromite Ore	0.022	0.058
NCS DC 28133	Chromite Ore	0.022	0.065

Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	TiO_2	SiO_2	Al_2O_3	CaO	MgO	S	P	V_2O_5	Cr_2O_3	FeO	MnO	Ni	(in g)
NCS DC 28134	Titanium Ore	14.85	7.11	38.43	8.67	12.39	6.33	0.196	0.883	0.062	0.0084	12.45	0.216	0.0037	50
NCS DC 28135	Titanium Ore	15.07	6.14	42.61	8.82	9.87	6.78	0.021	0.232	0.092	0.0095	12.77	0.187	0.0098	50
NCS DC 28136	Titanium Ore	26.50	27.23	14.41	2.31	9.49	2.34	4.77	1.07	0.066	0.0078	23.62	0.802	0.013	50
NCS DC 28137	Titanium Ore	30.31	40.66	9.21	1.35	4.78	1.30	1.52	0.117	0.068	0.0064	33.33	1.20	0.0084	50
NCS DC 28138	Titanium Ore	34.79	47.82	2.65	0.68	0.68	2.11	0.184	0.0076	0.095	0.014	39.14	0.652	0.0029	50
NCS DC 28139	Titanium Ore	22.04	55.68	1.54	2.30	0.070	1.09	0.025	0.047	0.266	2.80	9.15	1.26	0.0007	50
NCS DC 28140	Titanium Ore	33.02	45.73	4.85	0.95	2.23	1.68	0.74	0.048	0.203	0.012	36.68	0.882	0.0051	50
NCS DC 28141	Titanium Ore	33.58	45.61	4.16	0.867	1.65	1.74	0.536	0.047	0.188	0.0067	37.51	0.799	0.0046	50
NCS DC 28142	Titanium Ore	30.23	50.06	2.04	1.30	0.68	1.52	0.172	0.048	0.700	0.84	28.85	0.875	0.0021	50
NCS DC 28143	Titanium Ore	29.29	35.60	10.41	1.65	6.25	1.55	2.76	0.476	0.505	0.0077	29.34	1.02	0.011	50

		Cu	Co	Zn
NCS DC 28134	Titanium Ore	0.0082	0.0052	0.019
NCS DC 28135	Titanium Ore	0.016	0.0079	0.018
NCS DC 28136	Titanium Ore	0.038	0.015	0.015
NCS DC 28137	Titanium Ore	0.022	0.010	0.014
NCS DC 28138	Titanium Ore	0.0056	0.0087	0.016
NCS DC 28139	Titanium Ore	0.0093	0.0026	0.017
NCS DC 28140	Titanium Ore	0.013	0.051	0.016
NCS DC 28141	Titanium Ore	0.011	0.0098	0.015
NCS DC 28142	Titanium Ore	0.0073	0.011	0.017
NCS DC 28143	Titanium Ore	0.027	0.013	0.016

Number	Name	Chemical Composition(g/T)												Unit Size
		CaO	MgO	Fe_2O_3	SiO_2	Al_2O_3	MnO	S	P_2O_5	K_2O	Na_2O	TiO_2	L.O.I	(in g)
NCS DC 28144	Potassium Feldspar	1.05	0.329	1.04	69.12	13.84	0.03	0.584	0.02	3.84	4.72	0.089	1.61	50
NCS DC 28145	Potassium Feldspar	5.77	3.39	0.88	59.33	12.14	0.026	0.41	0.017	3.46	4.05	0.071	8.13	50

Number	Name	Chemical Composition(g/T)												Unit Size
		CaF_2	SiO_2	$CaCO_3$	Fe_2O_3	S	P	K_2O	Na_2O	MgO	Al_2O_3	MnO	TiO_2	(in g)
NCS DC 28146	Fluorspar	94.39	4.65	0.14	0.28	0.13	0.0036	0.012	0.006	0.003	0.113	0.005	0.0019	50
NCS DC 28147	Fluorspar	90.28	8.34	0.15	0.34	0.155	0.0041	0.064	0.008	0.0049	0.317	0.0046	0.003	50
NCS DC 28148	Fluorspar	96.31	3	0.17	0.163	0.025	0.0043	0.014	0.008	0.0022	0.09	0.0024	(0.001)	50
NCS DC 28149	Fluorspar	87.45	10.03	0.21	0.38	0.198	0.0052	0.153	0.009	0.012	0.63	0.0049	0.0054	50
NCS DC 28150	Fluorspar	80.3	15.52	0.25	0.47	0.184	0.0076	0.57	0.03	0.03	1.69	0.0094	0.014	50
NCS DC 28151	Fluorspar	79.24	15.8	0.98	0.59	0.103	0.011	0.54	0.078	0.096	1.71	0.044	0.025	50

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Number	Name	Chemical Composition(g/T)													Unit Size
		CaO	MgO	Fe_2O_3	SiO_2	Al_2O_3	MnO	S	P	K_2O	Na_2O	SrO	TiO_2	L.O.I	(in g)
NCS DC 28152	Limestone	46.71	6.55	0.25	2.42	0.374	0.0046	0.042	0.0017	0.05	0.011	0.016	0.023	43.22	50
NCS DC 28153	Limestone	41.81	10.37	0.417	2.35	0.543	0.007	0.05	0.0032	0.074	0.011	0.014	0.031	43.81	50
NCS DC 28154	Limestone	50.61	2.88	0.289	3.02	0.622	0.0054	0.055	0.0028	0.164	0.026	0.024	0.032	41.92	50
NCS DC 28155	Limestone	46.09	5.98	0.187	4.6	0.283	0.0046	0.033	0.0016	0.038	0.01	0.02	0.015	42.55	50
NCS DC 28156	Limestone	51.22	2.43	0.181	3.32	0.34	0.0042	0.03	0.0019	0.094	0.0074	0.021	0.02	42.26	50
NCS DC 28157	Limestone	53.79	1.17	0.151	1.32	0.225	0.0037	0.02	0.0027	0.066	0.0058	0.018	0.014	43.22	50
NCS DC 28158	Limestone	48.56	4.31	0.302	3.99	0.657	0.0055	0.044	0.0044	0.184	0.028	0.022	0.051	41.7	50
NCS DC 28159	Limestone	51.95	1.23	0.296	2.36	0.811	0.0077	0.016	0.0017	0.165	0.009	0.02	0.036	42.39	50
NCS DC 28160	Limestone	54.2	0.82	0.146	0.96	0.328	0.0049	0.019	0.0019	0.084	0.006	0.018	0.016	43.27	50
NCS DC 28161	Limestone	53.76	1.5	0.143	0.835	0.242	0.0058	0.018	0.0012	0.048	0.006	0.017	0.011	43.37	50
NCS DC 28162	Dolomite	28.73	19.76	0.475	8.42	1.2	0.02	0.072	0.0028	0.039	0.033	0.019	0.036	40.56	50
NCS DC 28163	Dolomite	30.22	20.85	0.244	1.87	0.205	0.015	0.038	0.0015	0.018	0.012	0.013	0.0079	45.31	50
NCS DC 28164	Dolomite	30.15	20.91	0.248	2.16	0.25	0.016	0.039	0.0013	0.027	0.011	0.013	0.012	45.04	50
NCS DC 28165	Dolomite	29.5	20.43	0.357	5.22	0.706	0.018	0.056	0.002	0.033	0.023	0.016	0.021	43.07	50

Number	Name	Chemical Composition(Percent)													Unit Size
		Al_20_3	SiO_2	Fe_2O_3	P_2O_5	MnO	TiO_2	CaO	MgO	K_2O	Na_2O	C	S	Cr	(in g)
NCS DC 28166	Bauxite	44.5	5.17	22.16	0.075	0.026	1.66	0.18	0.03	0.03	0.015	0.21	0.043	0.019	50
NCS DC 28167	Bauxite	43.38	7.45	22.69	0.057	0.044	1.35	0.52	0.051	0.023	0.025	0.22	0.058	0.014	50
NCS DC 28168	Bauxite	45.75	4.88	19.43	0.183	0.028	3.96	0.087	0.035	0.025	0.023	0.203	0.014	0.062	50

	V	Ga	L.O.I	Zr	Sc	Zn
NCS DC 28166	Bauxite	0.06	0.0028	25.35	0.011	0.0047	<0.005
NCS DC 28167	Bauxite	0.059	0.0027	23.59	0.0057	0.0052	0.0051
NCS DC 28168	Bauxite	0.1	0.0071	25	0.038	0.0021	0.0018

Number	Name	Chemical Composition(Percent)													Unit Size
		Zn	S	Fe	SiO_2	Pb	Cu	As	Cd	Ag	CaO	MgO			(in g)
NCS DC 28169	Zinc Concertrate	43.46	26.7	6.79	5.95	2.66	0.265	0.0014	0.309	0.0048	2.05	0.158			25

Number	Name	Chemical Composition(g/T)													Unit Size
		SiO_2	CaO	MgO	Fe_2O_3	Al_2O_3	MnO	P	TiO_2	SrO	K_2O	Na_2O	S	L.O.I	(in g)
NCS DC 28170	Limestone	1.46	48.32	5.49	0.218	0.383	0.0050	0.0028	0.023	0.028	0.145	0.007	0.005	43.68	50
NCS DC 28171	Limestone	2.20	43.96	8.84	0.290	0.47	0.0064	0.0035	0.024	0.020	0.196	0.0080	0.006	43.82	50
NCS DC 28171b	Limestone	2.23	49.64	4.13	0.187	0.462	0.0039	0.0032	0.022	0.019	0.272	0.012	0.035	43.18	50
NCS DC 28172	Limestone	4.70	37.44	12.97	0.300	0.523	0.0055	0.0034	0.030	0.017	0.28	0.013	0.013	43.43	50
NCS DC 28173	Limestone	0.29	55.43	0.22	0.057	0.078	0.0068	0.0013	0.0051	0.02	0.024	0.007	0.031	43.69	50
NCS DC 28174	Limestone	0.66	53.08	2.24	0.103	0.18	0.0052	0.0012	0.0080	0.020	0.044	0.005	0.024	43.75	50
NCS DC 28175	Limestone	0.70	55.04	0.30	0.035	0.220	0.0047	0.0021	0.0068	0.018	0.042	0.006	0.015	43.34	50
NCS DC 28175b	Limestone	0.76	41.91	11.15	0.316	0.272	0.013	0.0023	0.011	0.0066	0.041	0.003	0.002	44.86	50
NCS DC 28176	Limestone	0.86	48.92	5.40	0.241	0.360	0.0051	0.0029	0.022	0.029	0.125	0.008	0.008	43.90	50
NCS DC 28177	Limestone	1.25	54.43	0.50	0.179	0.195	0.0070	0.0018	0.010	0.024	0.048	0.007	0.012	43.10	50

Number	Name	Chemical Composition(g/T)													Unit Size
		TFe	CaO	MgO	SiO_2	Al_2O_3	S	P	MnO	TiO_2	Mn	Cu	Cr_2O_3	V_2O_5	(in g)
NCS DC 28241	V-Ti magnetite	63.97	0.94	1.74	3.98	1.09	0.04	0.017	0.197	2.59			0.42	0.55	100
NCS DC 28242	Hematite	53.34	0.43	0.13	8.71	1.78	1.88	0.126		0.087	0.199	0.076			100
NCS DC 28243	Hematite	55.71	0.3	0.1	6.97	1.07	0.98	0.121		0.049	0.143	0.068			100

Number	Name	Chemical Composition(g/T)													Unit Size
		CaO	MgO	SiO_2	Al_2O_3	Fe_2O_3	S	P	MnO	TiO_2	SrO	L. O. I			(in g)
NCS DC 28244	Limestone	51.32	2.94	1.49	0.39	0.171	0.0082	0.0022	0.0026	0.018	0.018	43.47			50
NCS DC 28245	Limestone	53.4	1.9	0.37	0.17	0.125	0.014	0.0015	0.0092	0.0085	0.024	43.93			50
NCS DC 28246	Limestone	54.92	0.37	0.47	0.203	0.107	0.01	0.0017	0.0081	0.0092	0.017	43.54			50
NCS DC 28247	Limestone	47.82	6.13	0.7	0.222	0.201	0.014	0.0066	0.0095	0.013	0.018	44.46			50
NCS DC 28248	Limestone	45.88	7.68	0.76	0.24	0.229	0.016	0.0078	0.01	0.014	0.018	44.51			50

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Number	Name	Chemical Composition(Percent)												Unit Size
		SiO_2	CaO	MgO	Fe_2O_3	Al_2O_3	MnO	P	S	L.O.I	TiO_2	SrO		(in g)
NCS DC 28201	Dolomite	6.75	30.62	20.53	0.085	0.0048	0.0072	0.0012	0.0019	41.00				50
NCS DC 28202	Dolomite	2.12	30.79	20.73	0.275	0.203	0.026	0.0013	0.016	45.22				50
NCS DC 28203	Dolimite	1.45	34.74	17.16	0.404	0.286	0.012	0.016	0.028	45.58				50
NCS DC 28204	Limestone	0.83	50.72	3.96	0.208	0.18	0.012	0.0076	0.016	43.70	0.006	0.046		50
NCS DC 28205	Limestone	2.17	52.42	1.92	0.197	0.39	0.0054	0.0019	0.012	42.53	0.0093	0.023		50
NCS DC 28206	Limestone	4.64	41.66	11.31	0.112	0.16	0.005	0.0032	0.0093	41.70	0.0056	0.015		50
NCS DC 28207	Dolomite	1.26	30.33	20.88	0.44	0.27	0.013	0.018	0.033	46.11				50
NCS DC 28208	Dolomite	0.99	30.8	20.79	0.32	0.23	0.019	0.0013	0.022	46.2				50

Number	Name	Chemical Composition(Percent)												Unit Size
		TMn	MnO_2	TFe	SiO_2	Al_2O_3	CaO	MgO	TiO_2	Cu	Zn	Ni	S	P	(in g)
NCS DC 28209	Manganese	27.76	21	12	17.54	1.77	5.44	4.08	0.085	0.0066	0.0071	0.0025	0.0067	0.069	50
NCS DC 28210	Manganese	44.76	66.46	5.72	4.62	7.28	0.24	0.257	0.34	0.062	0.088	0.057	0.014	0.099	50
NCS DC 28211	Manganese	32.7	32.32	10.47	14.4	3.3	4.21	3.04	0.16	0.02	0.027	0.016	0.009	0.087	50

Number	Name	Chemical Composition(Percent)										Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	S	P	(in g)
NCS DC 28212	Iron Ore	56.25	26.9	8.86	2.53	8.04	1.96	0.289	0.208	0.197	0.032	50
NCS DC 28213	Iron Ore	50.92	19.9	13.68	3.28	6.9	3.4	0.943	0.241	0.13	0.05	50
NCS DC 28214	Iron Ore	65.97	27	5.02	0.7	0.43	0.45	0.094	0.541	0.291	0.013	50
NCS DC 28215	Iron Ore	63.93	26.9	5.9	1.09	2.06	0.79	0.136	0.444	0.282	0.017	50
NCS DC 28216	Iron Ore	62.01	26.9	6.74	1.46	3.65	1.1	0.176	0.388	0.258	0.02	50
NCS DC 28217	Iron Ore	64.82	24.5	4.91	1.3	0.85	0.31	0.088	0.949	0.011	0.053	50
NCS DC 28218	Iron Ore	64.81	25.4	5.04	0.8	0.65	1.78	0.084	0.477	0.035	0.026	50
NCS DC 28219	Iron Ore	68.55	23	3.21	0.54	0.21	0.2	0.052	0.116	0.027	0.0054	50
NCS DC 28220	Iron Ore	69.05	23.8	2.45	0.5	0.2	0.17	0.079	0.313	0.011	0.01	50

Number	Name	Chemical Composition(Percent)										Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	P	S	(in g)
NCS DC 28221	Iron Ore	67.84	28.8	2.34	0.6	0.63	1.4	0.07	0.0061	0.0046	0.041	50
NCS DC 28222	Iron Ore	66.64	0.11	27.9	2.96	0.76	0.86	1.62	0.091	0.07	0.0051	50
NCS DC 28223	Iron Ore	66.31	24.4	4.17	1.04	0.64	0.26	0.085	0.709	0.039	0.011	50
NCS DC 28224	Iron Ore	63.2	1.4	6.55	1.02	0.86	0.5	0.083	0.319	0.02	0.015	50
NCS DC 28225	Iron Ore	54.96	10.7	5.89	2.93	11.49	0.98	0.171	0.152	0.05	0.032	50

Number	Name	Chemical Composition(Percent)							Unit Size
		CaF_2	$CaCO_3$	SiO_2	TFe	Mn	S	P	(in g)
NCS DC 28226	Fluorite	77.33	0.20	18.04	0.31	0.014	0.068		50
NCS DC 28227	Fluorite	78.75	0.33	19.36	0.28	0.012	0.028		50
NCS DC 28228	Fluorite	94.81	0.99	2.76	0.26	0.010	0.107	0.076	50
NCS DC 28229	Fluorite	85.56	0.58	10.62	0.28	0.013	0.079	0.045	50
NCS DC 28230	Fluorite	90.72	0.87	7.68	0.25	0.012	0.084	0.063	50

Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	P	S	Cu	C	(in g)
NCS DC 28231	Sintering Ore	56.53	22.9	5.57	1.90	11.46	1.75	0.202	0.103	0.027	0.063			50
NCS DC 28232	Iron Ore	67.42	27.40	1.80	0.78	0.61	2.43	0.132	0.069	0.0065	0.318			50
NCS DC 28233	Iron Ore	53.35	17.20	9.42	0.70	2.13	8.83	0.203	0.052	0.012	0.083			50
NCS DC 28234a	Iron Ore	45.17	15.10	15.55	1.33	4.74	9.82	0.167	0.090	0.023	0.104			50
NCS DC 28234b	Iron Ore	48.87	15.9	12.85	1.12	3.75	8.88	0.185	0.083	0.022	0.095	0.015	0.544	50
NCS DC 28234c	Iron Ore	49.64	21.1	11.54	1.87	5.85	5.81	0.112	0.105	0.040	0.504	0.156	0.798	50

Number	Name	Chemical Composition(Percent)											Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	Cr	Ni	Mn	Ti	Co	S	(in g)
NCS DC 28235	High Chromium - Nickel - Iron ore	38.38	15.21	2.89	0.20	8.16	1.50	1.36	0.67	0.042	0.114	0.012	50
NCS DC 28236	High Chromium - Nickel - Iron ore	49.05	3.60	6.53	0.51	0.64	1.66	1.02	0.51	0.075	0.069	0.112	50

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Number	Name	Chemical Composition(Percent)										Unit Size
		TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	P	S	(in g)
NCS DC 28237	Sinter Ore	55.24	13.80	6.45	2.80	10.80	1.22	0.205	0.157	0.048	0.068	50
NCS DC 28238	Sinter Ore	51.72	16.36	10.74	3.56	9.07	2.95	0.650	0.229	0.053	0.084	50
NCS DC 28239a	Pellet Ore	62.14	0.77	6.32	1.36	1.09	2.13	0.082	0.267	0.020	0.010	50
NCS DC 28239b	Pellet Ore	63.78	0.77	5.29	0.98	0.85	1.59	0.065	0.18	0.016	0.0086	50
NCS DC 28240a	Pellet Ore	66.18	0.78	3.81	0.43	0.51	0.79	0.040	0.048	0.010	0.0066	50
NCS DC 28240b	Pellet Ore	64.58	0.78	4.79	0.80	0.73	1.33	0.057	0.136	0.014	0.0080	50

Number	Name	Chemical Composition									Unit Size
		Au(μg/g)	Ag(μg/g)	Cu(%)	Pb(%)	Zn(%)	As(%)	Sb(%)	Hg(mg/g)	Cd(%)	(in g)
NCS DC 29101	Gold ore	0.64									500
NCS DC 29102	Gold ore	4.3	37.4	0.3	1.61	0.22					500
NCS DC 29103	Gold ore	20	18	0.12	0.61	0.1					500
NCS DC 29104	Silver ore		50.3	0.19	*83.8	*84.9	0.027	0.012	(3.85)		50
NCS DC 29105	Silver ore		138.1	0.5	0.02	*67.6	0.073	0.032	(10.1)		50
NCS DC 29106	Silver ore		199	0.68	0.01	0.011	0.078	0.05	(18)		50
NCS DC 29107	Copper ore		6.1	0.29	*34.5	0.01	*41.4	*23.4	(0.15)		50
NCS DC 29108	Copper ore		14.9	0.9	*80	0.02	*76.6	*11.7	(0.028)		50
NCS DC 29109	Copper ore		59.9	3.84	0.024	0.083	0.046	*71	(0.043)	*5.68	50
NCS DC 29110	Copper ore		120	8.53	0.027	0.19	0.02	*35.3	(0.039)	*13.5	50
NCS DC 29111	Pb-Zn ore		12.9	0.02	0.48	4.94	*90	*9.0	(12.6)	0.019	50
NCS DC 29112	Pb-Zn ore		362	0.1	2.93	0.51	0.082	0.011	(0.233)		50
NCS DC 29113	Pb-Zn ore		103	0.075	2.19	1.54	0.04	*38.3	(0.074)		50
NCS DC 29114	Pb-Zn ore		367.9	0.071	22.96	16.22	0.138	0.044	(270)	0.066	50
NCS DC 29115	Pb-Zn ore		5.3	0.021	1.25	30.19	*95	*20.5	(84.8)	0.119	50

Number	Name	Chemical Composition								Unit Size
		Pt($x10^{-6}$)	Pd($x10^{-6}$)	Ru($x10^{-9}$)	Rh($x10^{-9}$)	Ir($x10^{-9}$)	Os($x10^{-9}$)	Cu($x10^{-2}$)	Ni($x10^{-2}$)	(in g)
NCS DC 29116	Platinum Group	2.43	1.68	1.5	1.9	1.6	1.9	3.58	1.78	500
NCS DC 29117	Platinum Group	10.61	0.6	4.2	3.6	4.4	3.7	3.01	1.76	500
NCS DC 29118	Platinum Group	0.9	0.7	3.5	3.2	3.2	3	3.25	1.76	500
NCS DC 29119	Platinum Group	4.44	1.33	0.71	1.4	1.9	1.6	0.62	0.053	500
NCS DC 29120	Platinum Group	0.38	0.4	7.8	18	23.6	8.2	0.11	0.22	500

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Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	SiO_2	Al_2O_3	Mn	P	S	Cu	TiO_2	K_2O	Na_2O	MgO	CaO	Zn	(in g)
NCS DC 47004	Manganese Ore	1.22	16.16	2.20	45.39	0.054	0.007	0.013	0.063	1.00	0.044	0.64	1.06	0.027	100
NCS DC 47005	Manganese Ore	2.24	22.24	3.00	36.99	0.081	0.013	0.014	0.10	0.46	0.048	1.44	3.60	0.029	100
NCS DC 47007	Manganese Ore	20.99	10.46	8.97	25.00	0.275	0.032	0.028	0.54	0.72	0.030	0.10	0.051	0.048	100
NCS DC 47008	Manganese Ore	1.40	14.07	1.68	22.54	0.043	0.21	0.009	0.10	0.46	0.024	3.50	14.73	0.018	100
NCS DC 47009	Manganese Ore	2.07	15.82	2.49	15.74	0.061	0.27	0.014	0.15	0.70	0.040	3.82	19.78	0.020	100

		Ni	BaO	MnO_2	$Mn(Co_3^{2-})$	$Mn(Sio_3^{2-})$
NCS DC 47004	Manganese Ore	0.019	0.68	67.25		(0.028)
NCS DC 47005	Manganese Ore	0.019	0.47	54.38		(0.019)
NCS DC 47007	Manganese Ore	0.073	0.23	36.93		(0.004)
NCS DC 47008	Manganese Ore	0.041	0.13		22.46	(0.015)
NCS DC 47009	Manganese Ore	0.050	0.15		15.69	(0.012)

Number	Name	Chemical Composition(Percent)						Unit Size
		TFe	SiFe	SFe	MFe	OFe	CFe	(in g)
NCS DC 47010	State Of Irom Ore	44.67	(1.3)	0.9	10.0	(16.5)	15.6	100
NCS DC 47011	State Of Irom Ore	52.96	(0.8)	0.7	46.9	(2.6)	2.0	100
NCS DC 47012	State Of Irom Ore	43.73	(0.7)	6.4	30.0	(2.2)	4.5	100
NCS DC 47013	State Of Irom Ore	48.76	(2.9)	(0.04)	0.8	(44.7)	0.3	100
NCS DC 47014	State Of Irom Ore	26.90	(4.8)	(0.08)	18.5	(2.8)	0.8	100
NCS DC 47015	State Of Irom Ore	35.85	(1.3)	(0.03)	33.8	(0.3)	0.3	100

Number	Name	Chemical Composition(Percent)									Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	K_2O	Na_2O	CaF_2	L.O.I	(in g)
NCS DC 62001	Iron Ore	33.06	5.16	48.86	0.24	2.56	1.00	2.51	0.17		5.45	20
NCS DC 62002	Limestone	2.86	0.56	0.45	0.02	50.94	2.69	0.11	0.14		41.99	20
NCS DC 62003	Fluorite	23.52	2.50	0.63		0.50	0.03	1.21	0.32	67.22	0.62	20

Number	Name	Chemical Composition(Percent)													Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	K_2O	Na_2O	MnO	P_2O_5	SO_3	Cl	$fSiO_2$	(in g)
NCS DC 60109a	Limestone	4.05	0.94	0.58	0.052	50.09	1.79	0.42	0.027	0.014	0.033	0.054	0.0062	2.02	50
NCS DC 60110a	Limestone	2.25	0.6	0.38	0.03	47.07	5.81	0.2	0.016	0.012	0.037	0.032	0.0054	1.21	50

		L.O.I	CO_2
NCS DC 60109a	Limestone	41.53	(41.32)
NCS DC 60110a	Limestone	43.22	(43.02)

Number	Name	Chemical Composition(Percent)												Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	K_2O	Na_2O	TiO_2	MnO	P_2O_5	SO_3	H_2O^+	L.O.I	(in g)
NCS DC 60122a	Kaolin	43.41	34.77	1.5	0.038	0.069	0.78	0.045	0.25	0.002	0.21	5.51	13.24	17.31	50
NCS DC 60123a	Kaolin	45.3	37.7	0.35	0.064	0.021	0.042	0.045	0.06	0.0018	0.16	0.76	15.26	14.81	50

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Number	Name	Chemical Composition(Percent)													Unit Size
		Fe_2O_3	SiO_2	Al_2O_3	MnO	FeO	P_2O_5	S	SO_3	TiO_2	K_2O	Na_2O	MgO	CaO	(in g)
NCS DC 60102	Clay	10.55	49.98	26.27	0.052	(0.080)	0.14		0.049	0.70	0.79	0.060	0.46	0.13	50
NCS DC 60104	Clay	0.33	53.67	31.32	0.020	(0.052)	0.053		0.023	0.030	1.15	2.55	0.083	1.80	50
NCS DC 60105	Clay	4.64	66.64	13.28	0.088	(0.80)	0.106		0.027	0.66	2.50	1.81	1.84	3.23	60
NCS DC 60106	Shale	5.67	69.53	14.82	0.024	(0.40)	0.043		0.028	0.68	3.76	0.20	0.67	0.22	60
NCS DC 60107a	Limestone	0.11	1.09	0.24	0.0067		0.0081		0.018	0.010	0.084	0.017	0.81	54.03	50
NCS DC 60108a	Limestone	0.17	2.09	0.33	0.0089		0.0061		0.016	0.015	0.17	0.017	2.25	51.61	50
NCS DC 60112	Gypsum	0.16	1.68	0.34					51.91	0.016	0.094	0.065	1.74	39.24	50
NCS DC 60114	Gypsum	0.38	4.16	1.14					37.64	0.058	0.23	0.014	3.19	30.28	50
NCS DC 60115	Gypsum	0.11	0.63	0.14					40.72	0.010	0.026	0.014	2.47	32.30	60
NCS DC 60116	Siliceous Sand Ore	0.093	98.51	0.84	(0.0016)		(0.0041)			0.020	0.061	0.021	0.066	0.077	60
NCS DC 60117	Siliceous Sand Ore	0.21	95.74	2.36	(0.0033)		(0.0076)			0.036	0.67	0.25	0.098	0.17	60
NCS DC 60118	Siliceous Sand Ore	0.48	89.59	5.48	(0.010)		(0.014)			0.102	2.07	1.09	0.16	0.34	60
NCS DC 60119	Graphite Ore	6.73	49.84	12.93	0.084		0.13	1.18		0.57	2.54	1.60	6.10	9.37	60
NCS DC 60120	Graphite Ore	6.99	49.34	13.03	0.054		0.14	2.59		0.64	2.17	1.56	5.35	5.34	50
NCS DC 60121	Graphite Ore	1.48	10.34	5.60	0.022		0.16	0.14		0.55	0.99	0.23	0.50	0.74	50
NCS DC 60122	Kaolin	0.50	54.55	31.41	0.0032	(0.026)	0.099		0.53	0.69	0.34	0.015	0.12	0.052	50
NCS DC 60123	Kaolin	0.72	44.55	38.62	0.0054	(0.33)	0.21		0.12	0.39	0.049	0.069	0.068	0.16	50
NCS DC 60124	Siliceous Lime	0.10	50.50	0.39	0.096	0.28	0.052	(0.010)		0.022	0.14	0.052	0.95	40.39	50
NCS DC 60125	Nephelimite	1.37	60.64	20.05	0.050	0.28	0.020	(0.011)		0.12	5.06	8.97	0.13	0.52	50
NCS DC 60126	Nephelimite	0.33	39.42	29.67	0.031	1.24	0.072		(0.064)	0.14	4.72	12.59	0.92	5.98	50
NCS DC 60127	Pyrophyllite	1.94	66.84	23.58	0.0037		0.20		0.61	0.70	0.38	0.34	0.087	0.17	50
NCS DC 60128	Pyrophyllite	0.22	70.34	22.20	0.0040		0.11		0.17	0.18	0.028	0.043	0.041	0.066	50
NCS DC 60129	Brucite	0.49	2.69	0.053	0.036		0.12				0.0041	0.0066	61.43	2.51	50
NCS DC 60130	Brucite	0.40	4.47	0.067	0.033		0.12				0.0066	0.013	56.21	6.18	50
NCS DC 60131	Talcum	0.29	62.03	0.082	0.0015		0.14			0.0052	0.009	0.022	31.89	0.38	50
NCS DC 60132	Talcum	2.64	47.71	7.62	0.021		0.11			0.52	0.026	0.049	29.50	2.39	50

		Ash	Vdatile	Co	$fsio_2$*	CO_2	H_2O^+	Cl	L.O.I	SrO	Cr_2O_3	A.U.M*
NCS DC 60102	Clay					(0.041)	(9.64)	0.0041	10.62			
NCS DC 60104	Clay					(0.051)	(8.64)	0.0029	8.81			
NCS DC 60105	Clay					1.65	(3.38)	0.011	5.10			
NCS DC 60106	Shale					0.13	(3.71)	0.014	4.17			
NCS DC 60107a	Limestone				0.67	(43.12)		0.0028	43.12			
NCS DC 60108a	Limestone				1.38	(42.59)		0.0066	42.84			
NCS DC 60112	Gypsum					(4.02)	0.39	0.033	4.55	(0.27)		
NCS DC 60114	Gypsum					(5.80)	16.62	0.013	(22.88)	(0.077)		
NCS DC 60115	Gypsum					(5.44)	17.95	0.0032	23.60	(0.096)		
NCS DC 60116	Siliceous Sand Ore								0.24		0.00034	
NCS DC 60117	Siliceous Sand Ore								0.35		0.00054	
NCS DC 60118	Siliceous Sand Ore								0.53		0.0012	

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		Ash	Vdatile	Co	$fsio_2$*	CO_2	H_2O^+	Cl	L.O.I	SrO	Cr_2O_3	A.U.M*		
NCS DC 60119	Graphite Ore			2.91		3.60	2.60							
NCS DC 60120	Graphite Ore			9.91		0.67	2.80							
NCS DC 60121	Graphite Ore	20.78	2.72	76.50		0.28	1.98							
NCS DC 60122	Kaolin					(0.026)	11.72		11.94					
NCS DC 60123	Kaolin					(0.06)	14.77		15.00					
NCS DC 60124	Siliceous Lime						2.34		6.93					
NCS DC 60125	Nephelimite						1.78							
NCS DC 60126	Nephelimite				2.97									
NCS DC 60127	Pyrophyllite						4.15		5.48					
NCS DC 60128	Pyrophyllite						5.17		6.34					
NCS DC 60129	Brucite					8.08	(25.24)							
NCS DC 60130	Brucite					9.95	(23.22)							
NCS DC 60131	Talcum					0.34	4.73		5.14			(92.78)		
NCS DC 60132	Talcum					2.17	7.34		9.40			(83.13)		

*$fsio_2$ is free SiO_2 ; A. U. M is acid-unsolvable material.

Number	Name	Chemical Composition(Percent)												Unit Size
		Fe_2O_3	SiO_2	Al_2O_3	SO_3	TiO_2	K_2O	Na_2O	MgO	CaO	L.O.I	B_2O_3	F	(in g)
NCS DC 61101	Soff Clay	0.86	55.90	28.57		1.21	1.54	1.74	0.30	0.70	8.72			50
NCS DC 61102	Potassium Feldspar	0.19	66.26	18.63		0.048	9.60	3.69	0.054	0.76	0.86			50
NCS DC 61103	Na-Ca-Si Glass	0.18	71.25	2.56	0.17	0.057	1.10	13.77	3.98	6.37	0.44			50
NCS DC 61104	Boron Silicate Glass	0.34	53.98	14.50		0.19	0.59	0.096	4.40	16.54	0.26	8.87	0.54	50
NCS DC 61105	Alumine	1.18	8.17	85.07		3.76	0.44	0.080	0.21	0.24	0.29			50
NCS DC 61106	Albite Cement	0.10	67.96	19.62		0.054	0.098	11.26	0.015	0.48	0.36			50

Number	Name	Chemical Composition(Percent)										Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	SO_3	K_2O	Na_2O	I.R	L.O.I	(in g)
NCS DC 62101b	Porland	20.88	4.48	2.64	0.32	62.76	2.05	2.98	0.66	0.11	0.75	3.00	20
NCS DC 62102a	Cement	21.19	5.31	3.17	0.32	58.67	2.91	2.33	0.91	0.14		4.50	20
NCS DC 62103a	Cement Clinker	21.91	4.80	4.12	0.24	64.42	1.81	0.39	1.07	0.14	0.16	0.80	20
NCS DC 62104a	Cement Black Raw Meal	14.26	3.70	2.45	0.24	38.70	1.61	0.39	0.70	0.28		37.40	20
NCS DC 62105a	Cement raw meal	11.77	3.27	2.09	0.19	43.94	1.58	0.10	0.59	0.10		36.18	20

Number	Name	Chemical Composition(Percent)									Adhered	Crystallized	Indissoluble	Unit Size
		L.O.I	SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	SO_3	K_2O	Na_2O	water	water	material	(in g)
NCS DC 62106	Gypsum	24.48	6.37	1.87	0.57	0.10	29.32	6.26	30.36	0.38	0.08	micro	11.56	9.01	20

Number	Name	Chemical Composition(Percent)											Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	K_2O	Na_2O	L.O.I	SO_3	S	I.R	(in g)
NCS DC 62107	Alumina	4.97	83.90	3.91	4.19	0.99	0.46	0.38	0.11	0.44				20
NCS DC 62108b	Clay	65.00	15.48	6.16	0.77	1.47	1.60	2.40	1.10	5.55	0.06			20
NCS DC 62109	Portland pozzolanic cement	32.67	6.52	3.54	0.16	47.57	1.86	1.43	0.85	2.44	2.59			20
NCS DC 62110	Portland blast-furnace slag cement	23.48	6.26	2.39	0.43	57.4	3.31	0.59	0.17	3.68	2.02			20
NCS DC 62111	Portland flay ash cement	24.31	8.93	4.9	0.33	46.52	1.9	0.61	0.32	9.09	2.47			20
NCS DC 62112	Aluminate cement	7.95	51.15	1.91	2.03	34.56	0.63	0.13	0.04	0.68		0.1		20
NCS DC 62113	Granulated balst-furnace slag for cement	34.93	12.23	1.26	1.06	35.62	10.66	0.54	0.42	1.05	1.17	0.61		20
NCS DC 62114	Pozzolana in cement industry	57.53	24.2	5.1	1.07	2.83	1.24	3.05	1.42	2.99	0.08			20
NCS DC 62115	fly ash cement industry	48.93	36.62	4.37	1.46	4.42	0.84	0.57	0.17	1.76	0.35			20
NCS DC 62116	Composite portland cement	16.34	4.01	2.22	0.22	57.86	2.28	0.55	0.11	13.86	2.3			20
NCS DC 62117	white portland cement	20.49	4.61	0.26	0.12	65.71	0.14	0.05	0.05	6.43	1.9			20
NCS DC 62118	moderate heat portland cement	21.73	4.75	4.12	0.23	60.99	4.37	0.43	0.12	0.81	2.27		1.18	20

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Number	Name	Chemical Composition(Percent) Pozzolana or coal ash	Slag	Limestone	CO_2 (not solved slag)	Cl-	Unit Size (in g)
NCS DC 62119	Contet of mixed materials of ordinary portland cement	4.5	5.8	1.2	0.98		20
NCS DC 62120	Contet of mixed materials of portland blast-furnace slag cement	0.5	18.5	7	3.5	97.5	20
NCS DC 62121	Chloride content of cement raw meal					0.029	20
NCS DC 62122	Chloride content of cement					0.012	20

Number	Name	Chemical Composition(Percent) SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	SO_3	K_2O	Na_2O	L.O.I	F	CaF_2	Unit Size (in g)
NCS DC 62123	Sulphoaluminate cement clinker	8.56	32.6	2.21	1.51	43.4	1.37	9.55	0.22	0.09	0.41			20
NCS DC 62124	Sulphoaluminate cement raw meal	5.09	22.29	1.34	1.07	33.05	1.21	7.07	0.14	0.06	28.21			20
NCS DC 62125a	Cement contain F											0.18	(0.37)	20

Number	Name	Chemical Composition(Percent) Loss	$TCaCO_3$	CaO	Fe_2O_3	F	Unit Size (in g)
NCS DC 62126	Black raw meal $CaCo_3$ titrmetric value	37.46	70.9	38.89	2.74	0.15	20

Number	Name	Chemical Composition(Percent) Remain after through 80 ymsieve	Blaine	Density	Unit Size (in g)
NCS DC 62127	Portland Cement Fineness and Blaine Std	2.03%	354.7m^2/kg	3.16g/cm^3	200

Number	Name	Chemical Composition(Percent) SiO_2	Al_2O_3	Fe_2O_3	TiO_2	CaO	MgO	SO_3	K_2O	Na_2O	L.O.I	Unit Size (in g)
NCS DC 62128C1	Series of Cement for XRF Analysis	25.49	6.96	3.31	0.43	51.18	3.94	3.24	1.07	0.42	3.61	20
NCS DC 62128C2	Series of Cement for XRF Analysis	24.1	6.93	3.2	0.42	53.59	3.7	3.18	1.06	0.4	3.25	20
NCS DC 62128C3	Series of Cement for XRF Analysis	23.78	6.56	3.19	0.41	54.14	3.47	3.13	1	0.39	3.82	20
NCS DC 62128C4	Series of Cement for XRF Analysis	23.3	6.33	3.05	0.4	55.5	3.28	2.92	0.94	0.34	3.58	20
NCS DC 62128C5	Series of Cement for XRF Analysis	23.13	6.1	3	0.39	57.08	3.13	2.82	0.89	0.29	3.05	20
NCS DC 62128C6	Series of Cement for XRF Analysis	22.8	5.82	2.91	0.38	58.14	2.93	2.66	0.85	0.26	2.97	20
NCS DC 62128C7	Series of Cement for XRF Analysis	22.56	5.55	2.83	0.37	59.44	2.66	2.44	0.79	0.23	2.86	20
NCS DC 62128C8	Series of Cement for XRF Analysis	22.27	5.32	2.74	0.36	60.63	2.47	2.37	0.75	0.19	2.8	20
NCS DC 62128C9	Series of Cement for XRF Analysis	22.02	5.09	2.69	0.34	61.5	2.26	2.16	0.68	0.17	2.87	20
NCS DC 62128C10	Series of Cement for XRF Analysis	21.81	4.78	2.58	0.33	62.65	2.07	2.05	0.62	0.13	2.84	20
NCS DC 62128C11	Series of Cement for XRF Analysis	21.45	4.46	2.49	0.32	64.01	1.85	1.83	0.57	0.1	2.65	20

Number	Name	Chemical Composition(Percent) SiO_2	Al_2O_3	Mg	CaO	TiO_2	MnO	Na_2O	K_2O	S	Li	Rb	Ba	TFe (Fe_2O_3)	Unit Size (in g)
NCS DC 70001	Copper Ore	9.27	1.73	3.91	9.61	0.079	0.60	0.044	0.071	0.72				55.58	50
NCS DC 70002	Copper Ore	53.26	15.18	1.30	4.95	0.50	0.12	3.21	2.71	0.14			(0.08)	12.25	50
NCS DC 70003	Lead Ore	43.63	12.88	1.62	19.51	0.53	1.40	1.61	1.42	0.86				4.37	50
NCS DC 70004	Lead Ore	30.51	8.95	2.06	34.56	0.44	1.53	0.066	0.82	0.38				3.79	50
NCS DC 70005	Zinc Ore	82.95	2.80	0.082	1.91	0.017	0.026	0.56	0.99	2.87				3.50	50
NCS DC 70006	Molybdenum Ore	34.10	3.46	0.86	31.44	0.13	1.40	0.075	0.046	1.64				21.34	50
NCS DC 70007	Molybdenum Ore	46.67	7.27	1.83	23.03	0.36	1.49	0.77	0.82	0.48				14.66	50
NCS DC 70008	Tungsten Ore	13.27	8.24	1.45	37.73	0.079	0.97	0.16	1.94	3.12	(0.02)	(0.08)		7.79	50
NCS DC 70009	Tungsten Ore	71.27	11.15	0.14	4.17	0.044	0.090	0.12	1.58	1.90	(0.03)	(0.05)		5.60	50

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		Cu	Pb	Zn	As	Sn	W	Mo	F
NCS DC 70001	Copper Ore	1.15		0.059					0.079
NCS DC 70002	Copper Ore	0.19		0.013					0.080
NCS DC 70003	Lead Ore	0.20	4.17	0.062					0.27
NCS DC 70004	Lead Ore	0.035	0.61	0.092					0.23
NCS DC 70005	Zinc Ore	0.71	0.25	2.75					1.20
NCS DC 70006	Molybdenum Ore						0.36	1.51	4.08
NCS DC 70007	Molybdenum Ore			0.012			0.10	0.11	1.33
NCS DC 70008	Tungsten Ore	0.079	0.26	0.29	0.18	0.14	0.015		9.91
NCS DC 70009	Tungsten Ore	0.096		0.103		0.17	0.22	0.098	4.84

Number	Name	Chemical Composition(μg/g)												
		Ag	As	Cu	Ga	Ge	Li	Pb	Sc	Zn	Cd	Sb	Ce	Dy	Eu
NCS DC 70001	Copper Ore	3.9	4.2		22.6	0.89	(9)	9.1	1.8		0.42	0.36	13.2	1.1	0.28
NCS DC 70002	Copper Ore	0.70	1.5		22.6	0.93	(15)	13.0	5.4		0.14	0.23	72.6	2.4	1.3
NCS DC 70003	Lead Ore	14.7	85.1		16.7	0.90	(19)		7.5		3.2	39.3	78.3	3.0	1.2
NCS DC 70004	Lead Ore	5.6	43.2		11.7	0.93	(18)		8.1		2.6	12.0	66.8	3.1	0.82
NCS DC 70005	Zinc Ore	13.5	12.4		8.0	1.4	(86)		0.33		29.3	1.1	2.3	0.47	0.06
NCS DC 70006	Molybdenum Ore	0.09	1.6	93.6	25.1	19.0	(3.2)	18.7	3.4	65.5	0.12	1.2	20.8	1.8	0.59
NCS DC 70007	Molybdenum Ore	0.12	1.0	48.6	23.1	12.4	(13)	26.1	8.4		0.09	0.26	60.3	5.8	1.5
NCS DC 70008	Tungslen Ore	8.3			17.8	2.5			1.8		26.1	5.1	10.0	0.46	0.15
NCS DC 70009	Tungslen Ore	1.8	69.9		16.5	11.2		81.2	5.4		0.94	3.1	60.3	20.7	0.17

		Chemical Composition(μg/g)												
		Gd	Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Co
NCS DC 70001	Copper Ore	1.1	0.26	7.5	0.16	4.7	1.0	0.21	0.11	0.89	0.78	1.4	7.3	76.0
NCS DC 70002	Copper Ore	3.6	0.48	40.3	0.20	29.4	5.1	0.48	0.18	1.2	1.3	8.1	11.8	16.9
NCS DC 70003	Lead Ore	3.7	0.61	40.5	0.24	28.2	5.1	0.58	0.23	1.5	1.5	8.1	15.4	14.7
NCS DC 70004	Lead Ore	3.6	0.65	31.2	0.25	23.4	4.6	0.60	0.26	1.7	1.6	6.2	16.2	15.7
NCS DC 70005	Zinc Ore	0.31	0.13	1.3	0.08	0.92	0.36	0.10	0.05	0.42	0.28	0.30	4.5	8.7
NCS DC 70006	Molybdenum Ore	1.9	0.36	7.1	0.16	11.3	2.1	0.34	0.14	1.0	1.0	3.0	11.4	11.8
NCS DC 70007	Molybdenum Ore	5.8	1.2	37.4	0.41	29.8	6.4	0.98	0.44	2.8	3.2	7.4	34.2	13.5
NCS DC 70008	Tungslen Ore	0.64	0.11	5.0	0.06	4.0	0.79	0.15	0.04	0.28	0.23	1.1	2.8	2.7
NCS DC 70009	Tungslen Ore	14.8	4.5	23.7	2.4	32.9	12.5	3.3	2.2	14.9	13.1	7.9	128	3.7

		Chemical Composition(μg/g)												
		Ni	Bi	Sn	W	Mo	In	Se	Te	Ti	Th	Cr	Rb	R_E
NCS DC 70001	Copper Ore	9.6	1.5	11.1	4.1	1.4	1.4	5.1	0.62	0.06	0.90	(7)		
NCS DC 70002	Copper Ore	5.6	0.43	3.8	3.9	2.4	0.25	0.89	0.13	0.36	8.8	(10)	(94)	
NCS DC 70003	Lead Ore	27.7	15.6	3.0	17.6	1.6	0.12	1.7	3.9	0.43	10.2	(29)	(55)	
NCS DC 70004	Lead Ore	34.5	12.5	2.9	30.6	1.3	0.09	0.81	1.2	1.0	10.5	(41)	(74)	
NCS DC 70005	Zinc Ore	5.5	56.4	6.1	3.4	2.8	0.23	2.3	0.17	0.49	(1.1)	(62)	(73)	
NCS DC 70006	Molybdenum Ore	17.8	2.2	86.7			2.9	2.1	0.40	0.06	2.3	(24)		(0.35)
NCS DC 70007	Molybdenum Ore	20.9	1.0	33.2			1.3	0.27	0.14	0.21	9.7	(35)		(0.12)
NCS DC 70008	Tungslen Ore	4.1	110			4.2	8.7	0.39	0.66	5.0	2.2	(6.5)		(0.12)
NCS DC 70009	Tungslen Ore	2.8	680				1.3	0.96	2.9	1.8	28.3	(30)		(0.08)

		Chemical Composition(μg/g)
		Cs
NCS DC 70002	Copper Ore	(10)
NCS DC 70003	Lead Ore	(6)
NCS DC 70004	Lead Ore	(2.3)
NCS DC 70008	Tungslen Ore	(36)
NCS DC 70009	Tungslen Ore	(41)

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Number	Name	Chemical Composition(Percent)													Unit Size
		Sb	S	Cu	Pb	Ag	As	Ga	Li	Cd	Ce	Dy	Eu	Ni	(in g)
NCS DC 70013	Antimony Ore	1.81	1.02	0.012	0.037										50

Number	Name	Chemical Composition(μg/g)													Unit Size
		Ag	As	Cu	Ga	Li	Cd	Ce	Dy	Eu	Bi	Ni	Co	Sn	(in g)
NCS DC 70013	Antimony Ore	7.3	25.3	51.3	9.1	22.8	2.6	59.7	3.7	0.88	(0.26)	3.2	2.2	3.0	

Nb
5.4

Number	Name	Chemical Composition(μg/g)													Unit Size
		Ag	As	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	Cu	F	(in g)
NCS DC 70301	Rock	0.020	0.50	9.7	0.08	0.015	(0.2)	0.10	34	0.45	4.8	0.07	2.2	76	50
NCS DC 70302	Rock	0.021	0.29	11.6	0.12	0.020	(0.3)	0.09	34	0.5	5.6	0.09	2.2	91	50
NCS DC 70303	Rock	0.016	0.78	8.0	0.09	0.011	0.4	0.59	50	(0.5)	3.8	0.13	2.2	60	50
NCS DC 70304	Rock	(0.013)	0.17	4.9	0.06	0.016	(0.2)	0.05	28	2.6	54	0.10	2.1	71	50
NCS DC 70305	Rock	(0.016)	0.96	0.52%	0.08	0.025	6.1	0.02	343	0.52	3.4	0.13	2.8	459	50

		Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb	Rb	Sc
NCS DC 70301	Rock	0.3	0.11	1.4	0.004	2.9	70	0.35	0.3	5.8	35	2.9	1.2	0.40
NCS DC 70302	Rock	0.33	0.12	2.1	0.015	3.1	70	0.26	0.46	4.3	62	3.9	1.6	0.5
NCS DC 70303	Rock	0.3	0.10	12.4	0.007	2.7	232	0.18	0.34	(4.1)	99	1.4	0.6	0.50
NCS DC 70304	Rock	0.3	0.12	0.10	0.003	(3.0)	31	0.14	0.3	50.5	22	1.7	1.6	0.40
NCS DC 70305	Rock	0.31	0.12	0.13	0.006	3.1	93	0.19	0.4	2.9	155	2.9	2.6	0.40

		Sb	Se	Sr	Ta	Te	Tn	Ti	Tl	U	V	W	Zn	Zr
NCS DC 70301	Rock	0.08	0.014	227	(0.06)	0.008	0.25	66	0.022	0.59	4.8	0.17	8.1	53.7
NCS DC 70302	Rock	0.09	0.015	191	0.05	0.008	0.25	132	0.023	0.39	5.0	0.18	9.5	76.8
NCS DC 70303	Rock	0.15	0.007	87	0.04	0.009	0.54	42	0.04	0.66	4.0	0.13	6.4	443
NCS DC 70304	Rock	0.03	(0.016)	173	0.03	0.009	0.24	42	(0.02)	0.17	3.6	0.13	3.3	6.3
NCS DC 70305	Rock	0.06	0.013	158	0.06	0.008	0.45	78	0.04	0.70	5.1	0.17	3.6	4.9

		B	I	In	Sn	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
NCS DC 70301	Rock	(1.9)	(0.5)	(0.03)	(0.7)	0.9	1.4	0.22	0.66	0.15	0.037	0.13	0.022	0.12
NCS DC 70302	Rock	(2.2)	(0.3)	(0.02)	(0.6)	1.2	1.9	0.24	0.86	0.19	0.052	0.16	0.031	0.15
NCS DC 70303	Rock	(1.3)	(0.5)	(0.03)	(0.7)	2.6	2.2	0.49	1.80	0.38	0.078	0.39	0.085	0.51
NCS DC 70304	Rock	(1.47)	(0.3)	(0.02)	(0.5)	0.78	1.3	0.15	0.61	0.11	0.025	0.10	0.020	0.09
NCS DC 70305	Rock	(6.4)	(0.2)	(0.02)	(0.7)	1.3	2.5	0.28	1.10	0.26	0.14	0.22	0.032	0.17

		Ho	Er	Tm	Yb	Lu	Y	SiO_2*	Al_2O_2*	Fe_2O_3(T)*	MgO*	CaO*	Na_2O*	K_2O*
NCS DC 70301	Rock	0.034	0.09	0.018	0.11	0.019	1.2	0.55	0.17	0.193	6.76	47.89	0.022	0.043
NCS DC 70302	Rock	0.034	0.12	0.020	0.13	0.022	1.4	0.72	0.22	0.205	11.62	41.95	0.029	0.052
NCS DC 70303	Rock	0.13	0.50	0.092	0.68	0.13	6.1	0.30	0.15	0.070	0.24	55.49	0.014	0.012
NCS DC 70304	Rock	0.022	0.06	0.021	0.063	0.010	0.7	1.08	0.18	0.222	1.42	54.08	0.015	0.043
NCS DC 70305	Rock	0.034	0.10	0.017	0.10	0.015	1.1	1.15	0.29	0.17	20.14	30.93	0.036	0.16

		TiO_2*	MnO*	P_2O_5*	SO_3*	H_2O^+	FeO*	CO_2*	L.O.I*	C(org)*	H_2O^-*
NCS DC 70301	Rock	0.011	0.009	0.008	0.017	0.37	0.15	44.39	43.92	(0.03)	(0.20)
NCS DC 70302	Rock	0.022	0.009	0.014	0.013	0.31	0.16	44.89	44.75	(0.03)	(0.20)
NCS DC 70303	Rock	0.007	0.030	0.023	0.011	0.23	0.007	43.10	43.30		(0.06)
NCS DC 70304	Rock	0.007	0.004	0.005	0.014	0.14	0.09	43.13	42.64	(0.01)	(0.05)
NCS DC 70305	Rock	0.013	0.012	0.035	0.33	0.39	0.07	45.58	45.73	(0.07)	(0.07)

Value with * is in percent

Number	Name	Chemical Compcsition(μg/g)													Unit Size
		Ag	As	Ba	Be	Bi	Br	Cd	Ci	Co	Cr	Cs	Cu	F	(in g)
NCS DC 70306	Rock	0.019	3.7	1.33%	0.3	0.058	(0.5)	0.04	77	1.9	8.1	0.75	8.3	835	50
NCS DC 70307	Rock	0.029	1.3	18.8	0.15	0.022	0.4	0.39	60	0.34	10.3	0.14	2.9	92	50
NCS DC 70308	Rock	0.035	5.5	10.6	0.15	0.012	0.9	0.39	123	0.5	9.7	0.10	2.9	179	50
NCS DC 70309	Rock	0.045	2.2	101	0.56	0.050	0.5	0.15	96	7.0	34.0	1.98	18.7	454	50

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	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb	Rb	Sc
NCS DC 70306 Rock	1.6	0.16	0.3	(0.005)	5.1	689	0.60	1.0	6.6	527	5.6	10.6	1.1
NCS DC 70307 Rock	0.4	(0.07)	88	0.017	3.3	95	0.35	0.9	4.8	40	4.0	1.2	1.9
NCS DC 70308 Rock	0.4	0.11	3.1	0.031	3.0	209	0.80	0.4	5.6	40	7.8	1.1	0.5
NCS DC 70309 Rock	3.7	0.28	1.2	0.026	11.8	318	0.60	6.5	19.2	410	5.9	19.2	3.5

	Sb	Se	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Zn	Zr
NCS DC 70306 Rock	0.09	0.018	477	0.11	0.014	1.3	288	0.07	0.94	8.8	0.19	13.7	9.2
NCS DC 70307 Rock	0.17	0.087	278	0.11	0.012	2.6	174	0.03	3.4	6.2	0.18	8.6	0.28%
NCS DC 70308 Rock	0.59	0.10	85	0.030	0.016	0.29	54	0.02	1.13	7.5	0.13	35.7	113
NCS DC 70309 Rock	0.27	0.24	688	0.45	0.023	1.9	0.258%	(0.06)	1.04	38.5	0.25	24.5	47.0

	B	I	In	Sn	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
NCS DC 70306 Rock	(3.7)	(0.7)	(0.03)	(0.6)	4.1	8.1	0.94	3.42	0.74	0.30	0.69	0.11	0.52
NCS DC 70307 Rock	(3.1)	(0.5)	(0.03)	(0.5)	3.5	6.3	0.74	2.66	0.51	0.078	0.56	0.13	1.01
NCS DC 70308 Rock	(2.3)	(0.2)	(0.02)	(0.9)	0.9	1.5	0.21	0.89	0.21	0.049	0.19	0.035	0.20
NCS DC 70309 Rock	(14.8)	(0.3)	(0.05)	(1.1)	12.5	26.0	2.84	11.0	2.11	0.53	1.81	0.29	1.39

	Ho	Er	Tm	Yb	Lu	Y	SiO_2*	Al_2O_3*	Fe_2O_3(T)*	MgO*	CaO*	Na_2O*	K_2O*
NCS DC 70306 Rock	0.11	0.31	0.052	0.3	0.047	3.1	6.27	1.13	0.73	1.45	48.16	0.05	0.40
NCS DC 70307 Rock	0.27	1.20	0.27	2.62	0.53	8.9	1.28	0.29	0.155	0.75	53.83	0.020	0.035
NCS DC 70308 Rock	0.046	0.15	0.030	0.19	0.035	1.8	1.17	0.18	0.448	14.96	38.08	0.030	0.026
NCS DC 70309 Rock	0.25	0.75	0.099	0.60	0.091	8.0	11.07	3.03	1.77	1.36	43.76	0.17	0.88

	TiO_2*	MnO*	P_2O_5*	SO_3*	H_2O^+	FeO*	CO_2*	L.O.I*	C(org)*	H_2O^-*
NCS DC 70306 Rock	0.048	0.089	0.121	0.98	0.52	0.49	38.69	39.07	(0.17)	(0.15)
NCS DC 70307 Rock	0.029	0.011	0.009	0.058	0.39	0.06	42.58	42.75	(0.12)	(0.14)
NCS DC 70308 Rock	0.009	0.027	0.009	0.041	0.42	0.05	45.62	44.61	(0.04)	(0.17)
NCS DC 70309 Rock	0.430	0.041	0.094	1.18	0.97	0.79	35.52	36.57	(0.76)	(0.37)

Value with * is in percent

Number	Name	Chemical Composition(μg/g)													Unit Size
		Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	(in g)
NCS DC 70311	Rock	6.73	512	32.6	43.3	297	2.32	89.8	2.5	3.76	87	45.2	41.3	14.5	60
NCS DC 70312	Rock	5	18.9	1.2	59.0	404	2.52	0.46	1.2	0.18	114	16.7	68.2	10.4	60
NCS DC 70313	Rock	9	22.0	1.4	77.0	508	2.34	0.50	1.0	0.54	63	17.9	93.8	11.9	60
NCS DC 70314	Rock	0.06	19.0	0.9	58.9	341	2.13	0.34	1.4	0.15	120	7.9	36.2	8.0	60
NCS DC 70315	Rock	0.10	22.5	1.6	59.5	384	2.13	0.46	1.5	0.33	96.7	9.2	37.5	7.9	60

	Cu	F	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb
NCS DC 70311 Rock	0.50%	632	12.4	1.32	4.0	0.07	32.7	0.137%	15.5	8.6	46.2	804	731
NCS DC 70312 Rock	27.3	659	19.0	1.44	6.0	0.022	48.5	987	0.75	14.6	35.0	561	30.9
NCS DC 70313 Rock	27.1	622	17.8	1.34	6.5	0.033	53.9	876	0.60	15.9	51.9	613	61.9
NCS DC 70314 Rock	13.3	444	13.6	1.30	6.5	0.074	40.1	517	0.70	15.2	17.2	441	23.0
NCS DC 70315 Rock	16.6	539	14.1	1.09	6.0	0.026	27.9	567	0.83	15.6	20.1	501	31.7

	Rb	Sc	Sb	Se	Sn	Sr	Ta	Te	Tn	Ti(%)	Tl	U	V
NCS DC 70311 Rock	90.0	8.7	13.8	2.8	16.6	324	0.8	0.86	8.6	0.248	2.3	6.1	80.3
NCS DC 70312 Rock	119	11.8	1.44	0.10	2.8	83.8	1.2	0.045	12.9	0.375	0.60	2.8	102
NCS DC 70313 Rock	115	12.0	1.91	0.16	14.9	59.3	1.2	0.5	12.1	0.439	0.64	2.6	101
NCS DC 70314 Rock	104	6.96	1.08	0.11	3.1	117.5	1.3	(0.03)	12.7	0.276	0.59	2.9	56.1
NCS DC 70315 Rock	104	7.9	0.82	0.12	3.3	132	1.3	(0.03)	12.3	0.290	0.62	2.5	57.4

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	W	Zn	Zr	I	In	Pd*	Pt*	S	La	Ce	Pr	Nd	Sm
NCS DC 70311 Rock	38.7	797	132	(1.7)	(0.6)	(0.4)	(0.3)	(510)	26.6	55.6	6.01	23.2	4.85
NCS DC 70312 Rock	1.9	82.3	210	(0.6)	(0.06)	(0.5)	(0.4)	(98)	39.0	76.1	8.42	31	5.95
NCS DC 70313 Rock	2.6	176	222	(0.8)	(0.06)	(0.6)	(0.4)	(123)	38.8	74	8.33	31.1	5.99
NCS DC 70314 Rock	2.4	51.8	220	(0.7)	(0.04)	(0.5)	(0.4)	(135)	37.9	70.6	7.86	29	5.55
NCS DC 70315 Rock	2.4	91.1	206	(0.5)	(0.05)	(0.4)	(0.3)	(177)	37.0	71.3	8.10	29.3	5.61

	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yo	Lu	Y	SiO_2*	Al_2O_3*	Fe_2O_3(T)*
NCS DC 70311 Rock	1.17	4.88	0.77	4.40	0.86	2.64	0.39	2.43	0.35	24.3	38.05	9.67	10.34
NCS DC 70312 Rock	1.20	5.35	0.83	4.71	0.94	2.79	0.43	2.69	0.41	24.6	63.07	14.18	5.84
NCS DC 70313 Rock	1.21	5.40	0.83	4.73	0.95	2.81	0.43	2.73	0.41	24.4	69.70	13.19	5.85
NCS DC 70314 Rock	0.96	4.88	0.75	4.24	0.86	2.56	0.39	2.53	0.38	23.3	76.43	10.6	3.29
NCS DC 70315 Rock	1.04	5.15	0.78	4.40	0.87	2.60	0.40	2.55	0.38	23.7	66.50	10.17	3.7

	MgO*	CaO*	Na_2O*	K_2O*	TiO_2*	MnO*	P_2O_5*
NCS DC 70311 Rock	1.94	16.4	0.59	1.39	0.416	0.174	0.182
NCS DC 70312 Rock	1.55	3.69	1.11	2.51	0.650	0.127	0.13
NCS DC 70313 Rock	1.58	0.39	1.23	2.56	0.725	0.113	0.14
NCS DC 70314 Rock	0.72	1.27	1.47	2.30	0.469	0.067	0.101
NCS DC 70315 Rock	1.14	6.50	1.17	2.26	0.491	0.074	0.115

Value with * is in percent

Number	Name	Chemical Composition(μg/g)												Unit Size
		Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	(in g)
NCS DC 70316	Rock	0.07	13.7	1.8	56.1	476	2.43	0.30	1.9	0.10	56.7	14.7	139	13.7	60
NCS DC 70317	Rock	0.32	37.3	6.2	30.0	369	2.67	1.22	0.9	0.57	69.1	9.8	39.8	17.2	60
NCS DC 70318	Rock	0.06	18.0	1.4	30.6	437	3.32	0.49	0.9	0.10	207	6.7	47.6	20.2	60
NCS DC 70319	Rock	0.21	19.6	1.2	66.2	470	2.31	0.80	1.4	0.19	244	7.6	22.6	15.0	60
NCS DC 70320	Rock	0.14	12.3	1.1	41.5	483	2.56	0.70	1.1	0.17	152	7.3	24.4	13.0	60

	Cu	F	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb
NCS DC 70316 Rock	23.1	440	18.5	1.22	8.8	0.043	41.9	668	0.83	15.3	75.3	571	24.0
NCS DC 70317 Rock	247	424	14.4	1.19	5.7	0.034	29.7	614	6.6	12.0	20.8	389	127
NCS DC 70318 Rock	16.2	456	16.3	1.33	6.7	0.030	36.6	422	0.59	14.7	16.9	420	35.8
NCS DC 70319 Rock	151	459	15.8	1.13	9.5	0.028	26.1	527	7.0	16.1	9.5	484	46.8
NCS DC 70320 Rock	49.0	505	16.9	1.12	5.5	0.012	25.6	451	2.7	10.5	11.1	564	45.4

	Pb	Sc	Sb	Se	Sn	Sr	Ta	Te	Th	Ti(%)	Tl	U	V
NCS DC 70316 Rock	117	11.7	1.10	0.16	3.2	113	1.3	0.05	15.5	0.451	0.67	2.5	87.7
NCS DC 70317 Rock	141	6.5	4.44	0.19	3.3	185	1.1	0.21	17.5	0.217	0.96	3.4	45.7
NCS DC 70318 Rock	180	7.3	0.84	0.05	3.8	165	1.8	(0.03)	25.1	0.253	1.0	4.8	52.5
NCS DC 70319 Rock	154	6.2	2.70	0.18	2.7	256	1.8	0.10	25.5	0.344	1.1	4.8	74.7
NCS DC 70320 Rock	136	6.0	1.27	0.11	2.0	404	1.2	0.07	16.7	0.274	0.91	3.6	59.4

	W	Zn	Zr	I	In	Pd*	Pt*	S	La	Ce	Pr	Nd	Sm
NCS DC 70316 Rock	2.3	80.9	299	(0.7)	(0.06)	(0.6)	(0.4)	(157)	48.2	93.4	10.9	41.9	8.11
NCS DC 70317 Rock	9.2	116	188	(0.4)	(0.07)	(0.3)	(0.4)	(117)	37.9	72.0	7.89	29.0	5.39
NCS DC 70318 Rock	4.1	54.1	225	(0.3)	(0.04)	(0.4)	(0.3)	(48)	47.8	89.6	9.78	35.8	6.62
NCS DC 70319 Rock	9.3	62.9	299	(0.3)	(0.04)	(0.3)	(0.3)	(400)	42.6	78.1	8.57	30.6	5.42
NCS DC 70320 Rock	4.2	61.1	184	(0.3)	(0.04)	(0.3)	(0.3)	(183)	32.5	60.5	6.94	25.7	4.49

	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yo	Lu	Y	SiO_2*	Al_2O_3*	Fe_2O_3(T)*
NCS DC 70316 Rock	1.58	7.11	1.08	6.10	1.20	3.54	0.54	3.47	0.52	32.7	68.50	14.42	4.81
NCS DC 70317 Rock	0.96	4.90	0.76	4.24	0.83	2.47	0.38	2.46	0.36	23.0	64.22	10.84	3.07
NCS DC 70318 Rock	1.07	5.83	0.91	4.92	0.97	2.90	0.46	2.83	0.44	26.5	73.37	12.73	3.19
NCS DC 70319 Rock	0.97	4.57	0.70	3.91	0.79	2.39	0.38	2.55	0.39	21.6	71.23	13.22	4.11
NCS DC 70320 Rock	0.96	3.74	0.54	2.94	0.58	1.64	0.25	1.63	0.25	15.3	70.36	13.95	3.20

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	MgO*	CaO*	Na_2O*	K_2O*	TiO_3*	MnO*	P_2O_5*
NCS DC 70316 Rock	1.74	0.53	1.66	2.66	0.753	0.087	0.134
NCS DC 70317 Rock	0.87	8.19	1.74	2.86	0.366	0.079	0.090
NCS DC 70318 Rock	1.07	1.32	2.09	3.56	0.422	0.055	0.097
NCS DC 70319 Rock	0.70	1.40	2.72	3.65	0.589	0.069	0.111
NCS DC 70320 Rock	0.93	2.40	3.26	3.18	0.461	0.059	0.129

Value with * is in percent

Number	Name	Chemical Composition(μg/g)												Unit Size
		Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	(in g)
NCS DC 70321	Rock	0.06	14.3	0.4	19.7	875	3.60	0.33	0.8	0.07	82	4.4	16.5	16.2	60
NCS DC 70322	Rock	0.08	28.8	0.7	28.1	711	2.48	0.29	0.7	0.12	93	6.0	17.7	48.1	60
NCS DC 70323	Rock	0.10	54.6	2.9	134	475	3.88	0.48	1.3	0.08	71	13.2	59.0	42.5	60
NCS DC 70324	Rock	0.07	24.9	1.4	143	472	5.62	0.45	0.9	0.08	63	10.3	55.2	16.6	60

		Ou	F	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb
NCS DC 70321	Rock	10.8	452	16.5	1.02	6.1	0.008	25.7	258	0.60	10.1	8.8	459	48.9
NCS DC 70322	Rock	10.7	415	15.5	1.18	6.9	0.017	26.7	430	0.65	10.9	8.5	455	36.3
NCS DC 70323	Rock	44.0	555	17.1	1.66	6.3	0.066	69.8	608	0.66	15.5	37.2	542	27.7
NCS DC 70324	Rock	27.7	457	17.6	1.63	7.4	0.053	66.8	392	0.65	17.2	27.8	625	32.1

		Pb	Sc	Sb	Se	Sn	Sr	Ta	Te	Tn	Ti(%)	Tl	U	V
NCS DC 70321	Rock	229	3.9	0.67	0.04	2.1	340	1.0	(0.03)	317	0.170	1.42	5.1	31.5
NCS DC 70322	Rock	170	5.5	2.34	0.05	2.0	250	1.1	(0.04)	19.9	0.249	1.26	3.5	50.6
NCS DC 70323	Rock	110	10.5	10.4	0.39	4.6	327	1.2	0.15	15.6	0.339	0.66	2.1	85.0
NCS DC 70324	Rock	131	9.3	1.55	0.33	6.4	157	1.4	0.07	14.9	0.364	0.69	2.3	77.3

		W	Zn	Zr	I	In	Pd*	Pt*	S	La	Ce	Pr	Nd	Sm
NCS DC 70321	Rock	2.5	39.7	210	(0.23)	(0.03)	(0.3)	(0.2)	(57)	63.2	109	11.2	37	5.69
NCS DC 70322	Rock	3.1	50.8	243	(0.22)	(0.042)	(0.3)	(0.4)	(59)	41.6	77.6	8.61	30.2	5.26
NCS DC 70323	Rock	6.5	77.1	210	(0.5)	(0.07)	(0.8)	(0.6)	(528)	42.6	90.1	10.1	36.3	7.19
NCS DC 70324	Rock	2.6	76.4	247	(0.5)	(0.06)	(7)	(0.4)	(160)	40.0	84.4	9.42	34.8	6.69

		Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	La	Y	SiO_2*	Al_2O_3*	Fe_2O_3(T)*
NCS DC 70321	Rock	0.98	4.40	0.59	2.95	0.58	1.62	0.25	1.54	0.24	15.5	73.59	13.41	1.71
NCS DC 70322	Rock	1.05	4.43	0.64	3.49	0.69	1.99	0.32	1.96	0.30	18.6	73.67	12.57	2.85
NCS DC 70323	Rock	1.40	6.58	1.01	5.56	1.06	2.98	0.44	2.67	0.38	29.5	60.95	11.89	5.47
NCS DC 70324	Rock	1.29	6.05	0.93	5.10	0.99	2.75	0.41	2.57	0.37	25.9	70.16	12.79	4.82

	MgO*	CaO*	Na_2O*	K_2O*	TiO_2*	MnO*	P_2O_5*
NCS DC 70321 Rock	0.49	1.53	2.69	4.33	0.290	0.034	0.105
NCS DC 70322 Rock	0.62	1.38	2.50	3.87	0.421	0.056	0.104
NCS DC 70323 Rock	0.78	7.77	1.09	2.01	0.558	0.078	0.124
NCS DC 70324 Rock	0.62	2.29	1.48	2.67	0.616	0.051	0.142

Value with * is in percent

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition (Percent)													Unit Size
		Ag	As	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	Cu	(in g)
NCS DC70333	Soil,Sediment	0.073	5.97	39.5	408	1.66	0.19	1.20	0.2	84.1	14.2	71.7	3.8	38.7	50
NCS DC70334	Soil,Sediment	0.111	10.9	67.7	492	2.50	0.53	1.50	0.33	49.3	17.3	85.6	8.2	44.9	50
NCS DC70335	Soil,Sediment	0.103	13.1	58.6	583	2.63	0.44	3.69	0.30	58.3	18.0	89.2	9.8	43.2	50
NCS DC70336	Soil,Sediment	0.049	15.9	77.9	406	2.36	0.49	2.31	0.037	28.1	20.6	94.0	10.7	28.8	50
NCS DC70337	Soil,Sediment	0.128	14.5	54.8	362	2.27	0.46	18.0	1.74	54.9	17.1	158	8.7	37.2	50
		F	Ga	Ge	Hf	Hg	I	In	Li	Mo	Nb	Ni	Pb	Rb	
NCS DC70333	Soil,Sediment	466	13.0	1.31	5.87	0.043	(0.44)	0.048	24.0	0.91	15.0	31.6	22.6	71.8	
NCS DC70334	Soil,Sediment	643	18.2	1.39	7.48	0.096	0.76	0.075	44.3	0.77	19.9	41.0	29.6	108	
NCS DC70335	Soil,Sediment	720	20.1	1.49	5.8	0.076	1.73	0.078	50.9	1.17	16.8	44.8	31.4	123	
NCS DC70336	Soil,Sediment	534	21.7	1.67	10.0	0.054	9.10	0.081	54.9	1.08	23.5	41.3	30.8	122	
NCS DC70337	Soil,Sediment	725	19.5	1.67	8.16	0.189	8.64	0.086	44.0	14.0	27.6	65.7	26.8	88.2	
		Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Tl	U	V	W	Zn	
NCS DC70333	Soil,Sediment	0.57	9.9	0.16	2.69	180	1.08	(0.02)	8.9	0.40	1.93	96.3	1.26	77.2	
NCS DC70334	Soil,Sediment	1.02	14.0	0.25	3.49	145	1.61	(0.05)	14.0	0.67	2.88	115	2.49	101	
NCS DC70335	Soil,Sediment	1.28	14.8	0.45	3.15	125	1.42	(0.06)	13.7	0.75	3.86	123	2.07	101	
NCS DC70336	Soil,Sediment	1.43	15.5	0.48	4.23	39.3	1.94	(0.05)	18.7	0.81	3.97	127	3.21	77.2	
NCS DC70337	Soil,Sediment	2.23	12.6	5.07	4.05	73.3	1.96	(0.08)	13.7	1.33	5.99	323	2.39	113	
		Zr	Au*	Pt*	Pd*	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	
NCS DC70333	Soil,Sediment	211	1.7	(1.0)	(2.4)	32.0	59.3	7.21	27.5	5.14	1.16	4.58	0.68	4.02	
NCS DC70334	Soil,Sediment	262	2.5	(1.3)	(2.3)	43.3	82.1	9.65	36.8	6.95	1.46	6.26	0.68	5.62	
NCS DC70335	Soil,Sediment	196	3.4	(1.1)	(2.3)	41.2	77.2	9.06	34.6	6.57	1.40	5.90	0.91	5.36	
NCS DC70336	Soil,Sediment	342	3.3	(1.1)	(2.5)	43.1	116	9.34	34.9	6.58	1.21	5.85	0.93	5.74	
NCS DC70337	Soil,Sediment	296	2.1	(3.3)	(3.7)	45.5	93.6	9.87	36.9	6.65	1.25	5.73	0.91	5.60	
		Ho	Er	Tm	Yb	Lu	Y	SiO_2	Al_2O_3	Fe_2O_3(T)	MgO	CaO	Na_2O	K_2O	
NCS DC70333	Soil,Sediment	0.78	2.24	0.33	2.10	0.31	20.7	64.64	9.45	5.03	2.60	6.12	1.37	1.86	
NCS DC70334	Soil,Sediment	1.14	3.23	0.48	3.10	0.45	29.8	60.22	13.45	5.89	2.47	4.38	1.18	2.39	
NCS DC70335	Soil,Sediment	1.07	3.07	0.46	2.96	0.44	28.3	56.90	15.08	5.69	2.27	2.77	1.09	2.61	
NCS DC70336	Soil,Sediment	1.21	3.53	0.54	3.60	0.53	31.8	65.87	16.20	6.35	0.78	(0.13)	0.11	1.62	
NCS DC70337	Soil,Sediment	1.14	3.34	0.50	3.25	0.47	30.1	66.47	14.22	5.20	1.20	0.33	0.51	1.44	
		TiO_2	MnO	P_2O_3	SO_3	FeO	H_2O+	H_2O-	Tc	Org•C	L.O.I	N	CO_2		
NCS DC70333	Soil,Sediment	0.88	0.077	0.132	(0.054)	(1.98)	(2.51)	(0.78)	1.88	0.50	7.64	(0.032)	(5.11)		
NCS DC70334	Soil,Sediment	1.01	0.115	0.154	0.054	(2.02)	(4.17)	(1.40)	1.71	0.73	8.36	(0.074)	(3.56)		
NCS DC70335	Soil,Sediment	0.83	0.082	0.138	0.243	(3.06)	(5.56)	(2.92)	3.88	3.50	12.22	(0.309)	(1.54)		
NCS DC70336	Soil,Sediment	1.13	0.116	0.072	(0.100)	(0.62)	(6.65)	(2.47)	0.55	0.45	7.16	(0.066)	(0.14)		
NCS DC70337	Soil,Sediment	0.94	0.142	0.106	(0.081)	(1.43)	(6.50)	(2.91)	1.56	1.43	8,87	(0.21)	(0.27)		

Section 4 Mineral & Geology(Powder)

Number	Elements (10-6)										Unit Size
	Ag	As	Bi	Cd	Co	Cu	Ga	Ge	In	Mo	(in g)
DC70325	103±6	0.111*±0.007*	71.4±2.8	0.021*±0.001*	79.5±3.8	3.40*±0.07*	11.68±0.96	1.41Δ 1.05–1.5	5.60±0.42	54.8±3.0	50
DC70326	8.77±0.96	0.050*±0.007*	5.67±0.48	2.18±0.22	0.140*±0.007*	1.25*±0.05*	6.03±0.72	1.02±0.12	0.35±0.03	12.4±1.2	50
DC70327	125±8	0.055*±0.007*	1.78*±0.11*	44.5±4.4	18.1±0.8	0.211*±0.014*	15.32±0.72	2.76±0.26	6.11±0.40	0.361*±0.019*	50
DC70328	43.2±2.6	0.92*±0.05*	0.033*±0.003*	31.0±3.2	2.62±0.22	0.229*±0.011*	13.2±1.1	1.22±0.08	36.7±3.2	75±4	50
	Ni	Pb	Sb	Sc	Se	Sn	Te	Th	Tl	U	
DC70325	23.8±1.2	2.96*±0.07*	0.014*±0.002*	3.82±0.34	29.6±1.8	15.4±0.7	7.01±0.39	4.96±0.46	1.84±0.16	3.18±0.20	
DC70326	5.30*±0.19*	(78)	35.7±3.4	9.08±0.62	59.5±5.2	2.49±0.38	4.27±0.36	1.31±0.17	0.92±0.11	0.32±0.04	
DC70327	0.065*±0.004*	0.68*±0.05*	34.5±1.4	17.8±1.1	45.6±1.7	0.056*±0.008*	82.9±4.6	18.86±0.96	10.0±1.2	68.5±3.6	
DC70328	10.2±1.1	2.08*±0.04*	0.012*±0.001*	0.91±0.09	3.78±0.36	9.56*±0.40*	0.34±0.11	0.83±0.09	0.45±0.04	29.8±1.2	
	W	Zn*	Zr	Re	La	Ce	Pr	Nd	Sm	Eu	
DC70325	15.7±1.6	3.47±0.06	96±4		15.74±0.96	30.8±2.6	3.42±0.17	13.14±0.72	2.49±0.19	0.58±0.07	
DC70326	7.7±1.1	0.023±0.002	42.2±3.4		5.93±0.42	12.9±1.3	1.49±0.12	6.4±0.7	1.34±0.11	0.34±0.03	
DC70327	7.96*±0.32*	0.248±0.008	101±6	0.35±0.03	29.8±2.0	(58.1)	8.58±0.38	34.1±1.8	9.26±0.54	0.79±0.08	
DC70328	0.032*±0.007*	0.640±0.024	50±5		10.4±0.8	16.9±1.1	1.84±0.13	5.9±0.5	1.10±0.09	0.14±0.01	
	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y		
DC70325	2.20±0.14	0.33±0.03	1.78±0.12	0.35±0.03	1.01±0.06	0.15±0.02	0.98±0.06	0.15±0.02	9.26±0.42		
DC70326	1.20±0.09	0.20±0.02	1.14±0.09	0.23±0.02	0.61±0.05	0.09±0.01	0.54±0.05	0.09±0.01	5.75±0.46		
DC70327	7.44±0.72	1.55±0.13	10.3±0.5	2.06±0.14	6.53±0.34	1.14±0.06	9.28±0.60	1.36±0.16	66.3±4.6		
DC70328	0.96±0.13	0.14±0.02	0.70±0.05	0.13±0.01	0.39±0.03	0.065±0.007	0.44±0.03	0.073±0.008	3.60±0.34		
	Main content (10-2)										
	SiO_2	Al_2O_3	TFe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	MnO	P_2O_5	
DC70325	38.15±0.98	5.78±0.16	20.10±0.42	1.12±0.05	5.44±0.26	0.648±0.022	1.12±0.05	0.263±0.014	0.31±0.02	0.055±0.008	
DC70326	27.9±1.8	4.03±0.28	30.0±1.7	9.67±0.64	3.49±0.24	0.485±0.032	0.320±0.024	0.327±0.024	0.070±0.009	0.067Δ 0.055-0.096	
DC70327	48.2±1.7	8.43±0.34	8.44±0.36	1.06±0.05	9.18±0.40	0.96±0.04	1.85±0.07	0.222±0.016	1.20±0.06	0.153±0.014	
DC70328	0.98±0.06	0.45±0.04	68.7±2.6	0.35±0.02	1.69±0.13	0.023±0.007	0.017±0.003	0.046±0.007	0.47±0.04	0.052±0.005	
	F	S									
DC70325	0.074±0.003	13.99±0.32									
DC70326	0.021±0.003	17.36±0.60									
DC70327	2.37±0.14	2.40±0.11									
DC70328	0.036±0.004	4.12±0.12									

Value with * is in percent

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Number	Elements (10-6)										Unit Size
	Ag	As	Bi	Cd	Co	Cu	Ga	Ge	In	Mo	(in g)
DC70329	0.67±0.08	15.22*±0.96*	12.86±0.94	2.18±0.22	2.01±0.28	162±11	1.45±0.17	0.39±0.06	2.37±0.28	18.2±1.8	50
DC70330	94.6±4.6	0.056*±0.003*	3.10±0.38	0.012*±0.001*	17.69±0.94	0.044*±0.003*	30.7±1.9	15.35±0.75	0.77±0.09	0.012*±0.001*	50
DC70331	7.01±0.66	55.0±3.6	27.2±1.8	2.02±0.36	33.2±1.7	0.29*±0.02*	15.4±0.9	1.82±0.11	1.29±0.32	9.09*±0.28*	50
DC70332	2.61±0.38	0.212*±0.014*	5.56±0.58	1.45±0.13	26.7±1.7	52.3±2.6	7.10±0.64	2.23±0.16	0.038±0.008	10.3±1.8	50

	Ni	Pb	Sb	Sc	Se	Sn	Te	Th	Tl	U
DC70329	10.0±0.6	0.015*±0.002*	0.050*±0.004*	1.02±0.14	45.3±4.4	0.051*±0.008*	0.51±0.07	0.52±0.06	8.7±1.0	3.02±0.32
DC70330	16.8±1.4	7.90*±0.15*	0.011*±0.001*	4.85±0.36	1.96±0.34	16.7±0.7	0.34±0.05	4.53±0.62	0.97±0.07	2.99±0.34
DC70331	51.1±3.2	(97.8)	2.97±0.58	9.24±0.52	7.55±0.38	12.12±0.58	1.09±0.46	5.11±0.60	1.37±0.16	3.20±0.30
DC70332	17.4±2.6	(97)	8.55*±0.36*	4.38±0.28	94.5±8.2	2.04±0.22	0.44±0.19	3.27±0.54	0.50±0.05	1.23±0.13

	W	Zn*	Zr	Re	La	Ce	Pr	Nd	Sm	Eu
DC70329	11.7±1.2	0.040±0.003	4.15±0.36		1.91±0.17	3.62±0.28	0.43±0.05	1.58±0.15	0.34±0.05	0.073±0.008
DC70330	0.028*±0.002*	4.72±0.12	(79.8)		16.7±1.4	31.8±2.4	3.69±0.23	13.43±0.86	2.59±0.24	0.58±0.08
DC70331	0.037*±0.007*	0.027±0.002	102±11	10.9±0.7	24.4±1.9	44.3±3.8	5.59±0.26	20.0±1.5	3.52±0.50	0.88±0.12
DC70332	0.031*±0.003*	0.027±0.003	53.5±5.2		14.8±1.7	25.8±1.8	3.18±0.20	12.29±0.74	2.52±0.17	0.50±0.07

	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y
DC70329	0.29±0.04	0.042±0.008	0.20±0.02	0.035±0.004	0.12±0.03	0.017±0.003	0.10±0.02	0.019±0.004	1.09±0.11
DC70330	2.28±0.18	0.33±0.03	1.86±0.10	0.37±0.03	1.08±0.04	0.16±0.02	1.08±0.08	0.17±0.02	10.09±0.46
DC70331	3.13±0.28	0.46±0.05	2.37±0.28	0.48±0.04	1.37±0.13	0.20±0.03	1.35±0.09	0.21±0.03	13.73±0.98
DC70332	2.13±0.19	0.36±0.03	2.21±0.18	0.45±0.04	1.30±0.11	0.20±0.02	1.27±0.11	0.20±0.03	12.3±1.0

	Main content (10-2)								
	SiO_2	Al_2O_3	TFe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	MnO	P_2O_5
DC70329	2.30±0.16	0.44±0.08	3.87±0.26	12.20±0.82	23.9±1.6	0.022±0.003	0.049±0.005	0.020±0.005	0.027±0.002	0.025±0.003
DC70330	43.2±1.2	7.04±0.26	13.17±0.32	1.20±0.06	6.24±0.22	1.11±0.04	1.83±0.07	0.276±0.022	0.170±0.008	0.077±0.004
DC70331	52.7±1.8	11.05±0.38	6.43±0.28	2.04±0.09	3.85±0.18	2.14±0.09	2.28±0.10	0.41±0.04	0.110±0.008	0.169±0.028
DC70332	65.4±3.6	4.94±0.30	2.22±0.14	2.17±0.15	4.24±0.26	0.089±0.009	1.55±0.11	0.180±0.017	0.112±0.010	0.070±0.006

	F	S
DC70329	0.015±0.002	7.18±0.19
DC70330	0.45±0.03	11.45±0.24
DC70331	0.37±0.08	7.97±0.22
DC70332	0.060±0.004	3.59±0.15

Value with * is in percent

Number	Name	Chemical Composition (Percent)													Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	FeO	MgO	CaO	TiO_2	P_2O_5	MnO	Na_2O	K_2O	H_2O	CO_2	(in g)
NCS DC 71301	Rock	54.48	17.72	6.04	1.23	0.65	1.39	0.48	0.018	0.12	7.16	7.48	2.38	0.26	50
NCS DC 71302	Rock	63.06	16.1	4.51	0.19	0.84	2.47	0.8	0.36	0.089	3.06	5.17	1.79	1.03	50
NCS DC 71303	Rock	59.68	16.56	2.64	3.08	2.81	4.72	0.77	0.34	0.094	4.05	3.50	0.88	0.15	50
NCS DC 71304	Rock	35.69	14.14	9.90	13.36	5.25	9.86	7.69	0.028	0.193	2.11	0.15	1.09	0.12	50
NCS DC 71305	Rock	72.78	12.96	1.14	1.86	0.16	0.59	0.30	0.045	0.14	2.57	5.43	1.18	0.52	50
NCS DC 71306	Rock	0.62	0.10	0.04	0.15	21.8	30.02	0.015	0.006	0.010	(0.003)	0.038	(0.34)	46.77	50

		S	Cl	F	C(T)
NCS DC 71301	Rock	0.011	0.059	0.048	(0.093)
NCS DC 71302	Rock	0.023	0.016	0.112	(0.29)
NCS DC 71303	Rock	0.011	0.023	0.084	(0.057)
NCS DC 71304	Rock	0.37	0.006	0.006	(0.039)
NCS DC 71305	Rock	0.009	(0.002)	0.13	(0.15)
NCS DC 71306	Rock		0.012	0.014	(12.88)

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Number	Name	Chemical Composition(μg/g)													Unit Size
		Ta	Te	Th	Tl	U	Ag	As	W	B	Ba	Cu	Zr	Ga	(in g)
NCS DC 71301	Rock	1.96	0.012	79.3	0.76	14.6	(0.033)	6.27	1.24	31.8	251	11.8	0.154*	35.8	
NCS DC 71302	Rock	1.42	(0.007)	16.7	1.02	3.04	0.17	5.96	1.62	10.8	1053	9.1	335	19.8	
NCS DC 71303	Rock	0.62	0.011	10.9	0.39	1.40	0.066	0.4	0.19	3.92	0.190*	8.8	224	20.8	
NCS DC 71304	Rock	(0.56)	0.010	(0.28)	0.07	(0.086)	0.05	(0.21)	(0.10)	1.84	86.2	28.3	29	23.7	
NCS DC 71305	Rock	2.41	(0.0009)	(27.1)	0.83	4.83	0.08	0.7	1.10	3.5	506	10.9	403	20.5	
NCS DC 71306	Rock	(0.18)	(0.012)	0.11	(0.070)	0.16	0.04	0.23	0.11	20.5	44.3	30.2	3.0	(0.21)	
		Ge	Hg	Li	Pb	Sc	Sr	Zn	Br	Cd	Sb	Ce	Dy	Eu	V
NCS DC 71301	Rock	0.95	0.005	32.9	196	2.22	0.016*	112	1.21	0.07	0.15	242	4.70	2.35	179
NCS DC 71302	Rock	1.11	0.014	17.5	97.7	7.52	318	164	(0.55)	0.61	1.34	117	5.32	1.96	64.3
NCS DC 71303	Rock	1.00	0.035	16.2	19.8	10.3	1198	85.4	(0.34)	0.08	0.06	112	3.20	1.91	104
NCS DC 71304	Rock	1.06	(0.005)	1.94	(5.16)	22.5	612	118	(0.32)	0.09	(0.04)	4.2	1.11	0.74	768
NCS DC 71305	Rock	1.17	0.005	12.7	33.3	5.15	43.0	86.3	(0.25)	0.14	0.38	163	8.19	1.18	3.8
NCS DC 71306	Rock	0.15	(0.004)	2.30	(4.44)	0.098	27.0	11.7	0.84	0.07	(0.04)	3.58	0.19	0.05	(21)
		Gd	Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Be	
NCS DC 71301	Rock	7.0	0.96	14.9	0.43	65.1	9.7	1.02	0.46	2.56	2.48	22.5	24.7	17.2	
NCS DC 71302	Rock	6.54	1.10	62.5	0.49	47.2	8.63	0.99	0.5	3.15	2.93	13.2	28.0	3.64	
NCS DC 71303	Rock	5.09	0.60	60.5	0.24	48.1	7.74	0.68	0.26	1.56	1.57	13.2	15.5	2.11	
NCS DC 71304	Rock	1.31	0.20	1.71	0.06	4.10	1.22	0.20	0.09	0.36	0.47	0.84	4.9	(0.98)	
NCS DC 71305	Rock	9.47	1.64	82.7	0.67	64.5	11.7	1.51	0.73	4.51	4.31	18.4	42.5	4.09	
NCS DC 71306	Rock	0.18	0.04	1.34	0.019	1.39	0.25	0.05	(0.040)	0.09	0.09	(0.44)	(1.40)	(0.22)	
		Bi	Co	Cr	Cs	Hf	I	In	Mo	Nb	Ni	Pb	Se	Sn	
NCS DC 71301	Rock	0.37	4.59	3.6	2.05	34.0	0.14	0.15	0.26	66.9	1.75	130	0.05	6.50	
NCS DC 71302	Rock	0.09	7.9	7.7	7.16	7.5	0.07	0.11	0.95	20.8	12.6	183	0.03	3.12	
NCS DC 71303	Rock	0.05	15.6	37.6	0.97	5.2	(0.078)	0.08	0.47	10.6	24.4	70.1	0.03	1.44	
NCS DC 71304	Rock	0.04	93.0	14.5	(0.17)	0.65	0.08	0.12	(0.94)	9.3	69	(4.79)	0.26	0.89	
NCS DC 71305	Rock	0.06	2.40	7.3	3.34	10.8	(0.093)	0.09	2.46	34.3	64.5	213	0.040	3.35	
NCS DC 71306	Rock	0.03	3.88	2.6	0.07	(0.10)	0.23	(0.066)	(0.024)	(2.77)	241	(1.42)	0.08	0.53	

Number	Name	Chemical Composition (Percent)									Unit Size
		Ag	Cd	Cu	Fe	S	Sb	Sn	Zn	Pb	(in g)
NCS DC 71307	Sulfied Mineral				46.08	52.72					5
NCS DC 71309	Sulfied Mineral	0.97				13.30	0.43	0.11		84.26	5
NCS DC 71310	Sulfied Mineral		0.15	0.10	2.14	32.33			62.51	0.099	5
		Chemical Composition (μg/g)									
		Ag	As	Bi	Cd	Co	Ga	Ge	In	Sb	Se	Sn	Te
NCS DC 71307	Sulfied Mineral	0.59	(14.4)	2.9	0.71	(3.9)	0.44	(0.2)		1.1	5.8	(2.7)	0.95
NCS DC 71309	Sulfied Mineral		5.3	1.4	16.5	(0.4)	(0.3)	1.47	0.29				(0.07)
NCS DC 71310	Sulfied Mineral	5.0	(3.3)	6.1		491	251	6.0	21.0	249	(3.0)	(0.2)	(0.3)
		Zn	Ti	Mn	Ni	Pb	Cu	Fe					
NCS DC 71307	Sulfied Mineral	219		28.9	34.0	(23.4)	431						
NCS DC 71309	Sulfied Mineral	533	0.65				62.4	127					
NCS DC 71310	Sulfied Mineral			169	43.2								

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Number	Name	Chemical Composition(Percent)												Unit Size
		Al_2O_3	CaO	FeO	K_2O	Na_2O	MgO	Mn	P_2O_5	SiO_2	Fe_2O_3	TiO_2	LOI	(in g)
NCS DC 71311	Rock	13.21	7.83	7.24	1.49	3.17	5.08	0.16	0.55	49.88	13.40	2.94	2.30	70
NCS DC 71312	Rock	3.73	12.64	3.71	0.49	(0.10)	17.56	0.09	0.30	35.88	6.53	0.71	20.73	70
NCS DC 71313	Rock	13.19	(0.10)	(0.04)	6.22	1.6	0.13	0.013	0.18	76.40	0.24	0.61	1.27	70

		CO_2	Cl	F	H_2O^+	SO_3	Ba
NCS DC 71311	Rock	(0.11)	(0.04)	(0.07)	(2.44)	0.44	
NCS DC 71312	Rock	(16.78)	(0.04)	(0.11)	(4.47)	0.68	0.177
NCS DC 71313	Rock	(0.05)		(0.03)	(1.02)	0.07	

Number	Name	Chemical Composition(μg/g)											
		Ag	As	B	Ba	Be	Bi	Cd	Ce	Co	Cr	Cs	Cu
NCS DC 71311	Rock	0.33	5.1	17.0	614	1.5	0.39	0.39	78.1	37.5	109	1.7	82.6
NCS DC 71312	Rock	(0.06)	3.5	(31.8)		1.3	(0.10)	0.46	12.7	40.0	776	5.2	26.2
NCS DC 71313	Rock	(0.09)	3.1	(1.9)	728	1.3	(0.07)	0.15	(5.0)	(1.5)	4.8	1.8	4.2

		Dy	Er	Eu	Ga	Gd	Ge	Hf	Hg	Ho	La	Li	Lu
NCS DC 71311	Rock	5.5	2.6	3.5	21.2	7.2	1.5	9.2	0.017	1.2	38.1	20.8	0.34
NCS DC 71312	Rock	2.6	1.2	1.6	7.1	4.7	0.89	4.9	0.010	0.49	69.8	75.7	0.16
NCS DC 71313	Rock	0.20	0.12	(0.16)	13.5	0.22	1.48	(0.80)	(0.008)	(0.04)	(3.3)	14.4	0.03

		Mo	Nb	Nd	Ni	Pb	Pr	Rb	Sb	Sc	Se	Sm	Sn
NCS DC 71311	Rock	1.4	25.3	42.8	55.3	33.0	10.6	47.4	2.3	27.1	(0.19)	8.6	2.0
NCS DC 71312	Rock	1.4	56.8	49.0	542	20.7	13.8	28.4	(0.22)	10.9	0.10	6.5	1.7
NCS DC 71313	Rock	0.29	14.6	1.51	(1.6)	34.6	0.48	155	0.64	(2.85)	(0.015)	(0.24)	3.5

		Sr	Ta	Tb	Th	Tm	U	V	W	Y	Yb	Zn	Zr
NCS DC 71311	Rock	470	1.8	1.1	4.9	0.36	1.2	268	1.4	24.5	2.2	160	352
NCS DC 71312	Rock	262	3.9	0.54	10.8	0.17	2.2	89.4	2.4	11.6	1.1	190	175
NCS DC 71313	Rock	45.5	1.3	(0.04)	0.66	(0.02)	(0.75)	(44.5)	3.2	1.6	0.21	20.3	22.6

Number	Name	Chemical Composition(Percent)										
		No_2O_3	K_2O	SiO_2	ZnO	PbO	B_2O_3	Al_2O_3	MgO	TiO_2	Fe_2O_3	CaO
NCS DC 71401	Zinc Oxide for EPMA			(0.04)	99.80			(0.10)				
NCS DC 71402	Potassium Niobat for EPMA	74.10	25.89									
NCS DC 71403	Lead Glass for EPMA		3.12	32.70		64.4						
NCS DC 71404	Boron Glass for EPMA			37.11			(11.21)	35.24	10.28	(0.42)	(0.44)	(0.77)
NCS DC 71405	Kyanite for EPMA			37.06				62.70				
NCS DC 71406	Pyrite for EPMA											
NCS DC 71407	Olivine for EPMA			40.73					50.05			(0.04)
NCS DC 71408	Feldspar for EPMA		4.51	65.97				19.88	(0.02)			0.89
NCS DC 71409	Chromite for EPMA			(0.15)				(7.36)	12.38			
NCS DC 71410	Quartz for EPMA			99.98								
NCS DC 71411	Garnet for EPMA			36.31				20.05	0.08			10.21

		Na_2O	Cr_2O_3	MnO	Fe_2O_3	TFe_2O_3	FeO	Fe	S	P_2O_5
NCS DC 71404	Boron Glass for EPMA	(1.27)								(0.025)
NCS DC 71405	Kyanite for EPMA									
NCS DC 71406	Pyrite for EPMA								53.19	
NCS DC 71407	Olivine for EPMA			(0.17)			8.67			
NCS DC 71408	Feldspar for EPMA	7.08								
NCS DC 71409	Chromite for EPMA		64.34	(0.10)	(1.68)		14.04			
NCS DC 71410	Quartz for EPMA						(0.02)			
NCS DC 71411	Garnet for EPMA			29.71		(15.25)	13.4			

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Pb	S	Zn	Hg	BaO	SO_3	PbO	CO_2	WO_3	CaO	Nb_2O_3	Ta_2O_3	
NCS DC 71412	Galena for EPMA	86.35	13.44											
NCS DC 71413	Sphalerite for EPMA		32.76	66.33										
NCS DC 71414	Cinnabar for EPMA		13.63		86.00									
NCS DC 71415	Barite for EPMA					65.56	34.28							
NCS DC 71416	Cerusite for EPMA							83.36	(16.82)					
NCS DC 71417	Scheelite for EPMA									80.45	19.39			
NCS DC 71418	Manganocolumbite for EPMA											54.74	25.92	

		FeO	MnO
NCS DC 71418	Manganocolumbite for EPMA	6.65	12.47

Number	Name	Chemical Composition(Percent)									Unit Size (in g)
		Cd	Te	Se	Ga	As	Zn	In	Sb	P	
NCS DC 71419	Cadmium Telluride for EPMA	46.87	53.39								
NCS DC 71420	Cadmium Selenide for EPMA	58.48		40.88							
NCS DC 71421	Cadmium Arsenide for EPMA				48.07	51.95					
NCS DC 71422	Zinc Selenide for EPMA			54.44			45.38				
NCS DC 71423	Indium Antimonide for EPMA							48.59	51.45		
NCS DC 71424	Indium Phosphide for EPMA							78.51		21.12	
NCS DC 71425	Indium Arsenide for EPMA					39.60		60.97			

Number	Name	Chemical Composition(Percent)										Unit Size (in g)
		P_2O_5	Sc_2O_3	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Gd_2O_3	Ho_2O_3	Yb_2O_3	Lu_2O_3	
NCS DC 71426	Sc P 5014 for EPMA	85.6	16.42										
NCS DC 71427	La P 5014 for EPMA	67.70		31.25									
NCS DC 71428	Ce P 5014 for EPMA	68.32			31.7								
NCS DC 71429	Pr P 5014 for EPMA	68.67				31.83							
NCS DC 71430	Nd P 5014 for EPMA	68.12					32.2						
NCS DC 71431	Sm P 5014 for EPMA	68.87						32.07					
NCS DC 71432	Gd P 5014 for EPMA	66.6							33.71				
NCS DC 71433	Ho P 5014 for EPMA	65.37								34.52			
NCS DC 71434	Yb P 5014 for EPMA	64.1									35.88		
NCS DC 71435	Lu P 5014 for EPMA	63.44										36.08	

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Number	Name	Chemical Composition (Percent)												Unit Size
		TFe	SiO_2	Al_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O^+	S	P	Ti	(in g)
NCS DC 73001	Iron ore	20.17	60.86	3.57	(7.49)	1.68	2.84	0.28	0.53	(1.18)	0.051	0.045	0.085	50
NCS DC 73002	Iron ore	30.34	43.68	3.43	5.8	1.44	2.17	0.18	0.85	(2.08)	0.066	0.094	0.091	50
NCS DC 73003	Iron ore	40.51	33.93	2.27	(14.5)	2.22	2.00	0.16	0.27	(1.37)	0.95	0.032	0.067	50
NCS DC 73004	Iron ore	49.50	16.30	2.58	7.66	0.98	0.91	0.035	0.92	(2.1)	0.065	0.138	0.083	50
NCS DC 73005	Iron ore	56.60	11.48	0.99	20.05	3.62	1.36	0.058	0.071	(1.63)	2.44	0.017	0.043	50
NCS DC 73006	Iron ore	61.46	6.65	1.68	(0.35)	0.77	0.52	0.081	0098	(0.046)	0.0067	0.019	1.12	50
NCS DC 73007	Iron ore	62.51	10.93	1.02	21.54	0.28	0.18	0.016	0.038	(0.41)	0.0058	0.11	0.059	50
NCS DC 73009	Iron ore	66.87	5.05	0.99	23.14	0.22	0.14	0.012	0.030	(0.44)	0.0055	(0.011)	0.059	50

		Mn	Cu
NCS DC 73001	Iron ore	0.168	0.0028
NCS DC 73002	Iron ore	0.200	0.0023
NCS DC 73003	Iron ore	0.122	0.028
NCS DC 73004	Iron ore	0.198	0.0014
NCS DC 73005	Iron ore	0.076	0.068
NCS DC 73006	Iron ore	0.072	0.0028
NCS DC 73007	Iron ore	0.061	(0.0015)
NCS DC 73009	Iron ore	0.071	0.0015

Number	Name	Chemical Composition(Percent)										Unit Size
		Cr_2O_3	SiO_2	Al_2O_3	Fe_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O^+	CO_2	(in g)
NCS DC 73010	Chromite	17.59	20.30	11.86	10.52	(8.68)	28.12	0.44	(0.13)	0.046	(10.7)	(0.6)	50
NCS DC 73011	Chromite	34.44	12.24	11.37	11.81	(8.5)	23.32	0.32	0.073	0.026	(6.4)	(0.46)	50
NCS DC 73012	Chromite	46.56	5.06	11.60	15.34	(12.0)	17.92	0.46	0.018	(0.010)	2.5	(1.2)	50
NCS DC 73013	Chromite	57.80	1.10	10.53	13.70	(8.3)	16.45	(0.13)	(0.016)	(0.004)	(0.59)	(0.14)	50

		S	Ni	Co	P	Ti	Mn	V
NCS DC 73010	Chromite	0.037	0.188	0.0124	0.0031	0.085	0.088	0.043
NCS DC 73011	Chromite	0.024	0.175	0.14	0.0020	0.100	0.090	0.044
NCS DC 73012	Chromite	0.076	0.134	0.016	(0.0013)	0.070	0.135	0.064
NCS DC 73013	Chromite	(0.005)	0.16	0.016	(0.0012)	0.122	0.097	0.048

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Number	Name	Chemical Composition(μg/g)									Unit Size
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	(in g)
NCS DC 73014	Stream Sediment	0.14±0.01	14.3±0.9	53±7	455±9	2.2±0.1	0.51±0.03	0.8±0.2	0.34±0.02	47±2	70
NCS DC 73015	Stream Sediment	0.050±0.007	3.6±0.4	48±6	600±20	3.6±0.4	0.48±0.03	0.61±0.13	0.093±0.009	24±2	70
NCS DC 73016	Stream Sediment	0.74±0.14	43±4	62±6	623±18	2.9±0.3	1.25±0.04	3.7±0.5	4.3±0.5	63±2	70
NCS DC 73017	Stream Sediment	0.044±0.014	4.4±0.3	5.5±1.2	1054±17	1.6±0.1	0.33±0.04	1.0±0.2	0.095±0.010	32±2	70
NCS DC 73018	Stream Sediment	0.092±0.005	3.0±0.4	14±3	567±11	1.9±0.1	0.22±0.01	1.0±0.2	0.12±0.01	90±4	70
NCS DC 73019	Stream Sediment	0.082±0.008	51±3	28±2	360±8	1.3±0.2	0.17±0.02	1.1±0.4	0.22±0.01	39±2	70
NCS DC 73020	Stream Sediment	0.14±0.01	19.2±1.9	35±6	727±15	1.5±0.1	0.20±0.01	(0.9)	0.76±0.03	44±2	70
NCS DC 73021	Stream Sediment	0.068±0.010	10.5±0.6	46±10	584±14	1.5±0.1	0.25±0.02	1.3±0.2	0.165±0.010	47±1	70
NCS DC 73022	Stream Sediment	2.1±0.3	304±20	70±8	590±10	2.4±0.1	13.1±0.6	1.4±0.2	4.8±0.5	79±2	70
		Chemical Composition(μg/g)									
		Cl	Co	Cr	Cs	Cu	Dy	Er	Eu	F	
NCS DC 73014	Stream Sediment	53±5	10.2±0.4	61±4	5.8±0.3	132±5	4.1±0.3	2.5±0.2	1.20±0.06	550±21	
NCS DC 73015	Stream Sediment	33±3	4.4±0.2	21±33	7.2 ± 0.2	7.2±0.52	1.7±0.1	0.93±0.09	0.62±0.03	279±8	
NCS DC 73016	Stream Sediment	133±9	9.4±0.2	5±2	6.0±0.3	6.5±1.0	4.7±0.3	3.0±0.3	0.98±0.04	460±37	
NCS DC 73017	Stream Sediment	(30)	12.5±0.9	8.4±1.2	1.5±0.2	3.9±0.6	1.3±0.1	0.8±0.1	0.54±0.05	131±20	
NCS DC 73018	Stream Sediment	62±5	19.5±0.6	79±3	4.6 ± 0.3	43±1	6.5±0.3	3.7±0.2	1.4±0.1	664±22	
NCS DC 73019	Stream Sediment	38±6	29±2	220±16	2.9±0.2	45±1	3.4±0.2	2.0±0.2	1.12±0.04	390±21	
NCS DC 73020	Stream Sediment	0.28±0.02*	8.8±0.4	32±4	2.2±0.6	296±10	4.5±0.2	2.7±0,2	1.11±0.06	535±22	
NCS DC 73021	Stream Sediment	298±39	10.0±0.5	48±3	5.4±0.3	22.6±0.8	4.5±0.4	2.6±0.3	1.08±0.05	506±28	
NCS DC 73022	Stream Sediment	46±8	14.4±0.5	72±3	10.3 ±0.4	483±20	5.2±0.2	3.0±0.2	1.36±0.06	603±29	
		Chemical Composition(μg/g)									
		Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	
NCS DC 73014	Stream Sediment	14.6±0.6	4.1±0.2	1.87±0.14	3.8±0.8	0.018±0.006	0.83±0.08	0.47±0.08	0.14±0.01	24±1	
NCS DC 73015	Stream Sediment	12.4±0.5	1.7±0.1	1.64 ±0.14	2.1±0.4	(0.007)	0.33±0.02	0.27±0.08	0.018±0.004	13.9±1.0	
NCS DC 73016	Stream Sediment	17.7±0.6	4.8±0.2	1.15±0.07	6.7±0.8	0.108±0.011	0.99±0.08	2.0±0.2	0.104±0.009	35±1	
NCS DC 73017	Stream Sediment	12.0±0.6	1.4±0.1	1.21±0.07	2.7±0.5	0.016±0.005	0.26±0.03	0.46±0.10	(0.014)	11.8±0.6	
NCS DC 73018	Stream Sediment	16.5±0.4	7.0±0.5	1.45±0.08	7.8±0.7	(0.014)	1.27±0.05	0.4±0.1	0.068±0.008	45±2	
NCS DC 73019	Stream Sediment	15.5±0.5	3.6±0.6	1.15±0.08	(3.3)	0.089±0.009	0.70±0.07	0.36±0.07	0.050±0.007	20±1	
NCS DC 73020	Stream Sediment	15.7±0.5	4.3±0.4	1.06±0.08	4.8±0.4	0.025±0.005	0.93±0.08	1.6±0.2	0.11±0.01	21±1	
NCS DC 73021	Stream Sediment	13.4±0.4	4.5±0.3	1.05±0.04	4.1±0.3	0.019±0.004	0.92±0.10	1.7±0.3	0.046±0.006	24±1	
NCS DC 73022	Stream Sediment	21.5±1.0	5.5±0.2	1.74±0.16	7.4±1.3	0.115±0.023	1.04±0.08	1.8±0.2	0.36±0.03	40±1	
		Chemical Composition(μg/g)									
		Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	
NCS DC 73014	Stream Sediment	20.7±2.0	0.42±0.04	0.142±0.004*	0.94±0.04	150	9.4 ± 07	22±1	18.9±0.7	568±17	
NCS DC 73015	Stream Sediment	40 ± 2	0.16±0.02	290±7	0.33±0.04	79	5.1±0.7	9.8±0.4	7.0±0.6	335±15	
NCS DC 73016	Stream Sediment	23.6±1.6	0.52±0.03	0.149±0.004*	1.6±0.2	0.276±0.027*	13.6±0.8	28±1	14.4±0.7	0.107±0.005*	
NCS DC 73017	Stream Sediment	8.1±0.8	0.14±0.03	0.122±0.004*	0.64±0.05	218±27	9.5±0.7	8.9±1.0	4.7±0.5	234±13	
NCS DC 73018	Stream Sediment	43 ± 2	0.60±0.08	798±31	0.84±0.08	291±36	15.3±0.8	40±2	70±2	459±15	
NCS DC 73019	Stream Sediment	19.4±0.5	0.31±0.03	0.113±0.003*	0.81±0.11	204±37	12.3±1.4	17.9±0.7	102±3	850±36	
NCS DC 73020	Stream Sediment	16.2±0.8	0.47±0.05	829±9	1.7±0.1	140	9.2±0.8	22±1	13.4±0.9	608±16	
NCS DC 73021	Stream Sediment	28±1	0.42±0.04	675±19	1.1±0.1	312±35	9.2±0.41	23±1	26±2	571±14	
NCS DC 73022	Stream Sediment	38±2	0.48±0.02	0.103±0.003*	1.56±0.20	711±62	6.4±0.7	33±1	29±1	589±39	
		Chemical Composition(μg/g)									
		Pb	Pr	Rb	S	Sb	Sc	Se	Sm	Sn	
NCS DC 73014	Stream Sediment	210±6	5.9±0.4	96±4	432±60	1.18±0.07	11.4±0.3	0.47 ± 0.10	4.5±0.2	2.5±0.4	
NCS DC 73015	Stream Sediment	31±23	2.9±0.3	118±3	87±10	0.16±0.03	4.9±0.4	0.053±0.013	1.9±0.1	2.3±0.2	
NCS DC 73016	Stream Sediment	41±15	7.7±0.6	139±3	532±84	2.0±0.2	7.2±0.3	0.32±0.09	5.4±0.2	7.2±1.0	
NCS DC 73017	Stream Sediment	22±1	2.5±0.4	81±2	66 ±10	0.29±0.03	2.1 ±0.2	0.072±0.009	1.6±0.1	1.0	
NCS DC 73018	Stream Sediment	19±1	11.0±0.8	121±4	110±18	0.15±0.04	16.9±0.4	0.24±0.02	7.5±0.2	1.9±0.3	
NCS DC 73019	Stream Sediment	24±2	4.6±0.3	39±2	(350)	1.9±0.6	23±1	0.18±0.01	3.7±0.2	1.9±0.4	
NCS DC 73020	Stream Sediment	26±1	5.5±0.4	53±4	0.67±0.06*	1.00±0.07	12.4±0.4	1.55±0.34	4.7±0.2	2.0±0.4	
NCS DC 73021	Stream Sediment	17±1	5.9±0.3	77 ±2	(0.62)*	0.90±0.06	10.3±0.4	0.21±0.01	4.7±0.2	2.0±0.4	
NCS DC 73022	Stream Sediment	126±5	8.9±0.6	130±4	1.17±0.09*	25±4	13.8±0.3	0.69±0.08	6.2±0.2	6.7±0.6	

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		Chemical Composition(μg/g)								
		Sr	Ta	Tb	Te	Th	Ti(%)	Tl	Tm	U
NCS DC 73014	Stream Sediment	171±5	0.65±0.07	0.68±0.05	(0.05)	8.3±0.9	0.23±0.01	0.91±0.07	0.4±0.04	2.2±0.2
NCS DC 73015	Stream Sediment	253±13	0.72±0.10	0.29±0.02	(0.02)	4.1±0.6	0.146±0.011	0.83±0.08	0.16±0.02	1.9±0.1
NCS DC 73016	Stream Sediment	156±5	1.1±0.1	0.8±0.1	(0.05)	10.9±0.4	0.293±0.010	1.38±0.17	0.49±0.04	4.8±0.3
NCS DC 73017	Stream Sediment	167±10	0.81±0.14	0.22±0.02	(0.03)	5.4±0.6	0.151±0.014	0.44±0.06	0.13±0.02	1.1±0.1
NCS DC 73018	Stream Sediment	117±3	1.04±0.08	1.14±0.08	0.05	15.4±1.0	0.53±0.01	0.77±0.07	0.59±0.05	3.5±0.2
NCS DC 73019	Stream Sediment	251±8	0.80±0.13	0.58±0.04	0.05	5.4±0.9	0.53±0.02	0.31±0.07	0.31±0.03	1.54±0.10
NCS DC 73020	Stream Sediment	355±13	0.59±0.06	0.74±0.02	0.25	5.5±0.8	0.328±0.020	0.32±0.02	0.46±0.03	2.1±0.2
NCS DC 73021	Stream Sediment	273±11	0.63±0.07	0.77±0.04	0.05	7.8±0.5	0.285±0.02	0.48±0.03	0.43±0.05	2.3±0.3
NCS DC 73022	Stream Sediment	111±4	1.23±0.08	0.91±0.05	1.4	14.0±1.3	0.45±0.02	1.05±0.08	0.49±0.03	3.7±0.3

		Chemical Composition(μg/g)					
		V	W	Y	Yb	Zn	Zr
NCS DC 73014	Stream Sediment	77±3	2.0±0.1	23±2	2.6±0.3	209±6	132±4
NCS DC 73015	Stream Sediment	31±1	0.66±0.08	9.7±0.7	1.0±0.1	27±2	71±7
NCS DC 73016	Stream Sediment	49±3	3.0±0.2	29±2	3.2±0.3	579±17	219±6
NCS DC 73017	Stream Sediment	28±2	0.58±0.06	7.0±0.6	0.83±0.04	19±2	100±11
NCS DC 73018	Stream Sediment	120±4	1.7±0.2	34±2	3.8±0.3	74±3	275±13
NCS DC 73019	Stream Sediment	160±10	1.1±0.2	19±2	2.0±0.2	97±3	122±8
NCS DC 73020	Stream Sediment	83±4	0.97±0.11	26±2	3.0±0.3	289±6	179±13
NCS DC 73021	Stream Sediment	69±3	1.3±0.1	25±3	2.7±0.3	59±2	150±11
NCS DC 73022	Stream Sediment	101±3	15.5±0.8	28±2	3.1±0.1	874±19	241±30

		Chemical Composition(%)		
		SiO_2	Al_2O_3	TFe_2O_3
NCS DC 73014	Stream Sediment	69.40±0.29	11.06±0.13	7.00±0.10
NCS DC 73015	Stream Sediment	74.33±0.23	11.65±0.13	1.79±0.05
NCS DC 73016	Stream Sediment	61.96±0.31	12.94±0.12	3.80±0.05
NCS DC 73017	Stream Sediment	77.42±0.22	11.44±0.13	1.86±0.05
NCS DC 73018	Stream Sediment	66.02±0.23	11.25±0.08	6.31±0.07
NCS DC 73019	Stream Sediment	54.17±0.30	13.94±0.11	7.84±0.09
NCS DC 73020	Stream Sediment	63.12±0.34	13.08±0.10	4.80±0.05
NCS DC 73021	Stream Sediment	51.43±0.20	10.73±0.08	3.81±0.04
NCS DC 73022	Stream Sediment	64.35±0.45	13.61±0.12	7.05±0.11

		Chemical Composition(%)								
		FeO	MgO	CaO	Na_2O	K_2O	H_2O+	CO_2	Corg	TC
NCS DC 73014	Stream Sediment	(1.83)	1.70±0.03	2.96±0.04	1.40±0.02	2.35±0.03	2.31±0.09	(0.76)	0.28±0.03	(0.48)
NCS DC 73015	Stream Sediment	(0.57)	0.71±0.04	2.85±0.08	2.85±0.04	2.96±0.05	0.98±0.13	(1.34)	(0.08)	(0.46)
NCS DC 73016	Stream Sediment	(2.55)	1.29±0.02	2.08±0.05	2.09±0.05	3.17±0.04	(4)	(0.98)	4.43±0.26	4.76±0.30
NCS DC 73017	Stream Sediment	(0.2)	0.18±0.03	0.85±0.06	2.53±0.04	3.89±0.06	(1)	(0.11)	0.20±0.02	(0.25)
NCS DC 73018	Stream Sediment	(2.1)	2.34±0.04	3.82±0.06	0.83±0.02	2.41±0.03	3.23±0.25	2.57±0.28	0.34±0.05	1.01±0.09
NCS DC 73019	Stream Sediment	(2)	4.66±0.08	5.36±0.12	2.35±0.05	1.33±0.02	(4.6)	4.18±0.30	0.32±0.04	1.46±0.08
NCS DC 73020	Stream Sediment	(0.73)	2.01±0.04	4.09±0.08	3.15±0.05	2.44±0.04	(3.1)	1.36±0.17	0.11±0.02	(0.48)
NCS DC 73021	Stream Sediment	(0.66)	1.83±0.04	13.12±0.31	1.68±0.03	2.17±0.04	(3.5)	8.60±0.28	0.18±0.02	2.6±0.1
NCS DC 73022	Stream Sediment	(1.1)	1.25±0.05	1.64±0.05	0.41±0.04	2.76±0.07	(4.4)	(1.36)	(0.56)**	0.93±0.10

Note:value with*is in percent; value with **is calculated value; value in ( )is for reference only. Value behind"±"is uncertainty

Number	Name	Chemical Composition(μg/g)									Unit Size
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	(in g)
NCS DC 73023	Soil	0.050±0.006	6.2±0.4	24±3	606±12	1.3±0.1	0.15±0.02	0.8±0.2	0.058±0.011	25±2	70
NCS DC 73024	Soil	0.066±0.005	10.7±0.5	62±7	459±9	1.7±0.1	0.25±0.01	7.2±1.0	0.15±0.01	57±2	70
NCS DC 73026	Soil	0.068±0.007	8.7±0.6	143±38	356±17	1.3±0.1	0.19±0.01	6.5±1.2	0.108±0.011	37±2	70
NCS DC 73027	Soil	0.073±0.003	9.7±0.4	48±6	510±4	1.6±0.1	0.25±0.02	1.5±0.2	0.139±0.008	52±2	70
NCS DC 73028	Soil	0.074±0.006	7.8±0.5	52±7	749±14	2.1±0.1	0.25±0.02	24±2	0.065±0.012	81±4	70

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		Chemical Composition(μg/g)								
		Cl	Co	Cr	Cs	Cu	Dy	Er	Eu	F
NCS DC 73023	Soil	38±6	5.0±0.2	25±5	3.0±0.3	12.6±0.6	2.3±0.2	1.3±0.1	0.66±0.05	219±20
NCS DC 73024	Soil	0.78±0.05*	10.2±0.3	55±2	6.3±0.3	19.5±0.5	4.2±0.2	2.4±0.2	1.06±0.05	495±40
NCS DC 73026	Soil	4.0±0.3*	11.3±0.4	43±3	4.2±0.2	28±1	3.8±0.3	2.3±0.2	0.95±0.04	524±30
NCS DC 73027	Soil	152±12	11.0±0.3	55±5	5.8±0.4	24±1	4.8±0.4	2.8±0.3	1.03±0.06	510±31
NCS DC 73028	Soil	0.51±0.03*	11.6±0.3	57±3	5.5±0.2	18.3±0.8	4.6±0.1	2.6±0.2	1.30±0.03	419±21
		Chemical Composition(μg/g)								
		Ga	Gd	Ge	Hf	Hg	Ho	I	In	La
NCS DC 73023	Soil	10.8±0.5	2.2±0.1	1.11±0.08	3.8±0.3	(0.007)	0.46±0.04	0.52±0.13	0.024±0.003	14.0±0.3
NCS DC 73024	Soil	13.2±0.41	4.4±0.2	1.21±0.04	5.8±0.3	0.015±0.003	0.84±0.06	1.4±0.2	0.043±0.005	30±1
NCS DC 73026	Soil	12.9±0.7	3.7±0.4	0.99±0.06	4.3±0.4	0.008±0.002	0.80±0.06	1.4±0.4	0.042±0.005	19.4±1.4
NCS DC 73027	Soil	15.1±0.3	4.7±0.4	1.24±0.07	5.5±0.2	0.020±0.002	0.98±0.09	0.73±0.14	0.049±0.005	26±1
NCS DC 73028	Soil	17.4±0.5	5.3±0.2	1.28±0.07	7.2±0.5	0.020±0.002	0.93±0.05	8.6±0.7	0.051±0.007	44±2
		Chemical Composition(μg/g)								
		Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P
NCS DC 73023	Soil	14.2±0.8	0.24±0.02	309±6	0.51±0.06	(106)	6.3±0.8	12.4±0.4	9.6±0.6	228±14
NCS DC 73024	Soil	32±2	0.38±0.03	529±10	0.61±0.06	273±33	12.6±0.6	26±1	25±1	587±9
NCS DC 73026	Soil	27±2	0.38±0.03	667±20	0.38±0.3	(580)	8..4±1.2	18.7±1.0	20±2	706±24
NCS DC 73027	Soil	28±1	0.47±0.05	700±17	0.68±0.07	460±38	11.4±0.5	25±1	28±1	612±14
NCS DC 73028	Soil	36±1	0.43±0.02	755±13	0.63±0.05	438±29	15.4±0.6	35±2	26±1	438±18
		Chemical Composition(μg/g)								
		Pb	Pr	Rb	Hf	Re**	S	Sb	Sc	Se
NCS DC 73023	Soil	17.4±1.1	3.2±0.2	80±3	3.8±0.8	~~0.074	108±14	0.56±0.07	5.1±0.5	A.093±0.008
NCS DC 73024	Soil	20±1	6.9±0.3	86 ±29	2.1±0.4	~~0.25	(0.7)*	0.88±0.05	9.7±0.4	0.12±0.02
NCS DC 73026	Soil	3.4±1.2	4.7±0.2	63±3	6.7±0.8	~~2.1	2.70±0.29*	0.59±0.03	12.0±0.4	0.90±0.10
NCS DC 73027	Soil	17±1	6.4±0.5	85±2	2.7±0.5	~~0.24	(167)	1.10±0.07	11.2±0.3	0.084±0.012
NCS DC 73028	Soil	26±2	9.4±0.5	108±4	7.8±0.7	~~0.12	440±42	0.50±0.05	10.4±0.3	0.11±0.02
		Chemical Composition(μg/g)								
		Sm	Sn	Sr	Ta	Tb	Nb	Te	Th	Ti*
NCS DC 73023	Soil	2.4±0.1	1.3±0.3	209±8	0.42±0.08	0.37±0.03	9.4 ± 07	(0.03)	4.3±0.3	0.191±0.005
NCS DC 73024	Soil	5.0±0.2	2.4±0.4	242±5	0.91±0.14	0.74±0.04	5.1±0.7	(0.03)	9.9±0.7	0.32±0.01
NCS DC 73026	Soil	4.0±0.1	1.8±0.4	435±13	0.57±0.08	0.66±0.04	13.6±0.8	(0.04)	6.2±0.4	0.33±0.03
NCS DC 73027	Soil	5.1±0.2	2.4±0.3	205±5	0.84±0.12	0.80±0.05	9.5±0.7	(0.05)	8.4±0.8	0.37±0.02
NCS DC 73028	Soil	6.1±0.3	2.6±0.2	202±7	1.1±0.2	0.85±0.03	15.3±0.8	(0.04)	11.7±0.9	0.38±0.01
		Chemical Composition(μg/g)								
		Ti	Tm	U	V	W	Y	Yb	Zn	Zr
NCS DC 73023	Soil	0.51±0.04	0.23±0.02	1.2±0.1	40±4	0.7±0.1	12.7±0.8	1.5±0.1	29±2	134±5
NCS DC 73024	Soil	0.55±0.02	0.39±0.03	2.3±0.2	66±5	1.6±0.1	23±2	2.5±0.2	63±2	204±6
NCS DC 73026	Soil	0.37±0.04	0.38±0.03	5.4±0.5	82±7	0.9±0.2	22±3	2.4±0.3	61±2	153±18
NCS DC 73027	Soil	0.51±0.05	0.47±0.04	2.0±0.1	75±3	1.5±0.1	27±2	3.0±0.3	66±3	190±12
NCS DC 73028	Soil	0.61±0.05	0.43±0.02	1.9±0.2	69±3	1.5±0.1	25±1	2.8±0.2	59±2	255±13
		Chemical Composition(%)								
		SiO_2	Al_2O_3	TFe_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O
NCS DC 73023	Soil	78.30±0.33	9.65±0.09	2.07±0.03	(0.5)	0.78±0.08	1.83±0.05	2.31±0.04	2.56±0.03	(1.2)
NCS DC 73024	Soil	60.40±0.26	10.56±0.05	3.63±0.05	(1.1)	2.58±0.07	6.80±0.10	3.05±0.09	2.11±0.02	(2.7)
NCS DC 73026	Soil	47.28±0.13	10.39±0.10	4.12±0.07	(0.6)	2.98±0.13	6.48±0.10	8.99±0.26	1.99±0.05	(3.2)
NCS DC 73027	Soil	60.30±0.41	11.96±0.09	4.07±0.06	(1.1)	2.04±0.04	7.40±0.09	2.02±0.04	2.43±0.04	(3.4)
NCS DC 73028	Soil	68.23±0.27	13.89±0.17	4.06±0.05	(0.6)	1.47±0.06	1.09±0.04	2.84±0.10	2.97±0.04	(3.4)
		Chemical Composition(%)								
		CO_2	Corg	TC						
NCS DC 73023	Soil	0.76±0.13	(0.1)	(0.3)						
NCS DC 73024	Soil	4.54±0.42	0.25±0.05	(1.4)						
NCS DC 73026	Soil	(2.2)	(0.4)	1.03±0.04						
NCS DC 73027	Soil	4.79±0.25	0.34±0.02	1.71±0.10						
NCS DC 73028	Soil	(0.2)	(0.3)**	(0.4)						

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Number	Name	Chemical Composition(μg/g)									Unit Size
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	(in g)
NCS DC 73029	Soil	0.069±0.005	11.8±0.9	77±8	441±113	2.3±0.1	0.44±0.03	26±3	0.15±0.02	78±5	70
NCS DC 73030	Soil	0.092±0.013	15.8±0.9	83±7	40±9	2.7±0.2	0.98±0.03	24±2	0.106±0.07	89±3	70
NCS DC 73031	Soil	0.070±0.008	12.9±0.5	54±6	495±16	1.9±0.1	0.32±0.01	2.6±0.3	0.175±0.010	71±3	70
NCS DC 73032	Soil	0.070±0.004	8.9±0.5	52±8	504±17	1.9±0.1	0.28±0.01	3.0±0.4	0.14±0.01	70±5	70
NCS DC 73033	Soil	0.14±0.01	13.3±1.1	64±7	496±15	2.3±0.1	0.79±0.02	1.9±0.2	0.59±0.04	82±4	70
		Chemical Composition(μg/g)									
		Cl	Co	Cr	Cs	Cu	Dy	Er	Eu	F	
NCS DC 73029	Soil	0.63±0.06*	16.0±0.6	82±4	9.3±0.5	32±1	5.4±0.3	3.0±0.1	1.4±0.1	665±54	
NCS DC 73030	Soil	0.48±0.03*	12.4±0.4	62±2	9.8±0.2	28±1	6.1±0.2	3.5±0.4	1.25±0.04	524±40	
NCS DC 73031	Soil	61±5	12.0±0.51	66±4	7.2±0.3	23.6±1.0	5.0±0.4	2.8±0.3	1.20±0.06	561±43	
NCS DC 73032	Soil	75±9	1.2±0.5	61±3	6.0±0.4	19.1±0.6	4.9±0.3	2.8±0.3	1.21±0.06	551±26	
NCS DC 73033	Soil	71±9	19.0±0.6	92±4	7.7+0.5	54±2	5.7±0.2	3.2±0.2	150±0.05	650±40	
		Chemical Composition(μg/g)									
		Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	
NCS DC 73029	Soil	18.5±0.4	5.8±0.2	1.40±0.08	6.1±0.4	0.058±0.005	1.08±0.10	6.1±0.7	0.066±0.005	42±2	
NCS DC 73030	Soil	18.3±0.6	6.3±0.2	1.52±0.09	10.6±0.5	0.075±0.007	1.22±0.09	6.4±0.5	0.088±0.010	44±1	
NCS DC 73031	Soil	14.9±0.4	5.3±0.3	1.31±0.04	7.0±0.7	0.043±0.003	1.02±0.08	1.5±0.2	0.049±0.005	35±1	
NCS DC 73032	Soil	14.8±0.5	5.3±0.3	1.30±0.08	7.6±0.2	0.030±0.003	0.99±0.08	1.1±0.2	0.045±0.006	36±2	
NCS DC 73033	Soil	17.9±0.6	6.2±0.3	1.47±0.08	7.1±0.4	0.116±0.012	1.13±0.07	1.0±0.2	0.089±0.007	43±1	
		Chemical Composition(μg/g)									
		Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	
NCS DC 73029	Soil	50±1	0.48+0.02	882±18	0.65±0.06	600±50	17.4±0.7	36±2	38±1	675±21	
NCS DC 73030	Soil	55±3	0.59+0.05	717±13	1.1±0.1	617±44	19.2±1.0	38±2	24±1	414±14	
NCS DC 73031	Soil	32±2	0.45+0.04	632+21	0.72±0.07	696±39	14.2±0.5	31±1	30±1	857±39	
NCS DC 73032	Soil	31±2	0.45+0.03	561±23	0.47±0.06	878±77	14.9±0.7	34±2	26±1	846±50	
NCS DC 73033	Soil	41±2	0.50+0.02	956+37	0.84±0.11	850±94	20±1	44±2	43±2	778±41	
		Chemical Composition(μg/g)									
		Pb	Pr	Rb	Re**	S	Sb	Sc	Se	Sm	
NCS DC 73029	Soil	28±1	9.3±0.4	123±5	~0.17	(420)	0.77±0.05	13,8±0,6	0.13±0.02	6.6±0.3	
NCS DC 73030	Soil	40±2	9.8±0.4	139±5	~0.45	0.20±0.03*	1.05±0.05	11.7±0.4	0.20±0.03	7.1±0.2	
NCS DC 73031	Soil	22±1	8.0±0.5	95±2	~0.08	170±22	1.13±0.05	11.6+0.4	0.124±0.017	5.8+0.3	
NCS DC 73032	Soil	21±2	8.2±0.6	91±4	~0.1	162±10	0.86±0.06	10.6+0.3	0.14±0.02	5.8±0.3	
NCS DC 73033	Soil	41±2	9.8±0.8	105±3	~0.39	254±12	1.21+0.04	14.2±0.4	0.29±0.04	6.9±0.3	
		Chemical Composition(μg/g)									
		Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl		
NCS DC 73029	Soil	3.4±0.3	154±5	1.3±0.2	0.93±0.05	(0.06)	13.5±0.8	0.50±0.02	0.71±0.06		
NCS DC 73030	Soil	6.2±0.6	55±3	1.96±0.19	1.08±0.06	(0.06)	20.6±0.9	0.45±0.01	0.86±0.06		
NCS DC 73031	Soil	2.9±0.4	192±6	1.10±0.12	0.86±0.06	(0.05)	11.5±0.6	0.39±0.02	0.59±0.06		
NCS DC 73032	Soil	2.8±0.2	184±7	1.12±0.14	0.86±0.05	(0.04)	11.3±0.7	0.41±0.02	0.57±0.03		
NCS DC 73033	Soil	4.0±0.4	146±6	1.49±0.14	1.00±0.04	(0.1)	13.2±0.5	0.64±0.02	0.67±0.07		

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Number	Name	Chemical Composition(μg/g)								
		Tm	U	V	W	Y	Yb	Zn	Zr	
NCS DC 73029	Soil	0.49±0.01	2.6±0.1	104±4	2.1±0.2	29±23	3.1±0.2	97±3	210±19	
NCS DC 73030	Soil	0.59±0.05	4.0±0.2	87±4	4.1±0.2	3±2	3.8±0.3	81±2	342±11	
NCS DC 73031	Soil	0.46±0.04	2.4±0.1	77±4	8.3±0.5	27±2	3.3±0.3	66±26	254±15	
NCS DC 73032	Soil	0.47±0.03	2.3±0.1	72±4	(9.2)	27 ±2	3.9±0.4	2±2	277±21	
NCS DC 73033	Soil	0.51±0.03	2.9±0.1	120±6	(45)	31±2	5.8±0.5	127±4	262±9	
		Chemical Composition(%)								
		SiO_2	Al_2O_3	TFe_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O+
NCS DC 73029	Soil	59.80±0.22	13.92±0.15	5.54±0.08	(1.5)	2.61±0.06	4.21±0.08	1.91±0.04	2.64±0.03	(4.2)
NCS DC 73030	Soil	69.11±0.34	13.58±0.19	4.97±0.08	(0.8)	1.16±0.04	0.34±0.02	0.83±0.03	2.48±0.04	(5.1)
NCS DC 73031	Soil	60.93±0.25	11.76±0.13	4.30±0.07	(1.3)	1.99±0.05	7.18±0.10	1.74±0.03	2.28±0.02	(3.2)
NCS DC 73032	Soil	66.15±0.40	11.73±0.19	4.00±0.08	1.20±0.16	1.87±0.06	4.59±0.07	1.90±0.03	2.18±0.04	(3.2)
NCS DC 73033	Soil	58.87±0.65	13.15±0.16	6.12±0.09	(1.7)	2.75+0.08	4.91±0.07	1.22±0.03	2.37±0.04	(4.2)
		Chemical Composition(%)								
		CO_2	Corg	TC						
NCS DC 73029	Soil	(3)	(0.5)	1.28±0.13						
NCS DC 73030	Soil	(0.2)	(0.5)**	(0.6)						
NCS DC 73031	Soil	4.72±0.33	0.58±0.05	(1.9)						
NCS DC 73032	Soil	(2.9)	0.73±0.06	1.52±0.15						
NCS DC 73033	Soil	(4)	(0.9)	1.94±0.10						

Note: Value with* is in 10^{-2}, with** is in 10^{-9}, value in () is reference value, value with is ~information value.

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73035	Rock	0.046	4.7	11.5	605	0.99	0.061		0.071	52.0	72.9	7.6	27.7	1.8	
NCS DC73036	Rock	0.069	0.49		649	1.37			0.092	62.9	71.0	21.1	96.7	(0.28)	
NCS DC73037	Rock	0.085	1.8	4.7	277	1.99	0.031		0.098	104	51.0	38.7	98.1	0.52	
NCS DC73038	Rock	0.086	0.84	(11)	49.2	0.28	0.030		0.082	12.2	244	149	(0.49*)	1.4	
NCS DC73039	Rock	0.18	10.1	31.3	118	1.10	0.27	(1.4)	3.2	23.7	48.4	4.9	185	2.2	
NCS DC73040	Rock	0.24	6.1		35.9	0.13	0.10		(0.035)	42.9		2.3	20.6	0.43	
		Chemical Composition(μg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg**	Ho	I	In	
NCS DC73035	Rock	4.9	4.9	3.0	1.5	278	10.6	5.4	0.51	3.3	9.9	1.06		0.025	
NCS DC73036	Rock	33.5	3.7	2.0	1.6	424	21.5	4.9	0.95	4.7		0.75		0.049	
NCS DC73037	Rock	240	8.9	4.3	3.3	801	25.0	10.3	1.27	9.7	(5)	1.66		0.104	
NCS DC73038	Rock	75.6	1.2	0.63	0.38	197	4.9	1.2	0.92	1.1	3.5	0.23		0.023	
NCS DC73039	Rock	40.9	2.5	1.6	0.43	544	6.8	2.2	0.78	2.9	220	0.54	0.37	0.032	
NCS DC73040	Rock	8.6	0.88	0.55	0.17	(80)	(1.6)	0.66		1.4	12.2	0.18	1.03	0.015	
		Chemical Composition(μg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73035	Rock	30.0	15.2	0.40	0.21	0.33		(6)	26.6	13.5▲ 12.8~15.5	252	12.3	6.6	68.2	
NCS DC73036	Rock	29.4	12.1	0.30	816	0.64		7.0	33.4	44.8	0.11	7.4	8.5▲ 12.8~15.5	19.3	
NCS DC73037	Rock	48.0	11.3	0.51	0.14	1.19		45.1	56.6	69.7	0.19	6.2	13.7	27.1	
NCS DC73038	Rock	5.8	5.9	0.10	0.14	0.19		5.5	6.4	1269	227	(3.3)	1.6	6.9	
NCS DC73039	Rock	13.2	12.6	0.28	141	71.2	0.22	6.9	11.4	77.4	661	10.2	3.1	32.0	
NCS DC73040	Rock	3.5	0.59	0.12	67	0.67			2.9	8.1	(50)	15.1	0.87		
		Chemical Composition(μg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	
NCS DC73035	Rock	(690)	0.093	6.7	0.040	5.4	1.1	252	0.42▲ 0.37~0.66	0.84		3.7	0.17	0.43	
NCS DC73036	Rock	326▲ 314~414	0.080	16.7	0.094	6.1	1.5	818		0.71	(0.02)	0.58	0.40	0.10	
NCS DC73037	Rock	115	0.23	26.6	(0.15)	11.6	3.2	271	3.2	1.63		5.5	2.44	(0.06)	
NCS DC73038	Rock	514	0.13	10.6	0.20	1.32▲ 1.29~1.58	(0.9)	37.9		0.21	(0.04)	0.95	0.25	(0.05)	
NCS DC73039	Rock	0.73*▲ 0.64~0.76*	2.01	5.4	29.7	2.3	1.6	156	0.48	0.39	(0.06)	4.1	0.13	1.80	
NCS DC73040	Rock	(76)	0.68	2.4	0.32	0.76	(1)			0.13		1.1	264	(0.05)	
		Chemical Composition(μg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO_2*	Al_2O_3*	TFe_2O_3	FeO*	MgO*	
NCS DC73035	Rock	0.43	68.0	33.2	0.54	31.1	2.4	33.4	114	46.40	8.88	1.69▲ 1.66~2.02	(0.5)	0.88	
NCS DC73036	Rock	0.32	(0.25)	115	0.15	17.8	1.8	86.2	173	58.47	17.14	6.85	3.89	3.26	
NCS DC73037	Rock	0.58	1.56	389	0.54	37.5	3.4	142	365	47.95	12.68	13.76	6.16	5.11	
NCS DC73038	Rock	0.10	0.32	70.3	(0.17)	5.9	0.58	89.0	39.2	37.24	2.80	13.27	4.76	32.26	
NCS DC73039	Rock	0.28	12.5	614	0.70	16.9	1.7	46.2	108	71.51	5.21	1.79		2.62	
NCS DC73040	Rock	0.11	1.9	28.1	0.53	5.6	0.74	11.7	53.3	94.34	1.87	0.66		(0.05)	
		Chemical Composition(μg/g)													
		CaO*	Na_2O	K_2O	H_2O^+*	CO_2	Corg*	TC*	LOI*						
NCS DC73035	Rock	20.13	1.19	2.27	(2.5)	15.03	(0.1)	4.25	17.48						
NCS DC73036	Rock	5.90	4.77	1.51			(0.1)	(0.15)	0.68						
NCS DC73037	Rock	7.58	3.61	1.19	2.79		(0.25)	(0.11)	2.55						
NCS DC73038	Rock	2.17		0.17	(8.6)	(1.3)	0.34	(0.42)	10.34						
NCS DC73039	Rock	4.11	0.70	0.78	(2)	5.25	4.82	5.97▲ 5.87~6.05	12.09						
NCS DC73040	Rock	(0.07)		(0.03)	(0.7)		1.56	1.67	2.56						

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag**	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73041	Stream sediment	40	1.7	(3)	704	2.3	0.11	(0.8)	0.029	32	24	2.7	(3.7)	1.7	
NCS DC73042	Stream sediment	55	21.6	11.2	530	1.5	0.61		0.093	40	87	7.3	11.5	4.5	
NCS DC73043	Stream sediment	66	32.2	55.4	460	2.6	0.42	(1.3)	0.22	80	26	12.9	66	16.0	
NCS DC73044	Stream sediment	102	11.0	17.8	565	1.9	0.32	(0.9)	0.36	50	476	17.1	29.8	5.3	
NCS DC73045	Stream sediment	856	48.4	65.5	0.135	1.4	0.26		(32)	50	99	9.0	43.3	7.6	
		Chemical Composition(μg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg**	Ho	I	In	
NCS DC73041	Stream sediment	2.8	1.2	0.67	0.68	172	16.3	1.70	0.94	2.75	4.7	0.24	(0.21)	0.020	
NCS DC73042	Stream sediment	10.6	2.7	1.58	0.83	323	12.3	2.85	1.23	2.99	11▲ 10~13	0.53	(0.16)	0.094	
NCS DC73043	Stream sediment	21	4.8	2.57	1.17	632	18.8	5.43	1.42	5.30	18.3	0.90	0.48	0.063	
NCS DC73044	Stream sediment	916	4.0	2.27	1.06	415	15.1	4.10	1.20	4.61	10.0	0.80	(0.25)	0.051	
NCS DC73045	Stream sediment	23.8	3.1	1.76	0.88	438	10.8▲ 10.4~14.3	3.43	1.31	5.98	111	0.61	0.34	0.036	
		Chemical Composition(μg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73041	Stream sediment	17.0	8.4	0.12	322	0.42	(130)	6.2	13.3	2.3	332	20.5	3.68	75.3	
NCS DC73042	Stream sediment	23.2	12.8	0.26	827	1.06	(114)	9.3	16.9	5.8	415	10.2	4.66	99.8	
NCS DC73043	Stream sediment	40.4	38.0	0.35	519	0.55	689	14.6	33.5	36.5	498	35.0	9.24	154	
NCS DC73044	Stream sediment	25.0	22.8	0.34	960	3.91	(135)	10.7	22.2	15.2	499	22.0	5.93	95.7	
NCS DC73045	Stream sediment	25.3	47.2	0.28	691	2.75	420	9.7	21.5	21.8	356	0.269	5.86	79.0	
		Chemical Composition(μg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl	
NCS DC73041	Stream sediment	(61)	0.13	1.99	0.038	2.14	1.21	413	0.48	0.25	(0.016)	6.30	0.128	0.47	
NCS DC73042	Stream sediment	(72)	0.59	9.02	0.045	3.16	1.98	243	0.67	0.48	0.037	5.84	0.248	0.53	
NCS DC73043	Stream sediment	122	2.52	12.7	0.146	6.25	3.46	78.0	1.18	0.86	0.040	16.6	0.368	0.90	
NCS DC73044	Stream sediment	0.106	0.98	10.8	0.197	4.38	2.62	277	0.85	0.68	(0.054)	9.43	0.301	0.72	
NCS DC73045	Stream sediment	0.552	1.22	6.87		3.92	2.01	0.343	0.78	0.56	0.032	8.39	0.265	6.18	
		Chemical Composition(μg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO_2*	Al_2O_3*	TFe_2O_3	FeO*	MgO*	
NCS DC73041	Stream sediment	0.11	1.11	19.8▲ 16.8~20.6	0.28	8.14	0.69	25.0	87.6	72.20	14.86	1.46	0.27	0.22	
NCS DC73042	Stream sediment	0.26	1.67	80.0	4.37	15.7	1.66	40.6	107	71.14	12.85	3.86	1.23	1.07	
NCS DC73043	Stream sediment	0.37	1.71	88.9	2.18	26.6	2.49	101	180	63.48	14.10	5.16	2.35	1.73	
NCS DC73044	Stream sediment	0.36	2.08	72.1	2.48	22.5	2.22	83.4	160	68.62	13.31▲ 13.21~13.38	4.24	1.34	1.41	
NCS DC73045	Stream sediment	0.28	2.09	62.3	1.19	16.8▲ 16.1~19.5	1.80	0.260	223	69.66	8.84	3.52	0.82	1.25	
		Chemical Composition(μg/g)													
		CaO*	Na_2O*	K_2O*	H_2O^+*	CO_2*	Corg*	TC*	LOI*						
NCS DC73041	Stream sediment	1.35	4.99	3.22	0.80		(0.09)	(0.12)	(0.98)						
NCS DC73042	Stream sediment	3.52	2.13	3.24	1.27		(0.10)	(0.10)	1.37						
NCS DC73043	Stream sediment	3.78	0.83	3.04	3.48	3.02	0.57	1.33	6.84						
NCS DC73044	Stream sediment	2.94	2.48	2.48	2.17	(0.9)	(0.14)	0.34	3.23						
NCS DC73045	Stream sediment	5.07	0.58	1.85	(2.7)	(3.9)	0.46	1.30	7.16						

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag**	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73046	Stream sediment	83	3.5	8.2	311	1.8	0.06		(0.2)	98	32	57.9	0.109	1.3	
NCS DC73047	Stream sediment	90	14.8	61.9	337	2.0	0.41	6.3	4.3	79	36	19.6	144	7.2	
NCS DC73048	Stream sediment	67	24.9	74.5	318	1.6	0.30	1.6	0.23	59	41	11.3	43.1	5.7	
NCS DC73049	Stream sediment	89	33.9	80.1	456	6.4	3.98	6.4	0.38	85	56	12.8	70.0	21.4	
NCS DC73050	Stream sediment	149	3.5	10.4	926	4.6	1.06	3.7	0.60	138	55	12.7	36.5	6.5	
		Chemical Composition(μg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg**	Ho	I	In	
NCS DC73046	Stream sediment	186	6.6	3.25	2.77	558	20.6	7.99	1.38	6.69	12.2	1.21	0.31	0.086	
NCS DC73047	Stream sediment	39.9	4.6	2.64	1.00	856	15.0	4.59	1.34	7.09	148	0.91	4.31	0.060	
NCS DC73048	Stream sediment	14.6	3.7	2.14	0.85	581	10.7	3.92	1.17	7.35	86.2	0.72	1.36	0.039	
NCS DC73049	Stream sediment	25.7	8.6	4.74	0.84	663	17.4	7.69	1.42	10.5	266	1.58	3.95	0.093	
NCS DC73050	Stream sediment	22.3	9.7	5.52	1.72	616	28.4	9.85	1.79	12.4	63.1	1.88	2.95	0.130	
		Chemical Composition(μg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73046	Stream sediment	49.8	14.7	0.40	0.141	0.67	229▲ 222~283	35.3	47.8	349	0.118	(12)	12.2	30.0	
NCS DC73047	Stream sediment	34.2	41.2	0.42	0.111	10.0	0.247	17.2	28.3	60.4	620	29.0	7.70	84.0	
NCS DC73048	Stream sediment	29.5	19.9	0.34	486	0.68	318	12.1	24.5	19.2	224	24.7	6.69	82.2	
NCS DC73049	Stream sediment	40.0	92.9	0.86	638	4.88	0.136	18.4	38.5	28.1	410	35.7	10.3	204	
NCS DC73050	Stream sediment	71.8	43.6	0.84	0.144	2.59	0.142	35.3	56.8	16.0	787	85.0	15.8	264	
		Chemical Composition(μg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl	
NCS DC73046	Stream sediment	(69)	0.22	29.5	0.089	8.97	2.42	363	2.40	1.23	(0.03)	4.96	1.71	~0.15	
NCS DC73047	Stream sediment	363	1.90	11.1	8.75	5.17	3.08	84.3	1.25	0.76	0.059	12.0	0.452	0.87	
NCS DC73048	Stream sediment	84	2.27	7.10	0.159	4.45	2.41	17.9	0.96	0.65	0.030	9.81	0.308	0.52	
NCS DC73049	Stream sediment	207	1.18	11.4	0.652	8.65	9.39	19.3	4.55	1.35	0.046	25.9	0.313	1.33	
NCS DC73050	Stream sediment	229	0.31	12.0	0.261	10.8	5.19	138	3.18	1.63	0.076	27.5	0.461	1.55	
		Chemical Composition(μg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO_2*	Al_2O_3*	TFe_2O_3	MgO*	CaO*	
NCS DC73046	Stream sediment	0.45	1.24	332	(0.5)	27.9	2.66	115	252	47.27	10.84	12.91	8.82	7.42	
NCS DC73047	Stream sediment	0.42	5.91	302	1.92	26.4	2.72	94.2	264	70.49	10.83	4.64	1.03	1.14	
NCS DC73048	Stream sediment	0.35	2.34	60.1	2.15	21.8	2.23	51.7	275	82.85	7.90	3.05	0.67	(0.13)	
NCS DC73049	Stream sediment	0.87	8.79	91.8	18.9	48.3	5.80	85.2	346	73.54	11.40	4.08	0.96	0.21	
NCS DC73050	Stream sediment	0.87	5.99	74.1	4.73	52.8	5.57	189	449	59.79	18.85	5.26	0.83	0.60	
		Chemical Composition(μg/g)													
		Na_2O*	K_2O*	FeO*	H_2O+*	CO_2*	Corg*	TC*	LOI*						
NCS DC73046	Stream sediment	1.62▲ 1.38~1.66	1.12	2.20	(5.6)		0.30	0.34	5.87						
NCS DC73047	Stream sediment	0.37	1.49	1.57	4.53	(0.3)	2.21	2.41	8.52						
NCS DC73048	Stream sediment	(0.08)	2.07	(0.33)	2.15		(0.17)	(0.21)	2.34						
NCS DC73049	Stream sediment	0.36	2.27	1.65	3.90		1.39	1.45	6.26						
NCS DC73050	Stream sediment	0.96	3.94	(1.5)	6.04		1.47	1.50	8.35						

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC73051	Floodplain sediments	0.109	9.3	68	506	2.3	0.37~0.66	7.1	0.28	78	106	16.0	80	7.7	
NCS DC73052	Floodplain sediments	0.103	10.0	62	471	4.0	1.2	(1.43)	0.26	98	63	9.6	51	14.7	
NCS DC73053	Floodplain sediments	0.105	13.0	58	800	2.5	0.67	2.9	0.34	81	65	16.9	82	8.2	
NCS DC73054	Floodplain sediments	0.074	12.7	55	574	2.4	0.34	2.6	0.066	82	34	16.9	79	8.9	
NCS DC73055	Floodplain sediments	0.067	13.7	50	511	2.1	0.34	2.3	0.14	70	284	13.0	68	7.9	
NCS DC73056	Floodplain sediments	0.087	13.7	49	558	2.4	0.38▲ 0.38~0.40	11.6	0.16	74	906	15.6	76	8.6	
NCS DC73057	Floodplain sediments	0.082	9.2	36	585	2.3	0.30	12.5	0.11	68	52	12.2	56	6.6	
		Chemical Composition(μg/g)													
		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg	Ho	I	In	
NCS DC73051	Floodplain sediments	35	5.3	3.0	1.4	695	18.0	5.8	1.46	6.5	0.15	1.07	2.4	0.069	
NCS DC73052	Floodplain sediments	26	6.6	3.8	1.3	645	21.0	7.3	1.63	8.5	0.091	1.34	0.87	0.086	
NCS DC73053	Floodplain sediments	37	5.8	3.2	1.6	695	19.8	6.3	1.52	6.6	0.081	1.15	1.6	0.072	
NCS DC73054	Floodplain sediments	26	5.4	3.1	1.4	548	18.9	6.0	1.49	7.4	0.026	1.10	3.8	0.063	
NCS DC73055	Floodplain sediments	25	5.0	2.8	1.3	610	16.3	5.3	1.31	6.4	0.019	1.00	1.02	0.058	
NCS DC73056	Floodplain sediments	32	5.0	2.8	1.4	710	19.2	5.5	1.34	5.0	0.053	1.00	2.3	0.065	
NCS DC73057	Floodplain sediments	21	4.9	2.8	1.3	438	16.6	5.4	1.25	10.0	0.042▲ 0.039~0.054	0.99	5.6	0.054	
		Chemical Composition(μg/g)													
		La	Li	Lu	Mn	Mo	N	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC73051	Floodplain sediments	41	42	0.46	760	0.68	0.138	18.2	36	38	0.108	32	9.1	105	
NCS DC73052	Floodplain sediments	56	59	0.61	351	0.94	980	23.8	45	20	0.108	43	12.0	184	
NCS DC73053	Floodplain sediments	43	44	0.50	907	1.13	1123	18.4	38	41	952	28	9.7	114	
NCS DC73054	Floodplain sediments	40	40	0.48	841	0.39	418	16.7	36	37	287	26	9.2	108	
NCS DC73055	Floodplain sediments	38	39	0.44	664	0.72	464	14.0	33	32	657	22	8.4	100	
NCS DC73056	Floodplain sediments	40▲ 39~42	45	0.43	773	0.98	850	14.3	35	38	622	26	9.0	111	
NCS DC73057	Floodplain sediments	37	32	0.47	706	0.52	0.189	15.4	33	27	633	22	8.2	99	
		Chemical Composition(μg/g)													
		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti*	Tl	
NCS DC73051	Floodplain sediments	266	1.16	12.8	0.26	6.7	7.2	132	1.4	0.96	(0.048)	12.9	0.533	0.64	
NCS DC73052	Floodplain sediments	244	0.82	10.4	0.30	8.4	8.7	53	2.7	1.19	(0.043)	21.6	0.404	1.10	
NCS DC73053	Floodplain sediments	180	1.27	14.6	0.36	7.1	3.6	136	1.4	1.02	(0.054)	13.4	0.488	0.70	
NCS DC73054	Floodplain sediments	77	1.08	13.3	0.11▲ 0.10~0.11	6.8	3.6	115	1.2	0.98	0.046	13.6	0.463	0.68	
NCS DC73055	Floodplain sediments	268	1.14	12.5	0.19	6.2	2.9	201	1.0	0.89	(0.043)	12.5	0.374	0.68	
NCS DC73056	Floodplain sediments	431	1.08	14.0	0.21	6.5	3.2	202	1.0	0.91	0.051	12.8	0.394	0.68	
NCS DC73057	Floodplain sediments	344	(0.8)	10.3	0.25	6.2	2.9	258	1.2	0.88	0.046	11.4	0.418	0.64	
		Chemical Composition(μg/g)													
		Tm	U	V	W	Y	Yb	Zn	Zr	SiO_2*	Al_2O_3*	TFe_2O_3	FeO*	MgO*	
NCS DC73051	Floodplain sediments	0.47	2.6	105	2.0	28	3.0	96	235	63.16	13.24	5.44	(1.61)	2.17	
NCS DC73052	Floodplain sediments	0.61	5.7	67	5.8	36	4.0	92	288	69.13	14.98	3.81	(0.97)	0.72	
NCS DC73053	Floodplain sediments	0.50	2.6	125	2.1	30	3.2	104	238	62.79	14.85	5.92	1.47	2.16	
NCS DC73054	Floodplain sediments	0.49	2.3	97	2.0	29	3.2	64	270	67.33	14.49	5.52	(0.36)	1.34	
NCS DC73055	Floodplain sediments	0.45	2.4	83	1.8	26	2.9	69	220	59.68▲ 59.61~59.77	12.62	4.73	1.20	2.24	
NCS DC73056	Floodplain sediments	0.44	2.3	96	2.0	26	2.8	86	180	56.47	14.45	5.76	1.34	2.66	
NCS DC73057	Floodplain sediments	0.46	2.2	76	1.8	27	3.0	59▲ 58~61	383	59.48	12.99	4.09	(1.45)	1.47▲ 1.45~1.52	
		Chemical Composition(μg/g)													
		CaO*	Na_2O*	K_2O*	H_2O^+*	CO_2	Corg*	TC*	LOI*						
NCS DC73051	Floodplain sediments	3.13	1.32	2.31	4.20	2.05	1.12	1.68	7.62						
NCS DC73052	Floodplain sediments	0.34	0.41▲ 0.39~0.44	3.03	4.68		1.02	1.06	6.29						
NCS DC73053	Floodplain sediments	2.10	1.44	2.65	4.28	0.83	1.02	1.28	6.57						
NCS DC73054	Floodplain sediments	1.09	1.26	2.07	(5.2)		(0.3)	0.31	(5.6)						
NCS DC73055	Floodplain sediments	6.91	1.62	2.40	3.73	4.77	(0.4)	1.72	8.65						
NCS DC73056	Floodplain sediments	5.65	1.55	2.68	(4.7)	4.00	0.79	1.87	9.62						
NCS DC73057	Floodplain sediments	5.74	1.84	2.41	(4.5)	3.33	2.00	3.03	10.64						

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Number	Name	Chemical Composition(Percent)											Unit Size
		SiO_2	Al_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O^+	CO_2	$^{TE}_{(Fe_2O_3)}$	F	(in g)
NCS DC 73301	Rock	72.83	13.40	(1.03)	0.42	1.55	3.13	5.01	(0.61)	(0.15)	2.14	0.235	70
NCS DC 73302	Rock	60.62	16.17	(2.43)	1.72	5.20	3.86	1.89	(1.54)	(3.46)	4.90	0.0280	70
NCS DC 73303	Rock	44.64	13.83	(7.60)	7.77	8.81	3.38	2.32	(2.88)	(0.17)	13.40	0.0700	70
NCS DC 73304	Rock	90.36	3.52	(0.62)	0.082	0.30	0.061	0.65	(0.99)	(0.18)	3.22	0.0183	70
NCS DC 73305	Rock	59.23	18.82	(1.38)	2.01	0.60	0.35	4.16	(5.6)	(0.077)	7.60	0.129	70
NCS DC 73306	Rock	15.60	5.03	(1.64)	5.19	35.67	(0.081)	0.78	(2.20)	(32.44)	2.52	0.0406	70

		org·C	LOI	P	Ti
NCS DC 73301	Rock		(0.69)	0.0405	0.172
NCS DC 73302	Rock		(4.44)	0.1030	0.309
NCS DC 73303	Rock		(2.24)	0.413	1.420
NCS DC 73304	Rock	(0.04)	(1.10)	0.0970	0.158
NCS DC 73305	Rock	(0.15)	(5.95)	0.0690	0.395
NCS DC 73306	Rock	(0.12)	(34.14)	0.0226	0.196

Number	Name	Chemical Composition(μg/g)												
		Ta	Te	Th	Ti	U	Ag	As	W	B	Ba	Cu	Zr	Ga	Ge
NCS DC 73301	Rock	7.2	0.021	54	1.93	18.8	0.033	2.1	8.4	24	343	3.2	167	19	2.0
NCS DC 73302	Rock	(0.46)	0.017	2.6	(0.16)	0.90	0.071	2.1	(0.47)	4.7	1020	55.4	99	18.1	0.93
NCS DC 73303	Rock	4.3	(0.022)	6.0	(0.12)	1.40	0.040	(0.79)	(0.44)	3.5	527	48.6	277	24.8	0.98
NCS DC 73304	Rock	(0.42)	0.038	7.0	(0.36)	2.1	0.062	9.1	1.16	34	143	19.0	214	5.3	1.16
NCS DC 73305	Rock	(1.0)	(0.022)	12.8	0.71	1.5	0.047	1.4	0.79	154	450	42	96	25.6	3.1
NCS DC 73306	Rock	(0.46)	(0.023)	4.1	(0.36)	1.9	0.043	4.7	0.67	16	120	23.4	62	7.1	0.67

		Hg	Li	Pb	Sc	Sr	Zn	Mn	Cd	Sb	Ce	Dy	Eu	V	Gd
NCS DC 73301	Rock	(4.3)*	131	31	6.1	106	28	463	(0.032)	0.21	108	10.2	0.85	24	9.3
NCS DC 73302	Rock	12*	18.3	11.3	9.5	790	71	604	0.061	0.12	40	1.85	1.02	94.5	2.7
NCS DC 73303	Rock	(6.4)*	9.5	7.2	15.2	1100	150	1310	0.067	0.083	105	5.6	3.2	167	8.5
NCS DC 73304	Rock	(8.4)*	11.1	7.6	4.2	58	20	155	0.060	0.60	48	4.1	1.02	33.4	4.5
NCS DC 73305	Rock	9.7*	44	8.7	18.5	90	55	173	(0.003)	0.17	109	5.1	1.7	87	6.7
NCS DC 73306	Rock	16	20.5	18.3	6.0	913	52	434	0.069	0.43	25.4	1.6	0.51	36	1.9

		Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Be	Bi	CO
NCS DC 73301	Rock	2.05	54	1.15	47	12.5	1.65	1.06	7.4	6.5	12.7	62	12.4	0.53	3.4
NCS DC 73302	Rock	0.34	21.8	0.12	19	0.79	0.41	(0.15)	0.89	0.85	4.9	9.3	1.1	0.081	13.2
NCS DC 73303	Rock	0.88	56	0.19	54	2.0	1.2	0.28	1.5	2.0	13.2	22	2.5	(0.045)	46.5
NCS DC 73304	Rock	0.75	21	0.30	21	1.1	0.79	0.32	1.92	2.0	5.4	21.5	0.97	(0.18)	6.4
NCS DC 73305	Rock	0.98	62	0.41	48	2.0	1.02	0.43	2.6	2.7	13.6	26	3.0	0.23	21
NCS DC 73306	Rock	0.33	14.6	0.14	12.0	(0.98)	0.35	0.17	0.90	(1.1)	3.4	9.1	0.8	0.16	9.0

		Cr	Cs	Hf	In	Mo	Nb	Ni	Rb	Se	Cl
NCS DC 73301	Rock	(5.0)	38.4	6.3	(0.02)	3.5	40	2.3	466	(0.059)	127
NCS DC 73302	Rock	32.4	2.3	2.9	(0.033)	0.54	6.8	17	37.6	(0.063)	(42)
NCS DC 73303	Rock	134	(1.2)	6.5	(0.063)	0.26	68	140	37	(0.086)	114
NCS DC 73304	Rock	20	1.8	6.6	(0.026)	0.76	5.9	16.6	29	(0.098)	(42)
NCS DC 73305	Rock	99	14	2.9	(0.082)	0.35	14.3	36.8	205	(0.084)	(40)
NCS DC 73306	Rock	32	3.2	1.8	(0.042)	0.38	6.6	17.8	32	(0.099)	(80)

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Number	Name	Chemical Composition(Percent)												Unit Size
		SO_2	Al_2O_3	FeO	MgO	CaO	Mn	Na_2O	K_2O	H_2O^+	CO_2	S	(Fe_2O_3)	(in g)
NCS DC73307	Stream Sediment	64.89	10.58	(1.52)	2.39	5.35	0.620	1.44	1.99	(2.93)	(4.19)	0.0150	4.86	70
NCS DC73309	Stream Sediment	76.25	10.37	(0.34)	0.62	0.47	0.249	0.46	3.28	(2.66)	(0.09)	0.0170	4.39	70

		org.C	LOI	P	Ti
NCS DC73307	Stream Sediment	(0.47)	(7.21)	0.0670	0.550
NCS DC73309	Stream Sediment	(0.24)	(3.02)	0.0255	0.210

Number	Name	Chemical Composition(μg/g)													
		Ta	Te	Th	Ti	U	Ag	As	Au	B	Ba	Cu	F	Ga	Ge
NCS DC73307	Stream Sediment	1.3	(0.04)	12.4	0.49	2.6	0.089	8.4	(1.3)*	54	430	32.1	494	14.0	1.28
NCS DC73309	Stream Sediment	5.7	(0.38)	23.3	2.9	9.1	3.2	188	(3.6)*	68	260	78.6	1650	18.5	1.81

		Hg	Li	Pb	Sc	Sr	Zn	Br	Cd	Sb	Ce	Dy	Eu	V	W
NCS DC 73307	Stream Sediment	83	30	23	11.1	166	78	(1.5)	0.26	0.81	78	5.1	1.33	97	1.76
NCS DC 73309	Stream Sediment	72*	70.6	636	7.4	29	373	(2.3)	2.3	14.9	58	7.2	0.60	46.8	126

		Zr	Gd	Ho	La	Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Be
NCS DC 73307	Stream Sediment	370	5.5	0.96	40	0.45	34	6.3	0.87	0.44	2.8	2.8	9.2	26.6	1.8
NCS DC 73309	Stream Sediment	153	5.9	1.4	30	0.78	27	6.2	1.13	0.74	5.1	4.6	7.4	42.7	26

		Bi	Co	Cr	Cs	Hf	I	In	Mo	Nb	Ni	Rb	Se	Sn	Cl
NCS DC 73307	Stream Sediment	4.2	14.4	85	5.1	9.7	(0.61)	0.056	0.64	17.7	32.3	80	0.16	2.6	(50)
NCS DC 73309	Stream Sediment	50	8.5	40	17.4	5.4	2.0	1.86	5.9	25	14.3	408	0.20	370	290

Number	Name	Chemical Composition(μg/g)												Unit Size
		Ag	As	B	Ba	Cu	Li	Pb	Sr	Zn	Cd	Sb	Ce	Zr	(in g)
NCS DC 73327	Synthetic Silicate	(0.034)	2.0	2.1	24	2.0	15	2.5	5.0	3.0	0.022	0.28		2.2	70
NCS DC 73328	Synthetic Silicate	0.064	5.0	5.1	54	5.0	18	5.5	8.0	6.0	0.052	0.58	2.0	5.2	70
NCS DC 73329	Synthetic Silicate	0.11	10	10.0	104	10.0	23	10.5	13	11.0	0.10	1.1	5.0	10.2	70
NCS DC 73330	Synthetic Silicate	0.21	20	20	204	20.0	33	20.5	23	21	0.20	2.1	10.0	20	70
NCS DC 73331	Synthetic Silicate	0.51	50	50	504	50	63	50	53	51	0.50	5.1	20	50	70

		La	Yb	Y	Co	Cr	Mo	Nb	Ni	Bi	Sn	V	W	Be
NCS DC 73327	Synthetic Silicate	2.1	0.2	2.0	2.6	2.3	0.21	2.3	2.6	0.31	0.28	2.8	0.20	0.26
NCS DC 73328	Synthetic Silicate	5.1	0.50	5.0	5.6	5.3	0.51	5.3	5.6	0.61	0.58	5.8	0.50	0.56
NCS DC 73329	Synthetic Silicate	10	1.0	10	10.6	10.3	1.0	10.3	10.6	1.1	1.1	10.8	1.0	1.1
NCS DC 73330	Synthetic Silicate	20	2.0	20	20.6	20.3	2.0	20.3	20.6	2.1	2.1	20.8	2.0	2.1
NCS DC 73331	Synthetic Silicate	50	5.0	50	50.6	50	5.0	50	50.6	5.1	5.1	51	5.0	5.1

		Mn	Ti
NCS DC 73327	Synthetic Silicate	27	24
NCS DC 73328	Synthetic Silicate	57	54
NCS DC 73329	Synthetic Silicate	107	104
NCS DC 73330	Synthetic Silicate	207	204
NCS DC 73331	Synthetic Silicate	507	504

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Number	Name	Chemical Composition(μg/g)													Unit Size
		Ag	As	B	Ba	Cu	Li	Pb	Sr	Zn	Cd	Sb	Ce	Zr	(in g)
NCS DC73332	Synthetic Silicate	1.0	100	100	1000	100	113	100	103	101	1.0	10	100	100	70
NCS DC73333	Synthetic Silicate	2.0	200	200	2000	200	213	200	203	200	2.0	20	200	200	70
NCS DC73334	Synthetic Silicate	5.0	500	500	0.500*	500	513	500	500	500	5.0	50	500	500	70
NCS DC73335	Synthetic Silicate	10		1000	1.000*	1000	1010	1000	1000	1000	10	100	1000	1000	70
NCS DC73336	Synthetic Silicate	20				2000		2000	2000	2000	20	200			70
NCS DC73337	Synthetic Silicate	50				0.500*		0.500*	0.500*	0.500*	50	500			70

		La	Yb	Y	Bi	Sn	Be	Mo	W	Nb	Co	Ni	Cr	V
NCS DC73332	Synthetic Silicate	100	10	100	10	10	10	10	10	100	101	101	100	101
NCS DC73333	Synthetic Silicate	200	20	200	20	20	20	20	20	200	200	200	200	200
NCS DC73334	Synthetic Silicate	500	50	500	50	50	50	50	50	500	500	500	500	500
NCS DC73335	Synthetic Silicate		100		100	100	100	100	100				1000	1000

		Mn	Ti
NCS DC73332	Synthetic Silicate	1000	1000
NCS DC73333	Synthetic Silicate	2000	2000
NCS DC73334	Synthetic Silicate	0.500*	0.500*
NCS DC73335	Synthetic Silicate	1.000*	1.000*
NCS DC73336	Synthetic Silicate		2.000*

* Chemical Composition:Percent

Number	Name	Chemical Composition(μg/g)												Unit Size
		Ag	As	B	Ba	Cu	Ga	Li	Pb	Sr	Zn	Cd	Sb	Ce	(in g)
NCS DC73338	Synthetic Limestone	(0.03)	2.2	2.2	24	2.2	2.8	3.2	2.4	170	3.0	(0.023)	0.21	2.8	70
NCS DC73339	Synthetic Limestone	0.060	5.2	5.2	54	5.2	5.8	6.2	5.4	200	6.0	0.053	0.51	5.8	70
NCS DC73340	Synthetic Limestone	0.11	10.2	10	104	10.2	10.8	11.2	10.4	250	11	0.1	1.0	11	70
NCS DC73341	Synthetic Limestone	0.21	20	20	204	20	20.8	21	20.4	350	21	0.2	2.0	21	70
NCS DC73342	Synthetic Limestone	0.51	50	50	504	50	5.1	51	50	650	51	0.5	5.0	51	70
NCS DC73343	Synthetic Limestone	1.0	100	100	1000	100	101	101	100	1150	101	1	10	101	70
NCS DC73344	Synthetic Limestone	2.0	200	200	0.200*	200	200	200	200	0.215*	200	2	20	200	70
NCS DC73345	Synthetic Limestone	5.0	500	500	0.500*	500		500	500	0.515*	500	5	50	500	70
NCS DC73346	Synthetic Limestone	10				1000			1000		1000	10	100		70

		Zr	Ti	Mn
NCS DC73338	Synthetic Limestone	4.0	31	37
NCS DC73339	Synthetic Limestone	7.0	61	67
NCS DC73340	Synthetic Limestone	12	111	117
NCS DC73341	Synthetic Limestone	22	210	217
NCS DC73342	Synthetic Limestone	52	510	517
NCS DC73343	Synthetic Limestone	102	1010	1020
NCS DC73344	Synthetic Limestone	202	2010	2020
NCS DC73345	Synthetic Limestone	500	0.500*	0.500*
NCS DC73346	Synthetic Limestone			1.000*

* Chemical Composition:Percent

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition										Unit Size
		$Ag(10^{-9})$	$Al(10^{-2})$	$As(10^{-6})$	$B(10^{-6})$	$Ba(10^{-6})$	$Be(10^{-9})$	$Bi(10^{-9})$	$Br(10^{-6})$	$Ca(10^{-2})$	$Cd(10^{-9})$	(in g)
NCS DC 73347a	Human hair	(50)	(2)	(0.28)	2.9	11.4	110	21	(1.1)	0.145	0.07	6
		$Ce(10^{-6})$	$Cl(10^{-2})$	$Co(10^{-6})$	$Cr(10^{-6})$	$Cs(10^{-6})$	$Cu(10^{-6})$	$Dy(10^{-9})$	$Er(10^{-9})$	$Eu(10^{-9})$	$F(10^{-6})$	
NCS DC 73347a	Human hair	(0.35)	(0.018)	0.045	0.41	(0.003)	14.3	20	14	3.7	(11)	
		$Fe(10^{-6})$	$Gd(10^{-9})$	$Ge(10^{-9})$	$Hf(10^{-6})$	$Hg(10^{-9})$	$Ho(10^{-9})$	$I(10^{-6})$	$K(10^{-2})$	$La(10^{-6})$	$Li(10^{-6})$	
NCS DC 73347a	Human hair	36	20		(0.6)	670	4.6	0.8	(0.002)	0.16	(1.6)	
		$Lu(10^{-9})$	$Mg(10^{-2})$	$Mn(10^{-6})$	$Mo(10^{-6})$	$N(10^{-2})$	$Na(10^{-2})$	$Nd(10^{-6})$	$Ni(10^{-6})$	$P(10^{-2})$	$Pb(10^{-6})$	
NCS DC 73347a	Human hair	(2.8)	(0.014)	2	0.17	13.9	0.0089	0.093	0.43	0.014	5.7	
		$Pr(10^{-9})$	$Rb(10^{-6})$	$S(10^{-2})$	$Sb(10^{-6})$	$Sc(10^{-6})$	$Se(10^{-6})$	$Si(10^{-2})$	$Sm(10^{-9})$	$Sn(10^{-6})$	$Sr(10^{-6})$	
NCS DC 73347a	Human hair	25	(0.06)	4.19	(0.065)	(0.018)	0.58	(0.06)	19	(0.2)	7.7	
		$Tb(10^{-9})$	$Th(10^{-6})$	$Tl(10^{-6})$	$Ti(10^{-9})$	$Tm(10^{-9})$	$U(10^{-9})$	$V(10^{-6})$	$Y(10^{-6})$	$Yb(10^{-9})$	$Zn(10^{-6})$	
NCS DC 73347a	Human hair	3.3	0.064	(3.3)	7.7	21	99	0.5	11.2	15	137	
		Ash(%)										
		(5.5)										

Number	Name	Chemical Composition(Percent)									Unit Size
		Al	Ca	Cl	K	Mg	N	S	Si	Na	(in g)
NCS DC 73349	Branches and Leaves of Bush	0.20	1.68	(1.92)	0.92	0.48	1.50	0.73	0.60	1.96	35

Number	Name	Chemical Composition(μg/g)													
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	Co	Cr	Cs	Cu	Dy
NCS DC 73349	Branches and Leaves of Bush	0.049	1.25	38	18	0.051	0.023	3.0	(0.038)	2.2	0.41	2.6	0.27	6.6	(0.13)
		Eu	F	Fe	Gd	Hf	Hg	Ho	La	Li	Lu	Mn	Mo	Nd	Ni
NCS DC 73349	Branches and Leaves of Bush	0.39	23	1070	(0.19)	(0.15)		(0.033)	1.25	2.6	(0.011)	61	0.28	1.0	1.7
		P	Pb	Pr	Rb	Sb	Sc	Se	Sm	Sn	Sr	Tb	Th	Ti	U
NCS DC 73349	Branches and Leaves of Bush	100	47	(0.24)	4.5	0.095	0.32	0.12	0.19	(0.27)	246	0.025	0.36	95	(0.12)
		V	W	Y	Yb	Zn									
NCS DC 73349	Branches and Leaves of Bush	2.4	(0.06)	(0.68)	0.063	55									

Number	Name	Chemical Composition(μg/kg)						Unit Size
		Pt	Pd	Ir	Os	Au	Rh	(in g)
NCS DC 73352	Platinum Group	0.26	0.26	(0.04)	(0.05)	0.90		500
NCS DC 73353	Platinum Group	1.6	2.3	(0.05)	(0.05)	10		500
NCS DC 73354	Platinum Group	6.4	4.6	4.3	9.6	1.1	1.3	500
NCS DC 73355	Platinum Group	58	60	4.7	2.4	4.3	4.3	500
NCS DC 73356	Platinum Group	20	11.3	136	353		10	500
NCS DC 73357	Platinum Group	440	568	28	15.6	(45)	22	500
NCS DC 73358	Platinum Group	14.7	15.2	1.2	0.64	(1.8)	1.1	500

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		SiO_2	Al_2O_3	TFe_2O_3	FeO	MgO	CaO	Na_2O	K_2O	H_2O^+	CO_2	LOI	
NCS DC 73375	Limestone	6.65	0.68	0.21	(0.06)	0.71	51.1	(0.03)	0.15	(0.4)	39.8	40.2	70
NCS DC 73376	Gramite	66.3	16.3	3.12	1.6	1.63	2.66	5.3	2.60	(1.0)	0.35	1.28	70
NCS DC 73377	Plagioclase Bornblende	49.6	13.8	14.8	10.8	7.2	9.6	2.07	0.48	(1.7)	(0.16)	1.06	70

		Chemical Composition(μg/g)											
		Ag	As	B	Ba	Be	Bi	Cd	Ce	Cl	Co	Cr	Cs
NCS DC 73375	Limestone	(0.024)	0.67	(6)	8.6	0.13	0.032	(0.018)	4.6	(30)	(0.7)	(3.3)	(0.12)
NCS DC 73376	Gramite	0.027	0.25	15	1140	1.7	0.094	(0.06)	48	(127)	7.5	23	2.6
NCS DC 73377	Plagioclase Bornblende	(0.05)	25	12	62	0.34	(0.06)	0.14	7.8	(120)	52	137	1.9

		Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg	Hc	In
NCS DC 73375	Limestone	(2.2)	0.28	0.15	0.082	240	(0.8)	0.36	0.13	0.21	0.005	(0.04)	(0.03)
NCS DC 73376	Gramite	(2.6)	1.5	0.76	0.10	660	18	2.4	0.93	3.3	0.004	0.27	
NCS DC 73377	Plagioclase Bornblende	84	3.5	2.3	0.92	206	17.3	2.7	1.46	1.5	0.0032	0.84	

		La	Li	Lu	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb
NCS DC 73375	Limestone	2.3	4.5	0.023	30	0.18	(0.8)	1.95	(4)	57	(5)	0.60	4.0
NCS DC 73376	Gramite	25	24	0.11	430	(0.3)	4	21	12.2	570	7.7	5.7	57
NCS DC 73377	Plagioclase Bornblende	2.9	11	0.38	1600	0.16	2.7	6.4	119	375	(9)	1.25	30

		S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl
NCS DC 73375	Limestone	35	0.068	(0.7)	0.021	0.40	(0.5)	110	(0.05)	0.054	0.86	233	(0.033)
NCS DC 73376	Gramite	(50)	0.063	5.0	0.019	3.3	0.8	690	(0.33)	0.29	1.9	1780	(0.20)
NCS DC 73377	Plagioclase Bornblende	(70)	(0.7)	43	0.083	2.1	(0.8)	142	(0.14)	0.57	(0.34)	5530	(0.11)

		Tm	U	V	W	Y	Yb	Zn	Zr
NCS DC 73375	Limestone	0.022	0.23	5.2	0.13	(1.8)	0.15	(7)	(11)
NCS DC 73376	Gramite	0.11	(0.4)	45	0.42	7.4	0.69	46	(90)
NCS DC 73377	Plagioclase Bornblende	0.36	(0.14)	300	0.34	20	2.4	100	57

Number	Name	Chemical Composition									Unit Size (in g)
		$Pt(10^{-9})$	$Pt(10^{-6})$	$Pd(10^{-9})$	$Pd(10^{6})$	$Os(10^{-9})$	$Ru(10^{-9})$	$Ir(10^{-9})$	$Rh(10^{-9})$	$Au(10^{-9})$	
NCS DC 73397	Platinum group	0.66		0.66		0.25	0.66	0.16	0.066	2.3	1000
NCS DC 73398	Platinum group		1.9		0.57	43	74	28	7.3		1000
NCS DC 73399	Platinum group		5.7		1.67	2	2	2.1	1.5		1000

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Cu	Pb	Zn	Fe	S	Mn	SiO_2	Al_2O_3	MgO	CaO	Na_2O	K_2O	Ag*	
NCS DC 73510	Ore	0.096	5.13	13.9	19.6	29.0	0.066	14.1	(2.5)	0.59	6.5	(0.03)	0.78	148	50

		Ca*	Od*
NCS DC 73510	Ore	62	400

*Chemical Composition(10^{-6})

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Number	Name	Chemical Composition(mg/g)													Unit Size
		Ni(%)	Co	S(%)	Ag	As	Cd	Cr	Cu	Mn	P	Pb	Sc	Ti	(in g)
NCS DC 73514	Nickel Ore	0.11	49	0.74	0.56	5.3	0.28	790	330	960	728	21	15.6	0.42*	50
NCS DC 73515	Nickel Ore	0.33	104	1.53	0.75	5.1	0.34	0.13*	681	0.11*	485	25	15.8	0.32*	50
NCS DC 73516	Nickel Ore	1.02	262	3.78	1.1	5.4	0.44	0.12*	0.16*	0.11*	829	25	17.6	0.41*	50
NCS DC 73517	Nickel Ore	5.93	0.13*	18.14	9.3	25	2.5	(720)	1.52*	614	266	77	9.1	0.14*	50
NCS DC 73518	Nickel Ore	9.01	0.20*	27.83	15.2	37	4	(457)	2.47*	295	(130)	116	2.5	422	50

		V	Zn	SiO_2(%)	Al_2O_3(%)	Fe_2O_3(%)	Mgo(%)	CaO(%)	Na_2O(%)	K_2O(%)	H_2O(%)
NCS DC 73514	Nickel Ore	102	79	54.89	12.21	8.58	9.67	4.6	2.16	1.51	3.37
NCS DC 73515	Nickel Ore	93	77	52.29	9.09	10.71	14.56	4.02	1.59	1	3.78
NCS DC 73516	Nickel Ore	112	77	46.85	8.65	14.69	14.45	4.7	1.55	0.9	3.21
NCS DC 73517	Nickel Ore	61	102	27.4	4.06	34.71	9.88	2.55	0.69	0.34	2.4
NCS DC 73518	Nickel Ore	(30)	134	14.13	1.04	48.37	6.3	1.16	0.22	0.06	1.65

Note: Date in () is for reference only. value with* means in percent

Number	Name	Chemical Composition													Unit Size
		Mo(%)	S(%)	Ag(μg/g)	As(μg/g)	Bi(μg/g)	Cd(μg/g)	Co(μg/g)	Cr(μg/g)	Cu(μg/g)	Ge(μg/g)	Mn(%)	Ni(μg/g)	P(μg/g)	(in g)
NCS DC 73519	Molybdenum Ore	0.066	0.38	(0.11)	5.2	6.9	0.50	13.3	23	46	6.2	0.92	54	1160	50
NCS DC 73520	Molybdenum Ore	0.15	0.44	0.10	4.8	7.4	0.52	12.9	23	46	6.0	0.91	52	1231	50
NCS DC 73521	Molybdenum Ore	0.54	0.68	0.13	4.7	8.2	0.52	13.2	23	48	6.2	0.91	52	1210	50
NCS DC 73522	Molybdenum Ore	50.08	33.72	(2.1)	(2.2)	86	0.20	10.2	30	266	(0.67)	0.15	(20)	(130)	50

		Pb(μg/g)	Re(μg/g)	Sb(μg/g)	Sn(μg/g)	W(μg/g)	Zn(μg/g)	SiO_2(%)	Al_2O_3(%)	Fe_2O_3(%)	MgO(%)	CaO(%)	Na_2O(%)	K_2O(%)	Total oil and water(%)
NCS DC 73519	Molybdenum Ore	9.1	(0.07)	0.58	4.7	489	357	57.23	5.20	10.05	4.29	18.37	0.90	0.66	
NCS DC 73520	Molybdenum Ore	10.5	0.12	0.60	4.5	518	365	57.47	5.20	9.89	4.37	18.13	0.91	0.66	
NCS DC 73521	Molybdenum Ore	13.7	0.31	0.73	4.7	557	360	56.87	5.12	9.88	4.35	18.09	0.90	0.66	
NCS DC 73522	Molybdenum Ore	316	23	13.2	(11.9)	732	68	7.58	(1.16)	1.23	1.96	1.95	(0.21)	(0.06)	0.85

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Number	Name	Chemical Composition(Percent) Al	Ca	Fe	K	Mg	N	Na	P	Si	Ti			Unit Size (in g)
NCS DC 78302	Tibet Soil	7.11	2.59	3.34	2.12	1.53	0.128	1.52	0.86	30.57	0.40			15

Number	Name	Chemical Composition(μg/g) As	Be	Cd	Co	Ce	Cr	Cu	Eu	La	Mn	Pb	Rb
NCS DC 78302	Tibet Soil	3.8	2.96	0.081	13.1	83.6	60.8	24.6	1.4	41.9	677	14.2	135

		Sc	Se	Sm	Sr	Th	U	V	Zn	Yb	Hf	Hg	Lu
NCS DC 78302	Tibet Soil	10.8	0.16	7.1	163	17.5	3.84	77.5	58.0	3.1	(7.3)	(0.018)	(0.48)

		Sb	Ta	Tb	Ba	Nd	Ni	Br	Cs	Dy
NCS DC 78302	Tibet Soil	(0.4)	(1.1)	(0.9)	(509)	42.3	31.1	(1.3)	(7.3)	(5)

Number	Name	Chemical Composition(Percent) P_2O_5	SiO_2	CaO*	MgO	TFe_2O_3	Al_2O_3	MnO	TiO_2	F	CO_2	K_2O	Na_2O	Unit Size (in g)
NCS DC 79001	Phosphat Rock	36.89	3.26	51.32	0.43	1.04	0.58	0.024	0.037	3.54	2.15	0.17	0.33	100
NCS DC 79002	Phosphat Rock	20.86	3.61	40.71	8.19	1.08	2.58	0.015	0.14	2.05	18.46	0.28	0.059	100
NCS DC 79003	Phosphat Rock	6.06	38.80	19.42	7.12	3.08	4.06	0.026	0.48	0.51	16.41	2.63	0.14	100

* Including Sro

		I	Ts	SrO
NCS DC 79001	Phosphat Rock	0.0052		0.077
NCS DC 79002	Phosphat Rock	0.0059	0.79	0.16
NCS DC 79003	Phosphat Rock			0.055

Number	Name	PH	Organic Matter(g/kg)	Total Nitrogen(g/kg)	Hydrolyzable Nitrogen(mg/kg)	Unit Size (in g)
NCS DC 85113	Available Nutrients in Soil	6.14	34.5	1.62	157	500
NCS DC 85114	Available Nutrients in Soil	8.61	12.7	0.71	53	500
NCS DC 85115	Available Nutrients in Soil	8.50	10.3	0.65	45	500
NCS DC 85116	Available Nutrients in Soil	8.18	17	1.09	86	500

		Available NaHC03 Extraction	Phosphorus(mg/kg) NH_4F Extraction	Effective Potassium(g/kg)	Slowly available potassium (Inexchangeable)(g/kg)
NCS DC 85113	Available Nutrients in Soil		32	0.36	0.98
NCS DC 85114	Available Nutrients in Soil	15.7		0.39	1.04
NCS DC 85115	Available Nutrients in Soil	24		0.33	1.2
NCS DC 85116	Available Nutrients in Soil	11.2		0.34	1.02

		Available sulfure (mg/kg) Phosphate Extraction	Available sulfure (mg/kg) $CaCl_2$ Extraction	Available Silicon(g/kg)	Cation Exchange Capacity cmol(+) /kg
NCS DC 85113	Available Nutrients in Soil	33		0.63	31
NCS DC 85114	Available Nutrients in Soil		38	0.34	13.8
NCS DC 85115	Available Nutrients in Soil		27	0.31	9.6
NCS DC 85116	Available Nutrients in Soil		31	0.35	20

		Exchangeable Calcium cmol(1/2Ca^{2+}) /kg	Exchangeable Magnesium cmol(1/2Mg^{2+}) /kg	Exchangeable Sodium cmol(Na^+) /kg	Exchangeable Potassium cmol(K^+) /kg
NCS DC 85113	Available Nutrients in Soil	22.5	5.4	0.24	0.94

		Exchangeable Manganese(mg/kg)	Available Molybdenum(mg/kg)
NCS DC 85113	Available Nutrients in Soil	80	0.13
NCS DC 85114	Available Nutrients in Soil		0.27
NCS DC 85115	Available Nutrients in Soil		0.08
NCS DC 85116	Available Nutrients in Soil		0.069

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Number	Name	Chemical Composition	
		Available Boron(mg/kg)	Soluble Fluorine(mg/kg)
NCS DC 85113	Available Nutrients in Soil	0.56	2.9
NCS DC 85114	Available Nutrients in Soil	1.9	10.8
NCS DC 85115	Available Nutrients in Soil	0.35	7.7
NCS DC 85116	Available Nutrients in Soil	0.3	11.4

Number	Name	Soluble salt						
		Total(g/kg)	Cl^-(g/kg)	SO_4^{2-}(g/kg)	Ca^{2+}(g/kg)	Mg^{2+}(mg/kg)	K^+(mg/kg)	Na^+(mg/kg)
NCS DC 85113	Available Nutrients in Soil	(0.76)	0.016	0.109	0.080	19	18	24
NCS DC 85114	Available Nutrients in Soil	(0.9)	0.049	0.12	0.082	14	40	163
NCS DC 85115	Available Nutrients in Soil	(0.68)	(0.015)	0.083	0.117	12.4	29	29
NCS DC 85116	Available Nutrients in Soil	(0.87)	(0.021)	0.092	0.165	15.0	20.6	33

Number	Name	Available(mg/kg)								
		Copper	Zinc	Iron	Manganese	Cadmium	Lead	Nickel	Chromium	Cobalt
NCS DC 85113	Available Nutrients in Soil	2.6	2.3	142	67	0.048	2.07	2.4		0.39
NCS DC 85114	Available Nutrients in Soil	1.8	0.54	38	14.5	0.025	1.4	0.23	(0.014)	0.069
NCS DC 85115	Available Nutrients in Soil	1.36	0.57	20	17	0.025	0.67	0.20	(0.015)	0.08
NCS DC 85116	Available Nutrients in Soil	2.6	1.04	76	21	0.049	3.8	0.26		0.073

DTPA extraction

Number	Name	Available(mg/kg)									
		Copper	Zinc	Iron	Manganese	Cadmium	Lead	Nickel	Chromium	Arsenic	Selenium
NCS DC 85113	Available Nutrients in Soil	1.08	3.6	16.3	131	0.053	0.8	3.3	0.25	0.18	4.6

Hydrochloric acid extraction

Number	Name	Available(mg/kg)				
		Copper	Zinc	Cadmium	Lead	Nickel
NCS DC 85113	Available Nutrients in Soil	0.034	0.068	(0.7)	(0.028)	0.047
NCS DC 85114	Available Nutrients in Soil	0.052	(0.03)		(0.02)	(0.018)
NCS DC 85115	Available Nutrients in Soil	0.045	(0.038)		(0.02)	0.016
NCS DC 85116	Available Nutrients in Soil	0.053	(0.034)		(0.02)	(0.025)

Sodium nitrate extraction

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Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		SiO_2	AL_2O_3	TFe_2O_3	MgO	CaO	Na_2O	K_2O	TIO_2	
NCS DC 85107	Agriculture soil	65.37	15.06	4.98	1.62	1.68	2.48	2.72	0.74	70
NCS DC 85108	Agriculture soil	63.06	12.76	4.49	2.01	4.57	1.69	2.43	0.68	70
NCS DC 85109	Agriculture soil	53.72	14.74	5.72	2.09	7.93	0.99	2.72	0.65	70
NCS DC 85110	Agriculture soil	61.03	16.21	6.20	1.90	0.84	0.99	2.45	0.92	70
NCS DC 85111	Agriculture soil	69.68	14.58	5.21	0.54	(0.22)	(0.090)	1.08	0.96	70
NCS DC 85112	Agriculture soil	83.34	8.89	1.35	(0.20)	(0.16)	(0.038)	0.65	0.22	70

		MNO	P_2O_5	S	L.O.L	Cu*	Zn*	B*	Mo*
NCS DC 85107	Agriculture soil	0.094	0.120	(0.013)	4.83	24	67	34	0.80
NCS DC 85108	Agriculture soil	0.077	0.162	(0.017)	7.71	25	68	54	(0.82)
NCS DC 85109	Agriculture soil	0.106	0.197	(0.019)	11.17	29	96	75	1.53
NCS DC 85110	Agriculture soil	0.050	0.098	(0.033)	9.01	42	93	65	0.73
NCS DC 85111	Agriculture soil	0.029	0.122	(0.014)	7.52	32	81	71	1.47
NCS DC 85112	Agriculture soil	0.015	0.124	(0.014)	4.86	2.8	22	(20)	1.15

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		BeO	LI_2O	Rb_2O	Cs_2O	TA_2O_5	Nb_2O_5	ZrO_2	HfO_2	SIO_2	Al_2O_3	$TFeO_3$	FeO	CaO	
NCS DC 86301	Beryllium Ore	0.060								73.80	14.85	0.515	(0.17)	0.577	70
NCS DC 86302	Beryllium Ore	0.359								73.77	14.83	0.591	(0.18)	0.578	70
NCS DC 86303	Lithium Ore	0.017	0.459	0.145	0.036	48.4*	26.5*			74.21	14.79	0.391	(0.06)	0.335	70
NCS DC 86304	Lithium Ore	0.026	2.28	0.734	0.178	0.011	60.7*			64.70	19.23	0.299	(0.02)	0.076	70
NCS DC 86305	Tantalium Ore	0.033	0.791	0.245	0.064	87.3*	42.1			75.03	14.32	0.322	(0.02)	0.107	70
NCS DC 86306	Tantalium Ore	0.033	0.777	0.239	0.065	0.069	0.043								70
NCS DC 86307	Zirconium Ore							0.187	42.9*	65.36	14.75	4.78	1.83	2.69	70
NCS DC 86308	Zirconium Ore							1.27	0.026	65.56	14.76	4.67	1.83	2.64	70
NCS DC 86309	Rare-Earth Ore			5.71*						67.31	19.08	3.49	(0.07)	0.03	70
NCS DC 86310	Rare-Earth Ore		0.015	0.069	17.9*					74.61	14.72	1.16	0.053	0.03	70
NCS DC 86311	Rare-Earth Ore		0.015	0.068	17.9*					74.28	14.6	1.13	(0.04)	0.03	70
NCS DC 86312	Rare-Earth Ore		40.0*	0.011	5.66*					66.77	19.02	3.45	(0.07)	0.029	70

*Chemical Composition(10^{-6})

		RE_2O_3	La_2O_3	MgO	MnO	TiO_2	K_2O	Na_2O	P_2O_5	F	H_2O^*	L.O.I
NCS DC 86301	Beryllium Ore	75.8*	6.97*	0.070	0.029	0.015	4.08	4.79	(0.01)	0.019	0.607	0.687
NCS DC 86302	Beryllium Ore		7.74	0.069	0.035	0.015	3.87	4.66	0.013	0.040	0.596	0.732
NCS DC 86303	Lithium Ore	47.1*	5.03*	0.054	0.069	0.018	3.16	4.19	0.169	0.676	1.06	1.49
NCS DC 86304	Lithium Ore	15.2*	(2.1)*	0.036	0.252	0.028	4.79	2.34	0.236	3.16	2.34	4.11
NCS DC 86305	Tantalium Ore	18.3*	3.09*	0.050	0.113	0.028	2.05	3.62	0.350	1.34	1.50	2.20
NCS DC 86306	Tantalium Ore	44.9*	6.84*	0.048	0.143	0.032	2.02	3.69	0.344	1.34	1.53	2.20
NCS DC 86307	Zirconium Ore	0.018	36.3*	2.08	0.082	0.420	3.35	3.80	0.166	0.081	1.34	1.57
NCS DC 86308	Zirconium Ore	0.022	38.0*	2.01	0.083	0.411	3.33	3.72	0.169	0.083	1.3	1.51
NCS DC 86309	Rare-Earth Ore	0.093	0.031	0.227	0.070	0.539	2.12	0.063	0.029	0.016	6.55	6.69
NCS DC 86310	Rare-Earth Ore	0.086	19.9*	0.080	0.016	0.022	4.94	0.157	(0.003)	0.034	3.61	3.70
NCS DC 86311	Rare-Earth Ore	0.493	0.010	0.080	0.016	(0.02)	4.87	0.155	(0.002)	0.034	3.66	3.78
NCS DC 86312	Rare-Earth Ore	0.787	0.276	0.226	0.068	0.532	2.09	0.062	0.03	0.014	6.64	6.82

*Cherical Composition(10^{-6})

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(μg/g)												Unit Size
		CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	HO_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	La_2O_3	(in g)
NCS DC 86301	Beryllium Ore	14.7	1.70	6.68	2.53	0.14	3.64	0.75	4.53	0.85	2.16	0.33	2.27	0.32	
NCS DC 86302	Beryllium Ore	15.2	1.91	7.52	2. 73	0.14	3.84	0.80	4.63	0.91	2.20	0.36	2.37	0.38	
NCS DC 86303	Lithium Ore	8. 98	1.30	4. 96	1.60	(0.14)	2.09	0.42	2.47	0.43	1.16	0.18	1.28	0.18	
NCS DC 86304	Lithium Ore	2.56	0.61	2.56	0.63	0.13	0.72	0.13	0.63	(0.12)	0.27	0.039	0.23	0.030	
NCS DC 86305	Tantalium Ore	3.63	0.82	3.27	0.75	0.16	0. 83	0.14	0.65	0.12	0.28	0.041	0.23	0.031	
NCS DC 86306	Tantalium Ore	16.9	2. 17	6.54	1.44	0.18	1.22	0.21	1.11	0.22	0.57	0.11	0.94	0.15	
NCS DC 86307	Zirconium Ore	71.9	7.87	27.2	4.70	1.22	3.40	0.53	2.89	0.58	1.78	0.30	2.16	0.37	
NCS DC 86308	Zirconium Ore	75.9	7.91	27.0	4. 93	1.22	(4.1)	0.76	4.71	1.36	4.82	0.94	7.74	1.54	
NCS DC 86309	Rare-Earth Ore	91.2	50.1	0. 017*	33.8	8.10	32.1	5.34	28.4	5.69	(16)	2.40	14.1	2.06	
NCS DC 86310	Rare-Earth Ore	21.9	6.32	27.9	15.3	0.37	32.9	8.03	56.9	12.1	36.6	5.60	36.0	5.67	
NCS DC 86311	Rare-Earth Ore	34.1	(45)	0.022*	0.015*	1.83	(0.03)*	56.2	0.037*	76.3	0.022*	32.6	0.021*	30.8	
NCS DC 86312	Rare-Earth Ore	0.023*	0.054*	0.186*	0.033*	76 .6	0.026*	40.5	0.021*	42.3	0.011*	15.1	97.0	13.7	

		Y_2O_3	Sc_2O_3	W	Mo	Sn	Th
NCS DC 86301	Beryllium Ore	29.2	1.66	1.30	0.41		
NCS DC 86302	Beryllium Ore	28.5	3.4	5.46	1.25		
NCS DC 86303	Lithium Ore	17.0	0.98	8.87		(32)	
NCS DC 86304	Lithium Ore	3.51	0.44	43.7		95.4	
NCS DC 86305	Tantalium Ore	3.76	0.63	16.4		(52)	
NCS DC 86306	Tantalium Ore	5.22	6.09	0.02*		(64)	
NCS DC 86307	Zirconium Ore	19.5	14.1				7.95
NCS DC 86308	Zirconium Ore	42.7	14.5				15.0
NCS DC 86309	Rare-Earth Ore	(0.02)*					24.4
NCS DC 86310	Rare-Earth Ore	0.057*	9.26				40.0
NCS DC 86311	Rare-Earth Ore	0.312 *	8.96				38.8
NCS DC 86312	Rare-Earth Ore	0.125 *	11.6				23.8

*Chemical Composition Percent

Number	Name	Chemical Composition(Percent)												Unit Size
		SiO_2	Al_2O_3	$Fe_2O_3(T)$	FeO	CaO	MgO	MnO	TiO_2	K_2O	Na_2O	P_2O_5	F	H_2O^+	(in g)
NCS DC 86313	Beryllium Ore	71.97	15.55	0.47	0.15	0.52	0.083	0.020	0.010	3.28	3.63	(0.018)	0.0088	(0.63)	70
NCS DC 86314	Lithium Ore	53.92	24.53	0.30	(0.043)	0.063	0.027	0.40	0.029	7.75	1.08	0.13	5.08	(2.77)	70
NCS DC 86315	Tantalum Ore	72.34	14.58	0.68	0.26	0.71	0.093	0.45	0.039	4.11	4.40	(0.040)	0.019	0.56	70
NCS DC 86316	Zirconium Ore	70.73	(14.57)	0.38	0.10	0.63	0.079	0.021	0.64	3.90	4.20	0.040	0.027	0.49	70

		L.O.I
NCS DC 86313	Beryllium Ore	0.86
NCS DC 86314	Lithium Ore	(5.34)
NCS DC 86315	Tantalum Ore	0.61
NCS DC 86316	Zirconium Ore	0.56

Number	Name	Chemical Composition(μg/g)												Unit Size
		$\sum RE_xO_y$	La_2O_3	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	(in g)
NCS DC 86313	Beryllium Ore	63.6	6.08	13.1	1.58	5.96	1.99	0.11	2.83	0.57	3.62	0.67	1.95	0.29	
NCS DC 86314	Lithium Ore	0.56	0.10	0.50	0.094	0.24	0.038	0.10	0.56	0.10	0.50	0.094	0.24	0.038	
NCS DC 86315	Tantalum Ore	81.0	7.65	16.5	1.91	7.84	2.48	0.13	3.47	0.72	4.72	0.88	2.65	0.38	
NCS DC 86316	Zirconium Ore	515	69.2	146	15.7	53.4	10.1	0.55	9.92	2.02	14.9	3.66	16.4	2.84	

		Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	Mo	BeO	Lu_2O_3	Y_2O_3	Sc_2O_3	W	Rb_2O	BeO	Li_2O
NCS DC 86313	Beryllium Ore	1.88	0.25	23.0	1.91	3.37	3.02*							
NCS DC 86314	Lithium Ore	0.22						0.036	3.06	0.31	79.0	1.24*	164	3.89*
NCS DC 86315	Tantalum Ore	2.37						0.37	29.9	21.4	2.14	244	12.5	106
NCS DC 86316	Zirconium Ore	25.9												

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		Cs_2O	Nb_2O_5	Ta_2O_5	Sn	Lu_2O_3	Y_2O_3	Sc_2O_3	W	ZrO_2	Th	HfO_2		
NCS DC 86314	Lithium Ore	0.30*	81	132	152									
NCS DC 86355	Tantalum Ore	8.14	0.52*	1.02*	(2.65)									
NCS DC 86316	Zirconium Ore					6.11	142	10.7	5.01	4.68*	202	0.084*		

Number	Name	Chemical Composition(%)												Unit Size
		SiO_2	Al_2O_3	Fe_2O_3(T)	FeO	CaO	MgO	MnO	TiO_2	K_2O	Na_2O	P_2O_5	F^-	H_2O^+	(in g)
NCS DC 86317	Rare Earth Ore	70.92	16.59	0.71	0.18	(0.11)	0.13	0.10	(0.018)	4.03	0.13	(0.0073)	0.15	4.63	70
NCS DC 86318	Rare Earth Ore	66.9	(14.26)	2.24	0.20	0.29	(0.11)	0.052	0.17	5.52	0.66	(0.020)	0.017	3.60	70

		L.O.I	ΣRE_xO_y	La_2O_3	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3
NCS DC 86317	Rare Earth Ore	5.42	1.83	0.25	0.021	0.066	0.24	0.066	9.56*	0.091	0.019	0.12	(0.023)	0.068
NCS DC 86318	Rare Earth Ore	5.43	4.30	0.23	0.053	0.089	0.40	0.20	21.9*	0.25	0.055	0.37	(0.064)	0.20

		Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	Cs_2O	Rb_2O	Th	Li_2O
NCS DC 86317	Rare Earth Ore	82.9*	0.051	64.5*	0.80	10.1*	148*	0.12	21.0*	396*
NCS DC 86318	Rare Earth Ore	0.031	0.21	0.030	2.16	7.2*	12.6*	404*	67.0*	121*

*Chemical Composition μg/g

Number	Name	Chemical Composition(Percent)												Unit Size
		SiO_2	TiO_2	Al_2O_3	TFe_2O_3	Fe_2O_3	FeO	MnO	MgO	CaO	Na_2O	K_2O	P_2O_5	H_2O^+	(in g)
NCS DC 87101	Soil	67.96	0.72	14.35	(5.09)	4.69	(0.34)	0.093	1.62	0.90	1.78	2.56	0.10	(3.57)	100
NCS DC 87102	Soil	67.21	0.56	10.78	(3.46)	2.28	(1.06)	0.066	1.73	5.21	1.95	2.15	0.15	2.29	100
NCS DC 87103	Soil	72.92	0.69	12.28	(3.78)	3.38	(0.36)	0.072	1.14	1.44	2.20	2.16	0.11	(2.37)	100
NCS DC 87104	Soil	60.76	0.55	10.78	(3.55)	2.79	(0.68)	0.058	1.83	9.07	1.74	2.01	0.087	(2.56)	100
NCS DC 87105	Soil	67.53	0.54	10.84	(3.26)	2.64	(0.58)	0.066	1.73	5.21	1.87	2.18	0.074	(2.49)	100

		CO_2	L.O.I
NCS DC 87101	Soil	(0.076)	4.64
NCS DC 87102	Soil	3.48	6.73
NCS DC 87103	Soil	(0.083)	(3.28)
NCS DC 87104	Soil	6.44	9.62
NCS DC 87105	Soil	3.59	6.67

Number	Name	Chemical Composition(μg/g)											Unit Size
		N	S	As	B	Ba	Be	Bi	Cd	Cl	Co	Cr	(in g)
NCS DC 87101	Soil	0.035	(0.0065)	10	46	677	2.4	(0.24)	(0.26)	(61)	15	93	
NCS DC 87102	Soil	0.064	0.034	9.8	51	469	2.0	(0.20)	(0.22)	600	9.4	61	
NCS DC 87103	Soil	0.029	(0.0045)	6.3	50	524	1.9	(0.17)	(0.20)	(50)	12	56	
NCS DC 87104	Soil	0.020	(0.048)	9.4	44	448	1.8	0.24	(0.22)	222	9.2	62	
NCS DC 87105	Soil	0.021	0.0092	8.2	33	555	1.8	0.21	(0.21)	(85)	8.9	54	

		Cu	F	Ga	Hg	I	La	Li	Mo	Nb	N1	Pb	Rb	Sb
NCS DC 87101	Soil	23	458	17	0.014	(3.1)	43	37	(1.09)	15	41	28	111	0.73
NCS DC 87102	Soil	17	(414)	12	0.031		36	27	(0.94)	12	23	21	86	0.84
NCS DC 87103	Soil	23	383	15	0.017		38	28	(0.68)	14	22	19	91	0.65
NCS DC 87104	Soil	17	559	13	(0.015)		34	38	(0.87)	11	23	19	82	0.78
NCS DC 87105	Soil	16	657	13	(0.018)		32	25	(0.71)	11	22	20	83	0.70

		Se	Sn	Sr	Te	Th	U	V	W	Y	Zn	Zr
NCS DC 87101	Soil	(0.12)	(3.2)	168	0.033	12	1.9	88	1.8	24	68	274
NCS DC 87102	Soil	0.14	2.9	197	(0.039)	9.6	1.9	63	1.5	21	51	291
NCS DC 87103	Soil	0.11	3.2	227	(0.036)	10	1.9	74	1.5	22	48	331
NCS DC 87104	Soil	(0.12)	2.4	296	(0.046)	1.8	44	65	1.4	19	45	258
NCS DC 87105	Soil	(0.08)	2.2	231	(0.053)	8.9	2.4	66	1.3	19	(39)	298

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Number	Name	Chemical Composition(μg/g)													Unit Size
		Al_2O_3	CaO	CO_2	FeO	K_2O	MgO	MnO	Na_2O	P	S	SiO_2	TFe	TiO_2	(in g)
NCS DC 87106	Ilmenite	5.19	13.86	0.5	15.6	0.23	8.79	0.32	0.54	0.22	0.25	33.46	19.23	8.96	80
NCS DC 87107	Ilmenite	4.23	3.86	0.15	11.17	0.021	19.4	0.28	0.12	0.089	0.012	37.85	18.88	2.95	80
NCS DC 87108	Ilmenite	6.73	0.98	1.25	29.65	0.03	3.05	0.24	0.063	0.043	0.28	2.57	51.36	12.91	80
NCS DC 87109	Ilmenite	2.21	6.69	0.15	24.88	0.17	2.88	0.62	0.39	0.25	0.053	14.22	37.87	19.83	80
NCS DC 87110	Ilmenite	3.68	10.32	0.32	20.53	0.21	5.78	0.53	0.49	0.26	0.15	24.02	27.1	16.13	80

		As	Ba	Cd	Co	Cr	Cu	Ga	Li	Nb	Ni	Pb	Rb	Sr
NCS DC 87106	Ilmenite	0.61	71	0.072	84.4	47.4	70.1	30.3	12.7	30	91.2	6.85	7.28	334
NCS DC 87107	Ilmenite	2.16	15	0.33	104	916	213	17.9	1.68	14.5	700	371	0.65	53.5
NCS DC 87108	Ilmenite	1.9	38.5	0.05	236	0.42*	170	55.4	0.95	4.25	611	7.58	0.35	47
NCS DC 87109	Ilmenite	0.52	58.1	0.063	55.5	82.1	40.5	31.8	4.89	49.1	52.6	6.7	4.92	308
NCS DC 87110	Ilmenite	0.54	63.3	0.075	68.1	58.2	49.6	29	8.63	44.2	68.9	6.72	6.38	340

		Th	U	V	Zn	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd
NCS DC 87106	Ilmenite	2.06	0.61	681	267	274	21.5	28.2	72.1	11.1	54.6	12.5	3.65	9.91
NCS DC 87107	Ilmenite	2.5	0.67	303	390	147	12.3	3.71	12.9	2.6	14.8	4.51	1.01	3.75
NCS DC 87108	Ilmenite	0.1	0.029	0.33	493	16.8	1.52	1.34	3.39	0.46	2.26	0.44	0.17	0.42
NCS DC 87109	Ilmenite	2.3	0.63	1326	162	240	22.8	32.6	87.8	13.7	66.3	14.4	4.14	11.2
NCS DC 87110	Ilmenite	2.27	0.64	902	212	266	23.3	32.8	85.2	13.3	64.3	14.4	4.1	11.4

		Tb	Dy	Ho	Er	Tm	Yb	Lu
NCS DC 87106	Ilmenite	1.43	6.49	0.97	2.18	0.24	1.28	0.16
NCS DC 87107	Ilmenite	0.62	3.26	0.53	1.22	0.16	0.85	0.11
NCS DC 87108	Ilmenite	0.056	0.28	0.051	0.14	0.022	0.12	0.019
NCS DC 87109	Ilmenite	1.56	7.05	1.04	2.28	0.26	1.32	0.16
NCS DC 87110	Ilmenite	1.62	7.14	1.07	2.32	0.28	1.37	0.17

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Number	Name	Chemical Composition(μg/g) Certified value	Unit Size (in g)
NCS DC 90001	Ag in Silver ore	46.9	50
NCS DC 90002	Ag in Silver ore	112	50
NCS DC 90003	Ag in Silver ore	298	50
NCS DC 90004	Ag in Silver ore	446	50
NCS DC 90005	Ag in Silver ore	559	50
NCS DC 90006	Ag in Silver ore	732	50

Number	Name	Chemical Composition(Percent) F	Al	Na	SiO_2	Fe_2O_3	SO_4^{2-}	P_2O_5	CaO	L.O.I	Unit Size (in g)
NCS DC 91001	Cryolite	55.45	17.34	21.75	0.087	0.053	0.233	0.0034	(0.606)	4.53	100
NCS DC 91002	Cryolite	54.66	15.18	26.32	0.211	0.032	0.199	0.025	(0.597)	2.97	100
NCS DC 91003	Cryolite	53.89	13.65	29.29	0.363	0.036	0.205	0.013	(0.719)	2.25	100
NCS DC 91004	Cryolite	53.2	13.16	30.26	0.389	0.033	0.293	0.037	(0.508)	2.12	100
NCS DC 91005	Cryolite	52.14	12.69	32.01	0.485	0.0098	0.45	0.065	(0.0062)	1.4	100
NCS DC 91006	Cryolite	51.21	11.75	33.24	0.238	0.04	0.683	0.051	0.112	1.6	100

Number	Name	Chemical Composition(Percent) F	Al	Na	SiO_2	FeO	SO	PO	L.O.I	Unit Size (in g)
NCS DC 91007	Alaminum fluoride	60.76	30.27	0.104	0.146	0.156	0.654	0.0295	6.00	100
NCS DC 91008	Alaminum fluoride	61.79	30.7	0.097	0.104	0.132	0.585	0.0253	4.61	100
NCS DC 91009	Alaminum fluoride	57.79	34.68	0.113	0.015	0.028	0.093	0.0008	0.662	100
NCS DC 91010	Alaminum fluoride	60.96	30.52	0.125	0.251	0.126	0.748	0.0265	5.48	100
NCS DC 91011	Alaminum fluoride	61.51	32.28	0.121	0.429	0.021	0.627	0.1317	0.754	100
NCS DC 91012	Alaminum fluoride	59.74	33.93	0.126	0.016	0.037	0.136	0.0027	0.547	100
NCS DC 91013	Alaminum fluoride	60.88	33.12	0.315	0.017	0.02	0.098	0.0013	0.467	100
NCS DC 91014	Alaminum fluoride	57.72	34.76	0.113	0.014	0.015	0.104	0.0007	0.64	100
NCS DC 91015	Alaminum fluoride	59.99	30.7	0.111	0.301	0.107	0.702	0.0247	5.61	100
NCS DC 91016	Alaminum fluoride	64.97	31.92	0.028	0.196	0.025	0.076	0.0275	1.25	100

Number	Name	Chemical Composition Au(ng/g)	Au(g/T)	Ag(g/T)	Unit Size (in g)
NCS DC 93003	Gold Ore	3.4			500
NCS DC 93004	Gold Ore	52			500
NCS DC 93006	Gold Ore		57.2	43.4	1000
NCS DC 93007	Gold Ore		37.3	26.2	1000
NCS DC 93008	Gold Ore		20.9	63.1	750
NCS DC 93009	Gold Ore		2.5	7.8	500

Number	Name	Chemical Composition(Percent) Mo	SiO_2	P	Cu	Pb	As	Ca	Unit Size (in g)
NCS DC 93010	Molybdenum concentrate	40.83	22.07	0.013	0.26	0.46	0.016	0.46	50

Number	Name	Chemical Composition(Percent) TFe	FeO	SiO_2	Al_2O_3	CaO	MgO	Mn	TiO_2	P	S	Na_2O	K_2O	Unit Size (in g)
NCS DC 93023	Magnetite	61.34	29.68	12.36	0.45	0.64	(0.6)	0.056	0.064	0.036	0.494	0.012	0.018	100
NCS DC 93024	Magnetite	68.02	30.50	4.58	0.34	0.35	0.19	0.017	0.056	0.017	0.301	0.012	0.018	100
NCS DC 93025	Magnetite	64.17	31.34	9.43	0.29	0.56	0.49	0.032	0.049	0.033	0.624	0.011	0.012	100

Number	Name	Chemical Composition(Percent) SiC	Fe_2O_3	F.C.	F.Si	SiO_2	Al_2O_3	CaO	MgO	Unit Size (in g)
NCS DC 93026	Silicon Carbide	84.09	0.86	1.71	1.45	6.15	1.41	0.17	0.082	50
NCS DC 93027	Silicon Carbide	90.86	1.12	3.48	0.24	2	0.77	0.47	0.039	50
NCS DC 93028	Silicon Carbide	97.87	0.39	0.48	0.18	0.55	0.1	0.055	0.008	50

Number	Name	Chemical Composition(Percent) Ni	Fe	SiO_2	Al_2O_3	CaO	MgO	Mn	Cr	S	P	Unit Size (in g)
NCS DC 93030	Nickel iron ore	1.71	15.04	36.98	1.57	0.15	23.80	0.27	0.78	0.018	0.003	50

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition(μg/g)										Unit Size
		SiO_2	Fe_2O_3	Al_2O_3	TiO_2	CaO	MgO	TS	Na_2O	K_2O	MnO	(in g)
NCS DC 91017	Bauxite	3.16	2.01	71.14	3.04	0.75	0.090	0.031	0.022	0.477	0.0036	50
NCS DC 91018	Bauxite	8.02	6.06	64.53	2.59	0.26	0.246	0.040	0.030	0.22	0.012	50
NCS DC 91019	Bauxite	6.31	16.11	57.15	2.65	0.089	0.235	0.033	0.031	1.00	0.021	50

		P_2O_5	Ga_2O_3	ZnO
NCS DC 91017	Bauxite	0.221	0.0114	0.0018
NCS DC 91018	Bauxite	0.185	0.0106	0.0040
NCS DC 91019	Bauxite	0.077	0.0088	0.0036

Number	Name	Chemical Composition(μg/g)									Unit Size
		SiO_2	Fe_2O_3	Na_2O	K_2O	TiO_2	V_2O_5	P_2O_5	ZnO	Li_2O	CaO	(in g)
NCS DC 91020	Aluminium Hydroxide	0.0089	0.0047	0.19	0.0004	0.0013	0.00013	0.00009	0.00044	0.0002	0.0069	50
NCS DC 91021	Aluminium Hydroxide	0.02	0.0035	0.34	0.017	(0.00008)	0.00013	0.00015	0.00042	0.011	0.015	50
NCS DC 91022	Aluminium Hydroxide	0.112	0.0062	1.4	0.1	0.00054	0.00027	0.00029	0.00026	0.0027	0.017	50
NCS DC 91023	Aluminium Hydroxide	0.037	0.0037	0.55	0.03	0.0011	0.00017	0.0002	0.00041	0.0012	0.009	50
NCS DC 91024	Aluminium Hydroxide	0.083	0.0033	0.68	0.038	0.00014	0.00021	0.00028	0.00031	0.0079	0.017	50

		MgO	Cr_2O_3	L.O.I	CuO
NCS DC 91020	Aluminium Hydroxide	0.0014	(0.0001)	34.26	(<0.0001)
NCS DC 91021	Aluminium Hydroxide	0.0012	(0.0001)	34.26	
NCS DC 91022	Aluminium Hydroxide	0.0048	(0.0001)	33.7	
NCS DC 91023	Aluminium Hydroxide	0.0019	(0.0001)	34.23	
NCS DC 91024	Aluminium Hydroxide	0.0023	(0.0001)	34.14	

Number	Name	Chemical Composition(μg/g)									Unit Size
		SiO_2	Fe_2O_3	Na_2O	K_2O	TiO_2	CaO	ZnO	Li_2O	MgO	V_2O_5	(in g)
NCS DC 91025	Alumina	0.044	0.022	0.27	0.014	0.0027	0.022	0.0049	0.048	0.009	0.00034	50
NCS DC 91026	Alumina	0.025	0.0044	0.43	0.019	0.00019	0.016	0.0005	0.016	0.0024	0.00097	50
NCS DC 91027	Alumina	0.034	0.0087	0.18	0.0026	0.0035	0.02	0.00027	0.0089	0.0018	0.0019	50
NCS DC 91028	Alumina	0.047	0.0094	0.31	0.0056	0.0042	0.021	-0.00013	0.01	0.0012	0.0034	50
NCS DC 91029	Alumina	0.041	0.014	0.22	0.0077	0.0033	0.023	0.0026	0.027	0.006	0.00095	50

		P_2O_5	Cr_2O_3	L.O.I	CuO
NCS DC 91025	Alumina	0.00052	(0.0002)	0.49	(0.0002)
NCS DC 91026	Alumina	0.00022	(0.0003)	1	(<0.0001)
NCS DC 91027	Alumina	0.00095	(0.0002)	0.042	
NCS DC 91028	Alumina	0.00098	(0.0002)	0.16	
NCS DC 91029	Alumina	0.00076	(0.0002)	0.29	

Section 5 Slag, Refractory(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size
		SiO_2	MnO	P_2O_5	S	TiO_2	CaO	MgO	K_2O	Na_2O	Al_2O_3	TFe	F	Cr_2O_3	(in g)
NCS HC 11801	Blast Furnace Slag	34.31	0.34	0.012	0.97	1.52	39.02	8.12	0.47	0.41	13.83	0.411	(0.062)		60
NCS HC 11802	Blast Furnace Slag	32.25	0.51	0.0074	0.95	0.706	40.07	9.17	0.43	0.47	14.46	0.262	(0.14)		60
NCS HC 11803	Electric Furnace Slag	53.43	0.35	0.006	0.034	0.079	5.55	28.96	0.19	0.2	3.15	5.75	(0.033)	0.77	60

Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	SiO_2	Al_2O_3	MnO	FeO	S	TiO_2	MgO	CaO	TCa	P_2O_5	F	CaF	(in g)
NCS HC 13804	Converter Slag	13.38	14.91	1.78	1.86	12.33		0.42	9.28		37.64	1.02		1.41	50
NCS HC 13805	Open Hearth Slag	34.33	8.91	3.92	2.01	36.55		0.32	21.15			0.87			50
NCS HC 13806	Electric Furnace Slag	13.11	21.35	4.00	13.16	15.25		0.18	15.18		16.22	0.125	0.17		50
NCS HC 13807	Electric Furnace Slag	2.26	24.77	8.72	2.39	1.89		0.25	15.60		28.87	0.030	0.82		50
NCS HC 13811	Open Hearth Slag	29.44	23.35	4.47	2.32	35.40	0.050	0.51	13.19	18.11		0.91			50

Number	Name	Chemical Composition(Percent)										Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	P_2O_5	S	FeO	(in g)
NCS HC 13825	Blast Furnace Slag	0.78	30.95	7.84	36.50	20.77	0.077	0.36	0.049	0.535	0.60	50

Number	Name	Chemical Composition(Percent)									Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	K_2O	Na_2O	TiO_2	P	(in g)
NCS HC 14807	Mullite	51.43	43.62	1.14	0.23	0.21	1.62	0.46	0.65	0.062	60
NCS HC 14808	Mullite	37.41	57.47	0.46	0.15	0.14	1.69	0.46	1.45	0.022	60
NCS HC 14809	Mullite	21.81	72.39	0.93	0.19	0.42	0.24	0.16	3.64	0.043	60

Number	Name	Chemical Composition(Percent)												Unit Size
		TFe	SiO_2	Al_2O_3	MnO	FeO	S	TiO_2	MgO	CaO	K_2O	Na_2O	P	(in g)
NCS HC 15803	Blast Furnace Slag	1.76	35.00	13.93	0.175	2.16	0.98	0.51	5.61	39.66	0.42	0.26	0.0066	80

Number	Name	Chemical Composition(Percent)						Unit Size
		C	SiO_2	Mn	P	S	Fe	(in g)
NCS HC 15804	Manganese-rich slag	0.014	25.16	44.42	0.0032	0.32	0.22	100

Number	Name	Chemical Composition(Percent)										Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	P_2O_5	S	TCa	(in g)
NCS HC 18806	Blast Furnace Slag	0.60	32.75	14.11	38.84	8.46	0.30	2.63	0.008	1.13		100
NCS HC 18807	Blast Furnace Slag	1.10	33.04	16.48	35.77	8.77	0.74	0.73	0.009	0.90		100
NCS HC 18808	Converter slag	24.55	13.44	1.25		11.66	3.34	2.22	2.00	0.13	24.10	100
NCS HC 18809	Slag	0.30	16.50	21.94		6.55	0.18	1.03	0.024	0.69	35.21	100

Number	Name	Chemical Composition(Percent)											Unit Size
		TFe	SiO_2	Al_2O_3	MnO	P	S	TiO_2	MgO	CaO	V_2O_5	K_2O	Na_2O	(in g)
NCS HC 19805	V Ti Blast Furnace Slag	0.80	22.67	13.85	0.74		0.234		9.05	25.57	0.44			100
NCS HC 19805a	V Ti Blast Furnace Slag	2.31	26.30	14.46	0.757	0.0060	0.390	19.98	8.82	25.37	0.347	0.740	0.258	100
NCS HC 19805b	V Ti Blast Furnace Slag	1.28	25.41	13.55	0.607	0.0036	0.477	22.35	7.48	27.28	0.272			100

Number	Name	Chemical Composition(Percent)											Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	S	V_2O_5	P	Cr_2O_3	Mfe	(in g)
NCS HC 19810	V Slag	31.26	18.25	1.25	2.04	1.9	10.67	10.02	0.052	17.2	0.046	0.93	0.22	80
NCS HC 19812	V Slag	32.16	18.26	2.05	3.19	1.83	9.05	9.15	0.066	15.79	0.064	0.94	0.24	80

Number	Name	Chemical Composition(Percent)											Unit Size
		TFe	SiO_2	Al_2O_3	CaO	MgO	MnO	P	S	V_2O_5	TiO_2	Cr_2O_3	(in g)
NCS HC 19813	High-Titanium Slag	6.43	5.50	2.64	1.52	5.28	1.08		0.118		77.66		100
NCS HC 19814	High-Titanium Slag	1.08	4.13	3.04	1.83	7.27	0.74		0.247		84.94		100
NCS HC 19815	High-Titanium Slag	1.02	1.92	2.62	0.287	2.67	1.21		0.166		94.69		100
NCS HC 19817	V Slag	30.48	16.90	3.84	1.96	3.34	6.87	0.054	0.054	16.18	10.87	2.40	100
NCS HC 19818	V Slag	28.96	15.93	4.05	1.57	3.28	7.80	0.037	0.053	17.69	11.53	3.03	100
NCS HC 19819	V Slag	30.08	15.79	4.15	1.79	3.41	8.36	0.026	0.201	2.20	11.37	2.60	100
NCS HC 19820	V Slag	32.30	16.47	3.98	2.12	3.37	7.36	0.040	0.195	1.78	10.80	2.00	100
NCS HC 19821	V Ti Slag	0.695	1.13	56.53	9.01	27.14	0.081	0.013	0.013	3.18			100
NCS HC 19822	V Ti Slag	0.442	0.570	65.99	10.20	18.20	0.060	0.006	0.013	3.41			100

Number	Name	Chemical Composition(Percent)								Unit Size
		Mn	Fe	P	SiO_2	Al_2O_3	CaO	MgO	S	(in g)
NCS HC 25801	Rich Slag-Manganese	35.31	1.77	0.56	33.47	1.91	7.79	3.99	0.66	50

Section 5 Slag, Refractory(Powder)

Number	Name	Chemical Composition(Percent)											Unit Size
		SiO_2	TCa	Na_2O	Al_2O_3	MgO	FC	TC	F*				(in g)
NCS HC 26801	Continuous Casting mold powder	18.96	12.89	9.86	16.99	1.39	18.14	19.97	4.47				50
NCS HC 26803	Continuous Casting mold powder	30.1	30.78	0.52	2.14	1.3	4.06	5.98	10.59				50
NCS HC 26804	Continuous Casting mold powder	34.95	19.13	4.99	5.3	0.78	14.49	15.86	5.15				50
NCS HC 26805	Continuous Casting mold powder	41.31	21.46	4.07	6.93	3.26	1.57	3.06	4.79				50

Number	Name	Chemical Composition(Percent)										Unit Size
		SiO_2	Al_2O_3	CaO	MgO	MnO	TiO_2	TFe	S	P_2O_5	Na_2O	K_2O	(in g)
NCS HC 28801	Blast Furnace Slag	34.65	13.83	37.95	9.66	0.382	0.616	0.253	1.03	0.0072	0.40	0.58	60

Number	Name	Chemical Composition(Percent)									Unit Size
		TFe	CaO	SiO_2	MgO	Al_2O_3	MnO	TiO_2	P_2O_5	S	(in g)
NCS HC 28803	Blast Furnace Slag	0.92	36.26	31.82	9.92	16.85	0.78	0.52	0.018	0.75	60
NCS HC 28804	Blast Furnace Slag	2.01	37.13	31.18	7.52	16.26	1.23	0.58	0.043	0.79	60
NCS HC 28805	Blast Furnace Slag	0.76	39.20	34.91	9.27	12.80	0.090	0.42	0.012	0.90	60

Number	Name	Chemical Composition(Percent)							Unit Size
		S	SiO_2	CaO	TCa	MgO	Al_2O_3	TFe	(in g)
NCS HC 28806	Slag	1.15	30.36	37.53	-	10.8	16.92	0.211	50
NCS HC 28807	Slag	0.134	14.54	-	32.32	7.27	3.67	13.54	50
NCS HC 28808	Slag	0.885	29.62	35.71	-	10.92	18.05	0.48	50

	K_2O	Na_2O	MnO	P_2O_5	TiO_2	FeO	F
NCS HC 28806 Slag	0.46	0.39	0.414	0.013	0.762	0.35	-
NCS HC 28807 Slag	0.033	0.057	4.06	1.72	1.13	10.44	0.76
NCS HC 28808 Slag	0.42	0.36	0.542	0.027	0.753	0.55	-

Number	Name	Chemical Composition(Percent)								Unit Size
		TFe	TCa	SiO_2	MgO	Al_2O_3	MnO	TiO_2	P_2O_5	S	(in g)
NCS HC 28809	Converter Slag	13.50	32.65	15.40	7.75	4.38	2.30	1.02	1.67	0.195	60
NCS HC 28810	Converter Slag	16.52	33.35	14.45	7.1	1.76	2.78	1.25	1.60	0.120	60

Number	Name	Chemical Composition(Percent)												Unit Size
		Al_2O_3	CaO	MgO	P_2O_5	Fe_2O_3	TiO_2	MnO	SiO_2	K_2O	Na_2O	L.O.L	C	(in g)
NCS HC 28811	Bauxite	46.52	0.69	0.37	0.35	14.01	1.36	0.13	22.96	0.25	0.1	12.75	0.2	50
NCS HC 28812	Bauxite	60.41	0.51	0.26	0.3	9.69	2.22	0.082	17.82	0.22	0.07	7.96	0.14	50
NCS HC 28813	Bauxite	70.28	0.37	0.18	0.25	6.64	2.85	0.053	14.2	0.2	0.051	4.57	0.099	50
NCS HC 28814	Bauxite	83.07	0.22	0.088	0.18	2.71	3.64	0.011	9.69	0.17	0.022	0.15	0.05	50
NCS HC 28815	Bauxite	88.55	0.15	0.073	0.23	1.75	3.69			0.11	0.017		0.018	50

Number	Name	Chemical Composition(Percent)													Unit Size
		TFe	SiO_2	CaO	MgO	Al_2O_3	FeO	MnO	TiO_2	S	P_2O_5	K_2O	Na_2O_3	Cr_2O_3	(in g)
NCS HC 28816	Coverter Slag	18.66	12.8	45.02	8.23	2.07	14.24	2.75	0.7	0.12	1.99	0.033	0.13	0.076	50
NCS HC 28817	Coverter Slag	19.96	17.71	36.43	8.51	1.64	14.49	3.46	1.04	0.034	1.95	0.083	0.076	0.063	50
NCS HC 28818	Coverter Slag	21.04	18.81	37.31	5.23	1.56	17.01	3.79	1.11	0.034	1.86	0.082	0.046	0.079	50
NCS HC 28819	Coverter Slag	16.84	22.21	37.01	6.89	1.93	14.02	5.02	0.97	0.056	2.7	0.087	0.046	0.105	50
NCS HC 28820	Coverter Slag	16.56	12.35	45.44	6.91	1.52	13.87	2.29	0.65	0.12	2.28	0.032	0.091	0.089	50
NCS HC 28821	Coverter Slag	15.33	14.17	44.45	7.01	2.76	11.43	2.4	0.65	0.17	2.21	0.1	0.13	0.12	50

	V_2O_5	As	Pb	Zn	F	Cd
NCS HC 28816 Coverter Slag	0.122	0.0002	0.0002	0.0011	0.12	0.0001*
NCS HC 28817 Coverter Slag	0.346	0.0003	0.0003	0.0014	0.059	0.0001*
NCS HC 28818 Coverter Slag	0.35	0.0003	0.0003	0.0014	0.043	0.0001*
NCS HC 28819 Coverter Slag	0.2	0.0001	0.0003	0.0003	0.16	0.0001*
NCS HC 28820 Coverter Slag	0.229	0.0002	0.0035	0.003	0.18	0.0001*
NCS HC 28821 Coverter Slag	0.186	0.0003	0.0074	0.01	0.39	0.0001*

Number	Name	Chemical Composition(Percent)					Unit Size
		FeO	SiO_2	Al_2O_3	CaO	Sn	(in g)
NCS HC 35801	Sn Slag	46.18	19.61	7.36	4.12	11.96	70
NCS HC 35802	Sn Slag	22.22	37.49	9.32	19.76	2.32	70

Section 6 Gas in Metal

Number	Name	Chemical Composition(Percent) C	S	Unit Size (in g or pellet)	Form
NCS NS 11003	C&S in Steel	0.322	0.020	100	chip
NCS NS 11011	C&S in Steel	0.235	0.039	100	chip
NCS NS 11012	Pure Iron	0.0016	0.0063	100	chip
NCS NS 11013	Pure Iron	0.0066	0.0056	150	chip
NCS NS 11026	C&S in Steel	0.041	0.0039	100	chip
NCS NS 11039	C&S in Steel	0.0051	0.0058	100	chip
NCS NS 11040	C&S in Steel	0.019	0.0116	100	chip
NCS NS 11041	C&S in Steel	0.004	0.0053	100	chip

Number	Name	Chemical Composition(μg/g) N	O	Unit Size (in g)	Form
NCS NS 11037	O, N, in steel	1090	66	50	D4.0×5.0mm
NCS NS 11030	O in Copper		2.8		D6.0×110mm
NCS NS 11031	O in Copper		10	20	D4.8×6.5mm
NCS NS 11032	O in Copper		18	20	D4.8×6.5mm
NCS NS 11033	O in Copper		135	20	D4.8×6.5mm
NCS NS 11035	O in Copper		479	20	D4.8×6.5mm
NCS NS 11036	O in Copper		208	20	D4.8×6.5mm
NCS NS 11038	O in Copper		376	25	D4.8×6.5mm

Number	Name	Chemical Composition(Percent) O(%)	N(%)	H(%)	Sample weight	Sample size (mm)	Unit Size (in g)	Form
NCS NS 11043	O, N in steel	0.0041	0.0381	0.00005	0.5g	D 6.35	50 pieces	Ball

Number	Name	Chemical Composition(Percent) O	N	H	Sample Weight(g)	Sample Size(mm)	Sample form	Unit Size (in g)	Form
NCS NS 11044	O, N, H in Stainless steel	0.0025	0.058	0.00020	1.0±0.1	D6.35		50	Ball
NCS NS 11045	O, N, H in Stainless steel	0.0048	0.026	0.00020	1.0±0.1	D6.35		50	Ball
NCS NS 11046	N in Stainless steel		0.0067		1.0±0.1	D6.35		50	Ball
NCS NS 11047	N in Stainless steel		0.2076		0.50g/piece	D4.0x5.0	stick	50	

Number	Name	Chemical Composition(Percent) C	S	Unit Size (in g)	Form
NCS NS 11048	C, S in steel	0.067	0.058	100	Chip
NCS NS 11049	C, S in steel	0.116	0.002	100	Chip

Number	Name	Chemical Composition(Percent) O (%)	N (%)	Ball Weight(g)	Unit Size (in g)	Form
NCS NS11050	O, N in steel	0.012	0.0019	1	50	Ball
NCS NS11051	O, N in steel	0.0012	0.0045	1	50	Ball
NCS NS11052	O, N in steel	0.0062	0.00075	1	50	Ball
NCS NS11053	O, N in steel	0.0022	0.0032	1	50	Ball
NCS NS11054	O, N in steel	0.0023	0.0096	1	50	Ball
NCS NS11055	O, N in steel	0.00058	0.0028	1	50	Ball
NCS NS11056	O, N in steel	0.0107	0.142	1	50	Ball

Number	Name	Chemical Composition(Percent) C	S	Unit Size (in g)	Form
NCS NS 13001	C&S in Steel	2.51	0.020	100	chip
NCS NS 13005	C&S in Steel	0.485	0.024	100	chip
NCS NS 13008	C&S in Steel	0.644	0.068	100	chip

Number	Name	Chemical Composition(Percent) N	Unit Size (gorpellet)	Form
NCS NS 13009	N in Steel	0.0078	100	chip
NCS NS 13010	N in Steel	0.0096	100	chip
NCS NS 13011	N in Steel	0.0099	100	chip
NCS NS 13012	N in Steel	0.012	100	chip

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Number	Name	Chemical Composition(Percent) C	S			Unit Size (in g)	Form
NCS NS 13020	C in Steel	0.1				100	chip
NCS NS 13021	C in Steel	0.21				100	chip
NCS NS 13022	C in Steel	0.37				100	chip
NCS NS 13023	C in Steel	0.48				100	chip
NCS NS 13024	C in Steel	0.59				100	chip
NCS NS 13025	C in Steel	0.725				100	chip
NCS NS 13026	C in Steel	0.81				100	chip
NCS NS 13027	S in Steel		0.0105			70	chip
NCS NS 13028	S in Steel		0.017			70	chip
NCS NS 13029	S in Steel		0.037			70	chip
NCS NS 13032	S in Steel		0.096			70	chip
Number	Name	Chemical Composition(Percent) N				Unit Size (in g or)	Form
NCS NS 13033	N in Steel	0.0043				100	chip
NCS NS 13034	N in Steel	0.0044				100	chip
NCS NS 13036	N in Steel	0.0064				100	chip
NCS NS 13037	N in Steel	0.0067				100	chip
Number	Name	Chemical Composition(Percent) N				Unit Size (in g or)	Form
NCS NS 14001	N in Steel	0.0081				100	chip
NCS NS 14002	N in Steel	0.0040				100	chip
NCS NS 14003	N in Steel	0.0048				100	chip
Number	Name	Chemical Composition C(%)	S(%)			Unit Size (in g)	Form
NCS NS 16001	C.S in pig iron	2.02	0.0014			100	chip
NCS NS 16002	C.S in pig iron	3.60	0.0186			100	chip
Number	Name	Chemical Composition [H] ppm	Weight of ball (g)			Unit Size (in g)	Form
NCS NS 20001a	H in steel	6.00	1.034			20	ball
NCS NS 20025b	H in steel	1.1	1.034			20	ball
Number	Name	Chemical Composition O ppm	N ppm			Unit Size (in g)	Form
NCS NS 20035b	O, N in steel	22	61			50	ball
Number	Name	Chemical Composition(Percent) O(%)	N(%)	Mass of the ball (g)	Diameter of the ball(mm)	Unit Size (in g)	Form
NCS NS 20048	O, N in steel	0.0019	0.0070	1.056	6.35	50	ball
NCS NS 20049	O, N in steel	0.0058	0.0040	1.056	6.35	50	ball
NCS NS 20050	O, N in steel	0.0166	0.0026	1.047	6.35	50	ball
Number	Name	Chemical Composition O	N			Unit Size (in g)	Form
NCS NS 18017	O, N in Steel	0.0037	0.0134			50	
NCS NS 18018	O, N in Steel	0.0043	0.0136			50	
NCS NS 18019	O, N in Steel		0.0135			50	
NCS NS 18020	O, N in Steel	0.0029	0.0018			50	
NCS NS 18021	O, N in pure iron powder	0.188	0.0077			25	
NCS NS 18022	O, N in pure iron powder	0.205	0.0029			25	
NCS NS 18023	O, N in pure iron powder	0.543	(0.0065)			25	

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Number	Name	Chemical Composition(Percent) C	S	Unit Size (in g)	Form
NCS NS 18002	C, S in Steel	0.031	0.0084	100	chip
NCS NS 18003	C, S in Steel	0.082	0.035	100	chip
NCS NS 18004	C, S in Steel	0.171	0.0102	100	chip
NCS NS 18005	C, S in Steel	0.204	0.022	100	chip
NCS NS 18006	C, S in Steel	0.282	0.033	100	chip
NCS NS 18007	C, S in Steel	0.312	0.026	100	chip
NCS NS 18008	C, S in Steel	0.376	0.028	100	chip
NCS NS 18009	C, S in Steel	0.415	0.020	100	chip
NCS NS 18010	C, S in Steel	0.455	0.019	100	chip
NCS NS 18011	C, S in Steel	0.543	0.012	100	chip
NCS NS 18012	C, S in Steel	0.610	0.0095	100	chip
NCS NS 18013	C, S in Steel	0.890	0.022	100	chip
NCS NS 18014	C, S in Steel	0.990	0.0041	100	chip
NCS NS 18015	C, S in Steel	1.09	0.018	100	chip
NCS NS 18016	C, S in Steel	1.19	0.0080	100	chip
NCS NS 18024	C, S in Steel	0.121	0.013	100	
NCS NS 18025	C, S in Steel	0.15	0.013	100	
NCS NS 18026	C, S in Steel	0.357	0.013	100	
NCS NS 18027	C, S in Steel	0.586	0.039	100	
NCS NS 18028	C, S in Steel	0.755	0.0098	100	
NCS NS 18029	C, S in Steel	1.01	0.02	100	

Number	Name	Chemical Composition(Percent) O	N	Ball weight (g)	Ball diameter(mm)	Unit Size (in g)	Form
NCS NS 21003b	O and N in Bearing Steel	0.0012	0.0055	1.0673±0.0010	6.26	50	ball
NCS NS 21004a	O and N in Bearing Steel	0.0022	0.0044	1.0673±0.0010	6.26	50	ball
NCS NS 21004b	O, N in steel	0.0025	0.0038	1.0		50	

Number	Name	Chemical Composition(Percent) O	N	H	Unit Size (in g)	Form
NCS NS 21012-1	O, N, H in Titanium Alloy	0.076	0.0090	0.0010		bar
NCS NS 21012-2	O, N, H in Titanium Alloy	0.096	0.0052	0.0009		bar

Number	Name	Chemical Composition(Percent) N	Unit Size (in g)	Form
NCS NS 21013-1	N in Steel	0.075	100	chip
NCS NS 21013-2	N in Steel	0.175	100	chip
NCS NS 21013-3	N in Steel	0.222	100	chip
NCS NS 21013-4	N in Steel	0.313	100	chip
NCS NS 21013-5	N in Steel	0.540	100	chip
NCS NS 21013-6	N in Steel	0.66	100	chip

Number	Name	Chemical Composition(Percent) C	S	Unit Size (in g)	Form
NCS NS 21014	C, S in steel	0.0021	0.0052	100	
NCS NS 21014a	C, S in steel	0.0023	0.0052	100	
NCS NS 21015	C, S in steel	0.0010	0.0015	100	
NCS NS 21015a	C, S in steel	0.0012	0.0017	100	

Number	Name	Chemical Composition [H] ppm	Unit Size (in g)	Form
NCS NS 20042	H in stainless steel	3.55	20	ball

Number	Name	Chemical Composition(Percent) O	N	H	Unit Size	Form
NCS NS 20043-1	Titanium alloy	0.18	0.014	0.0018	100×3×2mm	
NCS NS 20043-2	Titanium alloy	0.31	0.018	0.0014	100×3×2mm	
NCS NS 20043-3	Titanium alloy	0.13	0.0093	0.0010	100×3×2mm	
NCS NS 20043-4	Titanium alloy	0.16	0.0089	0.00295	100×3×2mm	

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Number	Name	Chemical Composition(μg/g) O	N	Unit Size (in g)	Form
NCS NS 21002	O N in Stainless Steel	8.4±0.6	57±1	50 Pieces	ball
NCS NS 21006	O N in G Cr15	94.3	264	50 Pieces	ball

Number	Name	Chemical Composition(Percent) C	S	Unit Size (in g)	Form
NCS NS 28004	C S in Steel	0.416	0.022	100	chip
NCS NS 28005	C S in Steel	0.462	0.0096	100	chip

Number	Name	Chemical Composition(Percent) C	S	O	N	mass(g/p)	Unit Size (in g)	Form
NCS NS 28021	C S in Steel	0.16	0.028				100	chip
NCS NS 28025	C S in Steel	0.330	0.024				100	chip
NCS NS 28027	C S in Steel	0.523	0.017				100	chip
NCS NS 28029	C S in Steel	0.465	0.020				100	chip
NCS NS 28031	C S in Steel	0.985	0.012				100	chip
NCS NS 28039	C S in Steel	3.63	0.056				100	
NCS NS 28040	O, N in steel			0.0125	0.0021	1	50	
NCS NS 28041	O, N in steel			0.0015	0.0042	1	50	

Number	Name	Chemical Composition(μg/g) [H]	Unit Size (in g)	Form
NCS NS 35001	H in steel	2.9	20 pieces	
NCS NS 35001a	H in steel	3.0	20 pieces	
NCS NS 35002	H in steel	7.2	20 pieces	
NCS NS 35003	H in steel	0.8	20 pieces	
NCS NS 35003a	H in steel	0.9	20 pieces	
NCS NS 35003b	H in steel	1.3	20 pieces	
NCS NS 35004	H in steel	1.8	20 pieces	
NCS NS 35005	H in steel	2.2	20 pieces	
NCS NS 35006	H in steel	4.1	20 pieces	

Number	Name	Chemical Composition(μg/g) O	N	H	Unit Size (in g)	Form
NCS NS 35007	O, N, H in steel	33	305	5.8	20 pieces	
NCS NS 35008	O, N, H in steel	38	330	1.6	20 pieces	

Number	Name	Chemical Composition(μg/g) [H]	Unit Size (in g)	Form
NCS NS35009	H in steel	0.5	20 pieces	
NCS NS35009a	H in steel	0.6	20 pieces	

Number	Name	Chemical Composition(Percent) O(%)	N(%)	Unit Size (in g)	Form
NCS NS 41007	O N in steel	0.0029	0.0037	20 pieces	

Number	Name	Chemical Composition(Percent) O	N	mass(g/p)	Unit Size (in g)	Form
NCS NS 28036	O and N in Steel	0.0065	0.0067	1	50	ball
NCS NS 28037	O and N in Steel	0.0035	0.0081	1	50	ball
NCS NS 28037a	O and N in Steel	0.0043	0.0100	1	50	ball
NCS NS 28038	O and N in Steel	0.0037	0.0253	0.5	50	ball

Number	Name	Chemical Composition(Percent) O	N	Unit Size (in g)
NCS NS 57101	O N in titanium Alloy	0.045	0.011	0.1g/piece,100pieces/unit
NCS NS 57102	O N in titanium Alloy	0.073	0.007	0.1g/piece,100pieces/unit
NCS NS 57103	O N in titanium Alloy	0.121	0.017	0.1g/piece,100pieces/unit
NCS NS 57104	O N in titanium Alloy	0.309	0.040	0.1g/piece,100pieces/unit

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Number	Name	Chemical Composition(Percent)		Unit Size (in g)	Form
		C	S		
NCS NS 93004	C. S in Steel	0.293	0.040	100	chip
NCS NS 93005	C. S in Steel	0.357	0.018	100	chip
NCS NS 93006	C. S in Steel	0.428	0.032	100	chip
NCS NS 93008	C. S in Steel	0.251	0.022	100	chip
NCS NS 93009	C. S in Steel	0.310	0.031	100	chip
NCS NS 93011	C. S in Steel	0.512	0.0095	100	chip
NCS NS 93012	C. S in Steel	0.375	0.046	100	chip
NCS NS 93014	C. S in Steel	0.195	0.030	100	chip

Number	Name	Chemical Composition(Percent)		Unit Size (in g)	Form
		O (%)	N (%)		
NCS NS93017	O, N in steel	0.00049	0.0042	50 pieces	
NCS NS93018	O, N in steel	0.0117	0.0023	50 pieces	
NCS NS93019	O, N in steel	0.0021	0.0035	50 pieces	
NCS NS93020	O, N in steel	0.0029	0.0036	50 pieces	
NCS NS93021	O, N in steel	0.0160	0.0017	50 pieces	
NCS NS93022	O, N in steel	0.0130	0.0038	50 pieces	
NCS NS93023	O, N in steel	0.0078	0.0023	50 pieces	
NCS NS93024	O, N in steel	0.0011	0.0055	50 pieces	
NCS NS93025	O, N in steel	0.0157	0.0018	10 pieces	
NCS NS93026	O, N in steel	0.0011	0.0055	10 pieces	
NCS NS93027	O, N in steel	0.0120	0.0022	50 pieces	

Number	Name	Chemical Composition		Unit Size (in g)	Form
		[H] ppm	N(%)		
NCS NS 57011a	H in Titanium alloy	85		10	stick
NCS NS 57012	N in Titanium Alloy		0.013	10	stick

Section 7 Nonferrous Metal(Chip)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size
		Cu	Sn	Zn	Mg	P	Ni	Cr	Mn	Fe	Ti	Si	(in g)
NCS HC 28933	Low Tin Aluminum Alloy	2.53	7.05				1.88			0.32		0.56	75
NCS HC 28934	Low Tin Aluminum Alloy	1.52	7.40				0.77			0.31		3.83	75
NCS HC 28938	ZL202	9.91		0.23	0.076				0.192	0.575		0.50	75
NCS HC 28939	ZL203	3.91		0.235					0.187	0.57		0.52	75
NCS HC 28942	LD6	2.28		0.053	0.65		0.0048	0.037	0.423	0.397	0.076	0.476	50
NCS HC 28944	LD8	2.29		0.065	1.33		1.38		0.081	1.17	0.055	0.99	100
NCS HC 28945	LD9	3.41		0.073	0.60		1.73		0.22	0.70	0.024	0.575	50
NCS HC 28951	LY16	7.44		0.166	0.076		0.032		0.63	0.247	0.146	0.196	100
NCS HC 28959	AL-2	0.073							0.0050	0.35			90
NCS HC 28960	AL-1	0.0082							0.0020	0.20			70
NCS HC 28961	AL-3	0.115						0.010	0.79				70
NCS HC 28962	AL-100	0.0033						0.0014	0.086				50
NCS HC 28963	AL-0	0.011							0.0029	0.18			70
NCS HC 28966	ZL103A	1.79		0.200	0.345	0.012		0.32	0.23				75
NCS HC 28967	ZL104A	0.300		0.242	0.280			0.35	0.175				75
NCS HC 28968	ZL105A	1.62		0.264	0.425		0.099		0.164	0.22			50
NCS HC 28969	ZL106A	1.74		0.213	0.27				0.362	0.28			75
NCS HC 28970	ZL108A	1.42		0.157	0.39		0.027		0.378	0.275			100
NCS HC 28971	ZL108+RE	1.88		0.23	0.56				0.60	0.224			100
NCS HC 28973	ZL108A+RE	1.71		0.593	0.697		0.0245		0.44	0.39			100
NCS HC 28974	ZL107	3.73		0.385	0.071		0.048		0.062	0.51	0.005	7.03	50

		Ti	Si	RE
NCS HC 28959	AL-2	0.0015	0.52	0.075
NCS HC 28960	AL-1	0.0015	0.20	0.143
NCS HC 28961	AL-3	0.0025	0.79	0.163
NCS HC 28962	AL-00	0.0014	0.0088	0.48
NCS HC 28963	AL-0	0.0022	0.15	0.92
NCS HC 28966	ZL103A	0.0032	5.96	
NCS HC 28967	ZL104A		9.38	
NCS HC 28968	ZL105A		5.68	
NCS HC 28969	ZL106A		8.35	
NCS HC 28970	ZL108A		10.14	
NCS HC 28971	ZL108+RE	0.026	9.74	0.72
NCS HC 28973	ZL108A+RE	0.0105	11.70	1.06

Number	Name	Chemical Composition(Percent)							Unit Size
		Cu	Zn	Mg	Ni	As	Ti	SI	(in g)
NCS HC 41913	LD7	2.18	0.0094	1.58	1.15	1.22	0.12	0.094	100
NCS HC 41915	Al-00	0.0034				0.106		0.099	100
NCS HC 41916	LD2	1.07		0.758		0.332	0.080	1.05	100
NCS HC 41917	ZL103	2.55	0.097	0.55		0.33		5.66	100
NCS HC 41918	ZL108	1.29	0.2	0.74		0.23	0.01	11.87	100

Section 7 Nonferrous Metal(Chip)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)												Unit Size
		Cu		Sn	Pb	Zn	Mg	Ni	Mn	Fe	Ti	Si	Be	Zr	(in g)
NCS HC 50920	Aluminum Alloy	1.14		0.0071	0.038	0.084	1.44	1.04	0.38	0.19		12.74			100
NCS HC 50922	Aluminum Alloy						0.028		1.53	0.282	0.117	0.216			100
NCS HC 50923	Aluminum Alloy	4.43		0.0075	0.044	0.152	0.028		0.094	0.662	0.154	1.22		0.101	100
NCS HC 50924	Aluminum Alloy	0.114				0.141	4.96		0.274	0.392	0.142	1.22			100
NCS HC 50928	Aluminum Alloy	3.99		0.0096	0.041	0.19	0.085		0.23	0.26		7.21			100
NCS HC 50931	Aluminum Alloy	0.28				12.80	0.14		0.26	0.27		6.93			100
NCS HC 50932	Aluminum Alloy	1.45	margin	0.016	0.042	0.18	0.58		0.33	0.20	0.12	5.12	0.037		100
NCS HC 50933	Aluminum Alloy	1.57	margin	0.016	0.043	0.12	0.60		0.25	0.26	0.1	9.57	0.17		100
NCS HC 50934	Aluminum Alloy	0.096	margin	0.0085	0.043	1.62	0.60		0.088	0.18		5.87			100
NCS HC 50937	Aluminum Alloy	3.98				0.175	1.49			0.482		0.673			100

Number	Name	Chemical Composition(Percent)						Unit Size
		Cu	Sn	Fe	As	Sb	Bi	(in g)
NCS HC 50942	Aluminum Alloy	0.376	9.81	0.0023	0.068	14.88	0.072	100

Number	Name	Chemical Composition(Percent)										Unit Size
		Cu	Zn	Mg	Ni	Cr	Mn	Fe	Sb	Ti	Si	(in g)
NCS HC 53902	Aluminum Alloy	0.095	0.10	0.02			1.38	0.38			0.18	50
NCS HC 53906	Aluminum Alloy	4.12	0.25	0.52	0.083		0.35	0.44		0.051	0.60	100
NCS HC 53907	Aluminum Alloy	6.31	0.11	0.086	0.094	0.19	0.39	0.26		0.038	0.45	100
NCS HC 53908	Aluminum Alloy	0.098	0.08	2.30	0.048		0.29	0.55		0.096	0.40	100
NCS HC 53913	Aluminum Alloy	0.11	0.16	0.055	0.0061		0.080	0.49		0.012	5.55	100
NCS HC 53914	Aluminum Alloy	0.015	0.096	0.010	0.0048		0.20	0.48		0.11	11.75	100
NCS HC 53916	Aluminum Alloy	1.52	6.17	2.44		0.17	0.39	0.23			0.29	100
NCS HC 53917	Aluminum Alloy	0.21	0.053	4.98	0.011		0.16	0.51		0.0098	0.40	100

Number	Name	Chemical Composition(Percent)							Unit Size
		Si	Zr	Fe	Cu	Zn	Ti	Mg	(in g)
NCS HC 57903	Aluminum Alloy	0.0069	0.127	0.141	2.30	6.21	0.0196	2.21	50

Section 7 Nonferrous Metal(Chip)
2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)							Unit Size (in g)
		Cu	Al	Sn	Zn	P	Fe	Si	
NCS HC 28901	H68	68.55			31.33	0.023	0.0105		100
NCS HC 28907	Q Sn4-0.3			4.02		0.322			100
NCS HC 28910	Q Sn7-0.2	92.62		7.11		0.185			100
NCS HC 28911	Q Sn6.5-0.1			6.25		0.21			100
NCS HC 28912	Q Sn6.5-0.1			6.44		0.137			100
NCS HC 28913	Q Sn6.5-0.4			6.35		0.137			100
NCS HC 28920	ZQ Al9-2		8.29				0.14	2.09	100
NCS HC 28922	ZQ A10-3-1.5		9.17				2.98	1.64	100
NCS HC 28927	H68	68.52			31.4	0.0023	0.0105		100
NCS HC 28931	Tin Bronze			6.54		0.136			100

Number	Name	Chemical Composition(Percent)										Unit Size (in g)
		Cu	Sn	Pb	Zn	S	P	Ni	Fe	Sb	Bi	Si	
NCS HC 41904	ZQ Sn3-7-5-1	81.45	4.08	6.16	6.96		1.07						100
NCS HC 41905	ZQ Sn17-4-4	72.25	4.24	17.62	5.37								100
NCS HC 41907	H PB59-1	59.10		1.69		0.022			0.337	0.010	0.0039		100
NCS HC 41909	Tin-Phosphor Bronze	93.72	5.79				0.423						150
NCS HC 41910	Tin-Phosphor Bronze	92.85	6.82				0.238						100
NCS HC 41911	Tin-Phosphor Bronze	91.73	7.93				0.106						100
NCS HC 41912	Tin-Phosphor Bronze	93.70	5.79	0.021			0.372		0.011	0.006		0.001	100
NCS HC 41924	Phosphor Bronze	92.85	6.82				0.238						150
NCS HC 41925	Phosphor Bronze	91.73	7.92				0.106						150
NCS HC 41926	Phosphor Bronze	93.70	5.79	0.021			0.372		0.011	0.0058		0.0012	150

Number	Name	Chemical Composition(Percent)										Unit Size (in g)
		Cu	Al	Sn	Pb	Zn	P	Mn	Fe	As	Sb	Bi	
NCS HC 43909	Q Al9-2		9.80					2.46					80
NCS HC 43914	H Sn62-1	61.67		0.89	0.089		0.0070		0.090		0.0048	0.0018	60
NCS HC 43918	H Sn70-1A	70.04		0.91						0.039			100
NCS HC 43919	H Al177-2A	77.39	2.04							0.044			100
NCS HC 43925	Q Sn6-6-2			5.94	2.90	6.06							50

Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Cu	Al	Sn	Pb	Zn	Mg	P	Ni	Mn	Fe	As	Sb	Bi	
NCS HC 45913	H Pb59-1	58.87			1.30						0.022				100
NCS HC 45914	H Te59-1	59.22	0.46	0.54						0.73	0.88				100
NCS HC 45915	Tin Bronze			3.55	1.97	3.92									100
NCS HC 45916	Iron Bronze	58.00	0.26	0.54	0.19			0.0076		0.73	0.89		0.0091	0.0024	50
NCS HC 45918	Aluminum Bronze				0.019	20.81	0.033	0.0048	14.87	0.32	0.47	0.0098	0.0020	0.0019	100

		Si
NCS HC 45918	Aluminum Bronze	0.146

Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		Cu	Al	Sn	Pb	P	Fe	Sb	Bi	
NCS HC 50902	Copper Alloy	77.05	2.35		0.054		0.046	0.0043	0.0020	100
NCS HC 50904	Copper Alloy	57.54			0.78	0.012	0.78	0.0082	0.0020	100
NCS HC 50907	Copper Alloy	90.31		0.50	0.035	0.0064	0.044	0.0043	0.0020	100
NCS HC 50911	74-3	74.54			2.82	0.0069	0.11	0.0070	0.0018	100

Number	Name	Chemical Composition(Percent)			Unit Size (in g)
		Cu	Sn	Sb	
NCS HC 28979	Ch Pb Sb 14-5	0.38	5.14	14.20	100

Section 7 Nonferrous Metal(Chip)
3)Lead Base Alloy

Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		Cu	Sn	Pb	Sb	Bi				
NCS HC 28986	Pb60 Sn40	0.027	40.54	59.02	0.354	0.056				100
NCS HC 28987	Pb90 Sn10		10.12	89.84						100

Number	Name	Chemical Composition(Percent)								Unit Size (in g)
		Cu	Al	Sn	Zn	Fe	As	Sb	Bi	
NCS HC 39901	Lead Base Alloy	1.63		15.69	0.105	0.041	0.065	16.01	0.028	100
NCS HC 39902	Lead Base Alloy	1.25		19.57	0.104	0.030	0.041	13.81	0.038	100
NCS HC 39903	Lead Base Alloy	2.62	0.0021	11.01	0.035	0.037	0.052	13.86	0.054	100
NCS HC 39904	Lead Base Alloy	0.5		7.44	0.0052		0.095	12.02	0.069	100
NCS HC 39905	Lead Base Alloy	0.31		4.81	0.0068		0.115	10.04	0.103	100

Number	Name	Chemical Composition(Percent)						Unit Size (in g)
		Cu	Sn	Pb	As	Sb	Bl	
NCS HC 41919	Lead Base Bearing Alloy	1.98	15.97	65.73	0.014	16.09	0.024	100
NCS HC 41920	Lead Base Bearing Alloy	2.88	5.69	76.22	0.012	15.02	0.0075	100

Number	Name	Chemical Composition(Percent)				Unit Size (in g)
		Cu	Sn	As	Sb	
NCS HC 50956	Lead Base Bearing Alloy	0.38	5.16	0.15	15.94	100

Section 7 Nonferrous Metal(Chip)
4)Tin Base Alloy

Number	Name	Chemical Composition(Percent)										Unit Size
		Cu	Sn	Pb	As	Sb	Bi					(in g)
NCS HC 28988	Ch Sn Sb4-4	4.54			0.020	4.93	0.006					100
NCS HC 28989	Ch Sn Sb8-4	4.9			0.016	8.07	0.085					100
NCS HC 28990	Ch Sn Sb9-7	8.00			0.027	9.00	0.008					100
NCS HC 28994	Pb50 Sn50		51.15	48.80								100

Number	Name	Chemical Composition(Percent)										Unit Size
		Cu	Sn	Pb	Zn	Fe	As	Sb	Bi	Ag		(in g)
NCS HC 35902	Tin-Lead Solder	0.030	50.12					0.232	0.046			100
NCS HC 35903	Tin-Lead Solder	0.00090	30.12		(0.000083)		0.0034	1.73	0.127	0.047		100
NCS HC 35904	Tin-Lead Solder	0.0024	39.84		(0.000086)		0.0019	0.809	0.024	1.08		100
NCS HC 35905	Tin-Lead Solder	0.0019	49.72		(0.000086)		0.0032	0.409	0.021	3.61		100
NCS HC 35907	Tin-Lead Solder	0.0062	89.81		(0.000040)		0.013	0.036	0.0200	0.0024		100
NCS HC 35908	Tin-Lead Solder	0.029	3.66		0.000080		0.011	6.59	0.0045	0.0032		100
NCS HC 35910	Tin	0.029	99.79	0.076		0.0092	0.018	0.052	0.021			stick200

Number	Name	Chemical Composition(Percent)										Unit Size
		Ag	Cu	Bi	Sb	Pb	Fe	As	Cd	Ni	Al	(in g)
NCS HC 35912	Tin-Silver-Copper Solder	0.284	0.590	0.048	0.096	0.043	0.0037	0.0002	0.0020	0.0008	(0.0004)	50
NCS HC 35913	Tin-Copper Solder	0.087	0.557	0.047	0.086	0.042	0.0085	0.0019	0.0020	0.071	(0.0004)	50

Number	Name	Chemical Composition(Percent)										Unit Size
		Cu	Al	Zn	Mn	Fe	As	Sb	Bi			(in g)
NCS HC 39906	Tin Base Alloy	2.07		0.0028	18.36	0.049	0.036	13.54	0.029			100
NCS HC 39907	Tin Base Alloy	3.55	0.0036		9.30	0.038	0.070	12.03	0.064			100
NCS HC 39908	Tin Base Alloy	6.36	0.0029	0.0021	12.17	0.063	0.100	9.62	0.089			100
NCS HC 39909	Tin Base Alloy	6.97		0.0035	0.20	0.064	0.102	7.95	0.079			100
NCS HC 39910	Tin Base Alloy	4.64		0.0087	0.41	0.120		5.94	0.099			100

Number	Name	Chemical Composition(Percent)						Unit Size
		Cu	Sn	Pb	As	Sb	Bi	(in g)
NSC HC 41921	Tin Base Alloy	4.06	86.61	1.32	0.018	7.87	0.014	100
NSC HC41922	Tin Base Alloy	6.72	80.27	1.20	0.020	11.81	0.012	100

Number	Name	Chemical Composition(Percent)							Unit Size
		Cu	Pb	Zn	Fe	As	Sb	Bi	(in g)
NSC HC 50945	Z Ch Sn Sb D12-3-10	0.409	9.90		0.069				90
NSC HC 50947	Tin Alloy	7.11	0.323	0.0046	0.073	0.065	9.14	0.073	100
NSC HC 50949	Tin Alloy	4.09	9.90	0.0021	0.069	0.069	12.10	0.064	100

Section 7 Nonferrous Metal(Chip)
5)Zinc Alloy

Number	Name	Chemical Composition(Percent)							Unit Size (in g)
		Cu	Al	Mg					
NCS HC 28974	Z Zn Al4		4.84	0.083					100
NCS HC 28975	Z Zn Al4-1	1.56	4.48	0.074					100
Number	Name	Chemical Composition(Percent)							Unit Size (in g)
		Zn	PbO	Mn	CdO	L.O.I			
NCS HC 35911	Zinc oxit	99.67	0.0019	0.000051	0.00066	0.387			30
Number	Name	Chemical Composition(Percent)							Unit Size (in g)
		Cu	Al	Sn	Pb	Mg	Fe	Cd	
NCS HC 50955	Zinc Alloy	3.93	7.49	0.0049	0.0092	0.048	0.058	0.0056	100
Number	Name	Chemical Composition(Percent)							Unit Size (in g)
		Cu	Sn	Pb	Fe	As	Sb	Cd	
NCS HC 52904	Zinc	0.00012		0.0029	0.0011			0.011	200
NCS HC 52906	Zinc	0.0020	0.0022	0.319	0.030	0.0053	0.010	0.072	200

Section 7 Nonferrous Metal(Chip)
6)Titanium Alloy & Other

Number	Name	Chemical Composition(µg/g)												Unit Size (in g)
		CeO_2	Pr_6O_{11}	Tb_4O_7	Dy_2O_3	SiO_2 (Base)	CaO	Fe_2O_3	NiO	CuO	PbO			
NCS HC 44901	Yttrium Oxide	4.80	10.4	10.50	21.6	34.0	8.15	6.19	9.8	1.51	2.81			10
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Ni	Fe	Co	Mn									
NCS HC 55902	Tungsten Alloy	1.51	0.813	0.102	0.030									50
NCS HC 55903	Tungsten Alloy	3.00	1.63	0.302	0.040									50
NCS HC 55904	Tungsten Alloy	4.50	2.43	0.400	0.050									50
NCS HC 55905	Tungsten Alloy	6.01	3.22	0.502	0.060									50
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		C	Si	Cr	Mo	Al	Zr	Ni	Cu	Mn	RE	Zn	V	Fe
NCS HC 57901	Rare-Earth Magnesium						0.57	0.00093	0.00089	0.028	0.85	5.76			50
NCS HC 57904	Titanium Alloy	0.031		0.060	0.059	0.14	0.056			0.048			0.058	0.010	50
NCS HC 57905	Titanium Alloy	0.0093				5.60								0.24	50
NCS HC 57906	Titanium Alloy	0.00060			1.71	6.79	2.18						2.25	0.040	50
NCS HC 57907	Titanium Alloy	0.015		2.95		3.13							14.99	0.077	50
NCS HC 57908	Titanium Alloy	0.0063				1.82				1.20				0.041	50
NCS HC 57909	Titanium Alloy	0.013				6.20							4.02	0.17	50
NCS HC 57910	Titanium Alloy	0.018	0.30	1.49	2.66	6.33								0.46	50
NCS HC 57911	Titanium Alloy	0.0084	0.29		3.41	6.66	1.80							0.048	50
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		La_2O_3	CeO_2	Pr_6O_{11}	Nd_2O_3	Sm_2O_3	Gd_2O_3	Tb_4O_7	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	
NSC HC 63901	Europia	12.8	3.4	15.2	11.8	15.3	16.8	12.2	11.3	15.0	12.6	10.2	16.3	11.6	5
		Y_2O_3	Na_2O	SiO_2 (Acid)	SiO_2 (Base)	CaO	Fe_2O_3	Nio	CuO	ZnO	PbO_2				
NSC HC 63901	Europia	17.2	31.1	30.0	(40.5)	13.0	7.2	9.6	6.7	15.6	8.0				

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Pb	Sn	Sr	(mm)
NCS HS 49701c-1	Aluminium Alloy	10.38	1.02	0.413	0.309	0.178	0.137	0.387	0.055	0.226	0.096	0.129	Φ62×30
NCS HS 49701c-2	Aluminium Alloy	6.91	0.840	1.41	0.452	0.888	0.099	0.711	0.078	0.098	0.047	0.086	Φ62×30
NCS HS 49701c-3	Aluminium Alloy	12.64	0.212	2.07	0.540	0.753	0.066	0.216	0.042	0.074	0.021	0.062	Φ62×30
NCS HS 49701c-4	Aluminium Alloy	3.49	0.324	3.56	0.970	1.21	0.054	0.977	0.112	0.033	0.0079	0.039	Φ62×30
NCS HS 49701c-5	Aluminium Alloy	7.9	0.486	0.076	0.800	0.041	0.174	0.049	0.022	0.014	0.0027	0.023	Φ62×30
NCS HS 49701c-6	Aluminium Alloy	0.894	1.37	5.08	0.078	1.53	0.025	1.33	0.182	0.174	0.107	0.0057	Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	(mm)
NCS HS 49702a-1	Aluminium Alloy	0.352	0.136	0.191	0.153	0.78	0.087	0.137	6.66	0.070	0.087	Φ62×30
NCS HS 49702a-2	Aluminium Alloy	0.455	0.261	0.684	0.501	2.95	0.186	0.076	4.53	0.104	0.059	Φ62×30
NCS HS 49702a-3	Aluminium Alloy	0.275	0.358	1.37	0.329	2.19	0.143	0.037	5.15	0.037	0.106	Φ62×30
NCS HS 49702a-4	Aluminium Alloy	0.168	0.584	2.09	0.664	1.40	0.262	0.128	2.83	0.156	0.154	Φ62×30
NCS HS 49702a-5	Aluminium Alloy	0.078	0.430	1.54	0.819	0.274	0.367	0.205	8.3	0.0061	0.0085	Φ62×30
NCS HS 49702a-6	Aluminium Alloy	0.756	0.770	2.88	0.066	4.07	0.129	0.015	1.27	0.260	0.203	Φ62×30

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	(mm)
NCS HS 49703b-1	Aluminium Alloy	0.526	0.212	0.035	0.864	1.16	0.085	0.059	0.294	0.108	Φ62×30
NCS HS 49703b-2	Aluminium Alloy	1	0.344	0.237	0.507	0.658	0.144	0.042	0.217	0.049	Φ62×30
NCS HS 49703b-3	Aluminium Alloy	1.28	0.432	0.522	0.234	0.911	0.340	0.030	0.091	0.028	Φ62×30
NCS HS 49703b-4	Aluminium Alloy	0.224	0.652	0.730	1.17	0.442	0.232	0.094	0.162	0.072	Φ62×30
NCS HS 49703b-5	Aluminium Alloy	1.59	0.822	0.011	1.48	0.081	0.311	0.120	0.040	0.0094	Φ62×30
NCS HS 49703b-6	Aluminium Alloy	0.048	0.099	0.990	0.043	1.50	0.043	0.016	0.367	0.160	Φ62×30

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Pb	(mm)
NCS HS 49704b-1	Aluminium Alloy	0.588	0.671	0.184	0.851	0.0097	0.024	0.028	0.018	0.0043	Φ62×30
NCS HS 49704b-2	Aluminium Alloy	0.423	0.537	0.097	1.20	0.032	0.049	0.114	0.032	0.0027*	Φ62×30
NCS HS 49704b-3	Aluminium Alloy	0.287	0.313	0.129	1.52	0.052	0.075	0.047	0.06	0.0067	Φ62×30
NCS HS 49704b-4	Aluminium Alloy	0.145	0.242	0.057	1.93	0.073	0.109	0.081	0.088	0.017	Φ62×30
NCS HS 49704b-5	Aluminium Alloy	0.695	0.803	0.228	0.544	0.101	0.152	0.165	0.123	0.019	Φ62×30
NCS HS 49704b-6	Aluminium Alloy	0.05	0.149	0.0063	2.38	0.006	0.0046	0.017	0.01	0.0011	Φ62×30

Number	Name	Chemical Composition(Percent)								Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	(mm)
NCS HS 49705-1	LD7	0.454	0.904	0.095	0.428	1.55	4.51	0.021	0.140	Φ62×30
NCS HS 49705-2	LD7	1.21	0.657	0.138	1.37	1.12	2.51	0.088	0.238	Φ62×30
NCS HS 49705-3	LD7	0.900	1.22	0.239	0.897	2.02	1.51	0.120	0.334	Φ62×30
NCS HS 49705-4	LD7	1.61	0.371	0.184	1.80	0.624	3.33	0.055	0.166	Φ62×30
NCS HS 49705-5	LD7	1.87	1.53	0.287	2.26	0.153	0.927	0.161	0.367	Φ62×30
NCS HS 49705-6	LD7	0.115	0.090	0.054	0.074	2.25	5.55	0.00095	0.084	Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Na	(mm)
NCS HS 49706a-1	Aluminium Alloy	0.238	0.202	0.045	0.168	3.95	0.252	0.038	0.098	0.300*	0.0028*	Φ62×30
NCS HS 49706a-2	Aluminium Alloy	0.462	0.340	0.101	0.327	2.24	0.219	0.233	0.052	0.046	0.00011	Φ62×30
NCS HS 49706a-3	Aluminium Alloy	0.702	0.444	0.153	0.495	2.90	0.123	0.071	0.143	0.149	0.0011	Φ62×30
NCS HS 49706a-4	Aluminium Alloy	0.788	0.624	0.184	0.677	1.39	0.314	0.097	0.235	0.188	0.00014	Φ62×30
NCS HS 49706a-5	Aluminium Alloy	0.102	0.093	0.0085	0.051	5.09	0.042	0.011	0.030	0.019		Φ62×30
NCS HS 49706a-6	Aluminium Alloy	0.898	0.684	0.21	0.826	0.611	0.359	0.122	0.306	0.215		Φ62×30

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Be	(mm)
NCS HS 49707a-1	Aluminium Alloy	0.195	0.301	0.167	0.137	8.46	0.106	0.164	0.118	0.142	0.0033	Φ62×30
NCS HS 49707a-2	Aluminium Alloy	0.304	0.364	0.090	0.366	5.33	0.192	0.060	0.225	0.044	0.0028	Φ62×30
NCS HS 49707a-3	Aluminium Alloy	0.377	0.458	0.128	0.526	6.38	0.140	0.089	0.156	0.116	0.0068	Φ62×30
NCS HS 49707a-4	Aluminium Alloy	0.459	0.584	0.229	0.677	7.04	0.246	0.169	0.586	0.087	0.0011	Φ62×30
NCS HS 49707a-5	Aluminium Alloy	0.078	0.134	0.0074	0.065	10.14	0.0123	0.146	0.038	0.0070	0.0087	Φ62×30
NCS HS 49707a-6	Aluminium Alloy	0.600	0.696	0.243	0.865	3.76	0.273	0.035	0.285	0.192	0.00056	Φ62×30

Number	Name	Chemical Composition(Percent)								Unit Size
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	(mm)
NCS HS 49708a-1	Aluminium Alloy	0.448	0.690	2.14	0.341	2.15	0.111	0.054	0.088	Φ62×30
NCS HS 49708a-2	Aluminium Alloy	0.525	0.453	3.25	1.00	0.737	0.021	0.134	0.017	Φ62×30
NCS HS 49708a-3	Aluminium Alloy	0.127	0.350	4.11	0.532	1.51	0.037	0.147	0.039	Φ62×30
NCS HS 49708a-4	Aluminium Alloy	0.230	0.213	5.82	0.240	0.950	0.057	0.320	0.181	Φ62×30
NCS HS 49708a-5	Aluminium Alloy	0.103	0.772	1.21	0.084	2.64	0.210	0.712	0.013	Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Sn	Pb	(mm)
NCS HS 49709-1	XZL	0.504	10.89	0.252	1.35	1.33	0.624	0.080	0.209	0.020	0.016	Φ62×30
NCS HS 49709-2	XZL	0.216	11.35	0.614	0.843	0.827	0.930	0.115	0.165	0.120	0.136	Φ62×30
NCS HS 49709-3	XZL		7.08		1.14	1.00	1.13	0.056	0.098	0.0085	0.039	Φ62×30
NCS HS 49709-4	XZL	0.310	12.48	0.790	0.801	0.623	1.27	0.139	0.133	0.012	0.031	Φ62×30
NCS HS 49709-5	XZL	0.082	8.69	0.094	1.55	1.59	0.410	0.021	0.251	0.018	0.0025	Φ62×30
NCS HS 49709-6	XZL		14.56		0.513	0.353	1.46	0.179	0.049	0.013	0.043	Φ62×30

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Ga	(mm)
NCS HS 49710d-1	Pure Aluminum	0.168	0.137	0.010	0.010	0.0074	0.0051	0.017	0.011	0.012	Φ62×30
NCS HS 49710d-2	Pure Aluminum	0.052	0.058	0.0052	0.0030	0.0027	0.0036	0.0044	0.0010	0.0034	Φ62×30
NCS HS 49710d-3	Pure Aluminum	1.18	1.20	0.093	0.054	0.068	0.033	0.083	0.037	0.020	Φ62×30
NCS HS 49710d-4	Pure Aluminum	0.363	0.334	0.035	0.025	0.025	0.052	0.045	0.018	0.029	Φ62×30
NCS HS 49710d-5	Pure Aluminum	0.577	0.709	0.051	0.091	0.043	0.089	0.136	0.086	0.040	Φ62×30
NCS HS 49710d-6	Pure Aluminum	0.913	0.920	0.028	0.205	0.143	0.114	0.188	0.064	0.050	Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Fe	Si	Mn	Mg	Cr	Ni	Cu	Ti	Zn	Zr	(mm)
NCS HS 49711-1	LY11	0.825	1.25	1.24	0.692	0.092	0.161	1.88	(0.121)	0.401	(0.191)	Φ62×30
NCS HS 49711-2	LY11	0.657	0.893	0.932	0.298	0.223	0.113	2.89	(0.169)	0.343	(0.250)	Φ62×30
NCS HS 49711-3	LY11	0.427	0.552	0.561	0.481	0.157	0.045	4.03	0.047	0.236	0.137	Φ62×30
NCS HS 49711-4	LY11	0.188	0.236	0.241	(0.108)	0.193	0.089	5.47	0.078	0.125	0.048	Φ62×30
NCS HS 49711-5	LY11	(1.08)	1.59	(1.54)	(0.922)	(0.311)	(0.220)	0.658	(0.225)	0.051	0.0064	Φ62×30
NCS HS 49711-6	LY11	0.122	0.101	(0.071)	0.035	0.011	0.0095	6.61	(0.108)	(0.566)	(0.319)	Φ62×30

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size
		Si	Mg	Mn	Fe	Cu	Zn	Ni	Cr	Ti	Zr	Ga	(mm)
NCS HS 49715a-1	Aluminum Concentrate	0. 00098	0.0025	0.00007	0.00083	0.00088	0.00040	0.00025	0.00053	0.00011	(0.00026)		Φ40x35
NCS HS 49715a-2	Aluminum Concentrate	0. 0015	0.00039	0.0019	0.0016	0.00017	0.0025	0.0026	0.00097	0.00084	0.0025	0.0032	Φ40x35
NCS HS 49715a-3	Aluminum Concentrate	0.010	0.0079	0.0066	0.012	0.0061	0.0073	0.0063	0.0040	0.0030	0.0053	0.0082	Φ40x35
NCS HS 49715a-4	Aluminum Concentrate	0.031	0.0092	0.010	0.033	0.012	0.011	0.011	0.0069	0.012	0.014	0.011	Φ40x35
NCS HS 49715a-5	Aluminum Concentrate	0. 0073	0.0052	0.0041	0.0091	0.0033	0.0047	0.0059	0.0018	0.0021	0.0057	0.0012	Φ40x35
NCS HS 49715a-6	Aluminum Concentrate	0. 044	0.014	0.012	0.063	0.014	0.016	0.042	0.015	0.017	0.019	0.015	Φ40x35
NCS HS 49715a-7	Aluminum Concentrate	0.111	0.0022	0.0030	0.397	0.0020				0.012			Φ40x35

Number	Name	Chemical Composition(Percent)											Unit Size
		Si	Mg	Mn	Fe	Cu	Zn	Sn	Pb	Ni	Ti	Sr	(mm)
NCS HS 49716b-1	ADC12	7.53	0.478	0.702	0.665	0.505	3.04	0.096	0.011	0.152	0.018	0.0021	Φ62×30
NCS HS 49716b-2	ADC12	8.87	0.145	0.558	1.33	3.35	0.794	0.129	0.028	0.266	0.0093	0.0053	Φ62×30
NCS HS 49716b-3	ADC12	10.79	0.211	0.363	1.01	2.58	1.25	0.197	0.056	0.318	0.045	0.111	Φ62×30
NCS HS 49716b-4	ADC12	11.98	0.294	0.265	0.855	1.95	1.89	0.242	0.076	0.473	0.013	0.038	Φ62×30
NCS HS 49716b-5	ADC12	13.82	0.392	0.108	0.289	1.19	2.42	0.310	0.129	0.647	0.020	0.029	Φ62×30
NCS HS 49716b-6	ADC12	6.27	0.064	0.052	1.92	4.21	0.330	0.054	0.0041	0.079	0.0060	0.0002	Φ62×30

Number	Name	Chemical Composition(Percent)											Unit Size
		Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	V	Pb	Sn	(mm)
NCS HS 49717-1	DL18	0.0026	0.0032	0.0006	0.062	0.051	0.0016	0.0095	0.0026	0.0002	0.0046	(0.0001)	Φ62×30
NCS HS 49717-2	DL18	0.015	0.011	0.017	0.193	0.194	0.030	0.036	0.014	0.237		0.171	Φ62×30
NCS HS 49717-3	DL18	0.031	0.031	0.034	0.371	0.344	0.067	0.013	0.030		0.123		Φ62×30
NCS HS 49717-4	DL18	0.104	0.093	0.046	0.940	0.933	0.096	0.054	0.050	0.121		0.119	Φ62×30
NCS HS 49717-5	DL18	0.076	(0.056)	0.108	0.612	0.634	1.05	0.081	0.075		0.066		Φ62×30
NCS HS 49717-6	DL18	0.134	0.127	0.142	0.748	0.789	0.522	0.114	0.104	0.027		0.071	Φ62×30
NCS HS 49717-7	DL18	0.048	0.021	0.070	0.505	0.491	1.50	(0.138)	0.133		0.0052		Φ62×30

		Sb	Ga	Cd	Ca	B	Ce	Nd
NCS HS 49717-1	DL18	(0.0004)	(0.00024)	(0.0008)	(0.00005)	(0.0014)	0.00031	0.0002
NCS HS 49717-2	DL18	0.040		0.105				
NCS HS 49717-4	DL18	0.043		0.048				
NCS HS 49717-5	DL18		0.0085			(0.0047)	0.0080	
NCS HS 49717-6	DL18	0.097		0.011				
NCS HS 49717-7	DL18		0.032					

Number	Name	Chemical Composition(Percent)											Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Pb	Sn	Be	Zr	(mm)
NCS HS 49718-1	Aluminium Alloy	6.03	0.194	0.303	0.411	0.095	0.375	0.008	0.020	0.011	0.0086	0.047	Φ62×30
NCS HS 49718-2	Aluminium Alloy	6.36	0.413	0.254	0.317	0.207	0.257	0.188	0.031	0.021	0.013	0.085	Φ62×30
NCS HS 49718-3	Aluminium Alloy	7.15	0.654	0.412	0.248	0.301	0.225	0.132	0.063	0.031	0.017	0.162	Φ62×30
NCS HS 49718-4	Aluminium Alloy	7.55	0.911	0.158	0.165	0.401	0.061	0.088	0.088	0.048	0.024	0.191	Φ62×30
NCS HS 49718-5	Aluminium Alloy	8.19	1012	0.065	0.070	0.501	0.0068	0.043	0.123	0.061	0.055	0.174	Φ62×30

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Ni	(mm)
NCS HS 49719-1	Aluminium Alloy	0.352	0.098	0.099	0.094	0.745	0.374	0.088	0.046	0.011	Φ62×30
NCS HS 49719-2	Aluminium Alloy	0.547	0.215	0.200	0.198	0.580	0.275	0.126	0.092	0.042	Φ62×30
NCS HS 49719-3	Aluminium Alloy	0.654	0.294	0.328	0.289	0.647	0.236	0.181	0.109	0.062	Φ62×30
NCS HS 49719-4	Aluminium Alloy	0.794	0.411	0.435	0.410	0.395	0.145	0.223	0.142	0.100	Φ62×30
NCS HS 49719-5	Aluminium Alloy	0.972	0.517	0.540	0.539	0.277	0.072	0.277	0.173	0.138	Φ62×30

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Cr	Zr	(mm)
NCS HS 49720-1	Aluminium Alkly	0.044	0.122	0.015	0.095	0.842	5.78	0.010	0.011	0.021	0.067	Φ62×30
NCS HS 49720-2	Aluminium Alkly	0.115	0.206	0.041	0.243	1.16	5.20	0.019	0.039	0.077	0.104	Φ62×30
NCS HS 49720-3	Aluminium Alkly	0.177	0.312	0.086	0.397	1.35	4.41	0.035	0.067	0.119	0.138	Φ62×30
NCS HS 49720-4	Aluminium Alkly	0.284	0.396	0.116	0.556	1.94	3.50	0.059	0.099	0.179	0.204	Φ62×30
NCS HS 49720-5	Aluminium Alkly	0.401	0.481	0.119	0.719	1.76	2.78	0.073	0.145	0.222	0.235	Φ62×30

Number	Name	Chemical Composition(Percent)								Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	(mm)
NCS HS 49726-1	Aluminium Alloy	0.027	0.034	0.0025	0.0017	1.20	0.0072	0.0090	0.0093	Φ62×30
NCS HS 49726-2	Aluminium Alloy	0.0033	0.0097	0.0065	0.0017	1.88	0.013	0.00084	0.00088	Φ62×30
NCS HS 49726-3	Aluminium Alloy	0.0073	0.012	0.0038	0.0042	1.63	0.0047	0.0042	0.0036	Φ62×30
NCS HS 49726-4	Aluminium Alloy	0.013	0.027	0.011	0.011	2.10	0.0012	0.011	0.0098	Φ62×30
NCS HS 49726-5	Aluminium Alloy	0.015	0.0040	0.012	0.0013	2.13	0.0024	0.00060	0.00028	Φ62×30

Number	Name	Chemical Composition(Percent)				Unit Size
		Pb	Cd	As	Cu	(mm)
NCS HS 49727-1	Aluminium Alloy	0.0022	0.0038	0.017	0.082**	Φ62×30
NCS HS 49727-2	Aluminium Alloy	0.011	0.019	----	0.469**	Φ62×30
NCS HS 49727-3	Aluminium Alloy	0.029	0.010	0.038	0.284**	Φ62×30
NCS HS 49727-4	Aluminium Alloy	0.019	0.027	0.011	0.080**	Φ62×30
NCS HS 49727-5	Aluminium Alloy			0.0057		Φ62×30
NCS HS 49727-6	Aluminium Alloy			0.024		Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Si%	Fe%	Cu%	Mn%	Mg%	Ni%	Zn%	Ti%	Be ppm	Li ppm	Cd ppm	(mm)
NCS HS 49728-1	Aluminium Alloy	0.044	0.108	0.066	0.017	0.0030	0.0082	0.012	0.0054	0.79	0.53	8.4	Φ62×30
NCS HS 49728-2	Aluminium Alloy	0.104	0.359	0.042	0.020	0.0016	0.046	0.029	0.018	3.0	1.6	45	Φ62×30
NCS HS 49728-3	Aluminium Alloy	0.375	0.480	0.0080	0.080	0.011	0.070	0.087	0.038	3.2	2.0	80	Φ62×30
NCS HS 49728-4	Aluminium Alloy	0.594	0.665	0.072	0.032	0.036	0.095	0.027	0.031	20	8.8	67	Φ62×30
NCS HS 49728-5	Aluminium Alloy	0.772	0.828	0.072	0.0066	0.029	0.110	0.050	0.011	12	55	97	Φ62×30
NCS HS 49728-6	Aluminium Alloy	0.650	0.478	0.100	0.033	0.0086	0.098	0.030	0.028	7.8	4.2	42	Φ62×30
NCS HS 49728-7	Aluminium Alloy	1.03	0.932	0.111	0.096	0.046	0.118	0.079	0.075	26	48	223	Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Zn	Li	Ti	Zr	(mm)
NCS HS 49729-1	Aluminium Alloy	0.069	0.076	0.0025**		6.00			1.23		0.091	Φ45x40
NCS HS 49729-2	Aluminium Alloy	0.086	0.129	0.0019**		5.49			2.25		0.073	Φ45x40
NCS HS 49729-3	Aluminium Alloy	0.222	0.227	0.042		4.29			1.98		0.109	Φ45x40
NCS HS 49729-4	Aluminium Alloy	0.056	0.163	0.040	0.015	4.95	0.023	0.022	1.35	0.026	0.057	Φ45x40
NCS HS 49729-5	Aluminium Alloy	0.129	0.075	0.012	0.053	3.84	0.047	0.094	1.50	0.079	0.140	Φ45x40
NCS HS 49729-6	Aluminium Alloy	0.132	0.055	0.100	0.045	3.81	0.046	0.093	1.54	0.091	0.168*	Φ45x40
NCS HS 49729-7	Aluminium Alloy	0.098	0.089	0.420	0.030	2.18	0. 1 26*	0.058	1.03	0.128*	0.143	Φ45x40
NCS HS 49729-8	Aluminium Alloy	0. 025	0.043	0.824	0.097	0.680	0.103	0.041	2. 52	0.134	0.042	Φ45x40
NCS HS 49729-9	Aluminium Alloy	0.150	0.148	1.11	0.081	1.33	0.073	0.146	1.99	0.092	0.077	Φ45x40
NCS HS 49729-10	Aluminium Alloy	0.214	0.264	1.60	0.138	1.62	0.058	0.204*	1.63	0.070	0.061	Φ45x40
NCS HS 49729-11	Aluminium Alloy	0.118	0.112	1.22	0. 032	0.193	0.021	0.107	2.12	0.010	0.082	Φ45x40
NCS HS 49729-12	Aluminium Alloy	0.136	0.094	1.46	0.082	0.291	0.029	0.118	2.48	0.0026	0.088	Φ45x40

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)						Unit Size
		Ag	Cu	Mg	Li	Ti	Zr	(mm)
NCS HS 49730-1	Aluminium Alloy	0.224	2.45	0.584	1.76	0.104	0.045	Φ45×25
NCS HS 49730-2	Aluminium Alloy	0.234	3.12	0.473	1.28	0.092	0.061	Φ45×25
NCS HS 49730-3	Aluminium Alloy	0.425	3.83	0.417	0.387	0.025	0.097	Φ45×25
NCS HS 49730-4	Aluminium Alloy	0.455	4.57	0.274	1.23	0.052	0.126	Φ45×25
NCS HS 49730-5	Aluminium Alloy	0.59	5.43	0.190	0.954	0.027	0.142	Φ45×25

Number	Name	Chemical Composition(Percent)						Unit Size
		Ga	Li	Cd	B	Co	Mg	(mm)
NCS HS 49732-1	Aluminium Alloy	0.018	0.0054	0.0045	0.0058	0.0052	1.04	Φ62×30
NCS HS 49732-2	Aluminium Alloy	——	0.00012	0.00022*	0.0010	——	1.09	Φ62×30
NCS HS 49732-3	Aluminium Alloy	0.0093	0.00058	0.00023	0.0011	0.00025	0.092	Φ62×30
NCS HS 49732-4	Aluminium Alloy	0.0097	0.039	0.019	0.0032	0.0037	0.106	Φ62×30
NCS HS 49732-5	Aluminium Alloy	0.411	0.00010	0.00012	0.0015	0.00013*	2.67	Φ62×30
NCS HS 49732-6	Aluminium Alloy	0.069	0.0042	0.052	0.00067	0.0098	0.629	Φ62×30
NCS HS 49732-7	Aluminium Alloy	0.040	0.0023	0.0015	0.0040	0.0111	2.01	Φ62×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Zr	V	(mm)
NCS HS 49733-1	Aluminium Alloy	0.358	0.455	4.76	0.476	0.0020	0.007*	0.0037	0.0038	0.038	0.027	Φ62×30
NCS HS 49733-2	Aluminium Alloy	0.257	0.380	5.53	0.387	0.021	0.049	0.071	0.017	0.103	0.061	Φ62×30
NCS HS 49733-3	Aluminium Alloy	0.198	0.302	6.21	0.318	0.040	0.105	0.160	0.041	0.157	0.175	Φ62×30
NCS HS 49733-4	Aluminium Alloy	0.159	0.199	6.64	0.161	0.062	0.157	0.123	0.069	0.236	0.116	Φ62×30
NCS HS 49733-5	Aluminium Alloy	0.106	0.105	6.97	0.090	0.126	0.189	0.154*	0.090	0.197	0.170	Φ62×30

Number	Name	Chemical Composition(Percent)												Unit Size
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Cr	Ti	Zr	B	Sc	Be	(mm)
NCS HS 49734-1	Aluminium Alloy	0.246	0.361	0.013	1.11	4.85	0.013	0.101	0.214	0.0094	0.035	0.0010	0.031	0.00011	Φ45×30
NCS HS 49734-2	Aluminium Alloy	0.206	0.273	0.051	0.849	6.28	0.014	0.029	0.127	0.062	0.162	0.0020	0.103	0.0012	Φ45×30
NCS HS 49734-3	Aluminium Alloy	0.131	0.197	0.029	0.413	5.61	0.0097	0.044	0.023	0.029	0.092	0.0027	0.181	0.0034	Φ45×30
NCS HS 49734-4	Aluminium Alloy	0.050	0.155	0.072	0.140	7.11	0.035	0.135	0.134	0.178	0.220	0.0084	0.236	0.0051	Φ45×30
NCS HS 49734-5	Aluminium Alloy	0.100	0.299	0.097	0.783	7.30	0.108	0.076	0.066	0.079	0.055	0.0060	0.257	0.00051	Φ45×30
NCS HS 49734-6	Aluminium Alloy	0.049	0.089	0.012	0.341	5.19	0.0066	0.0080	0.014*	0.040	0.097*	——	0.349	0.0013	Φ45×30
NCS HS 49734-7	Aluminium Alloy	0.046	0.089	0.011	0.306	4.52	0.0058	0.0074	0.013*	0.039	0.088	——	0.535	0.0011	Φ45×30

Number	Name	Chemical Composition(Percent)			Unit Size
		Hg	Pb	Cd	(mm)
NCS HS49735-1	Aluminium Alloy	0.0038	0.0023	0.0017	Φ62×30
NCS HS49735-2	Aluminium Alloy	0.039	0.0060	0.0047	Φ62×30
NCS HS49735-3	Aluminium Alloy	0.059	0.011	0.0088	Φ62×30
NCS HS49735-4	Aluminium Alloy	0.0027	0.010	0.0085	Φ62×30
NCS HS49735-5	Aluminium Alloy	0.0039	0.019	0.017	Φ62×30
NCS HS49735-6	Aluminium Alloy	0.0062	0.035	0.037	Φ62×30

Number	Name	Chemical Composition(Percent)													Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Cd	V	Na	Ga	Pb	(mm)
NCS HS 49736-1	Aluminium Alloy	0.658	0.847	0.030	0.687	1.39	0.052	0.039	0.0041	0.00017	0.102	0.0012*	0.020	0.0085	Φ62×30
NCS HS 49736-2	Aluminium Alloy	0.488	0.664	0.111	0.795	1.19	0.109	0.105	0.018	0.0028	0.068	0.00025	0.034	0.016	Φ62×30
NCS HS 49736-3	Aluminium Alloy	0.194	0.497	0.203	0.957	1.16	0.206	0.091	0.055	0.0042	0.056	0.00055	0.059	0.011	Φ62×30
NCS HS 49736-4	Aluminium Alloy	0.342	0.332	0.380	1.05	0.869	0.271	0.156	0.071	0.0044	0.033	0.0013	0.086	0.0051	Φ62×30
NCS HS 49736-5	Aluminium Alloy	0.056	0.209	0.298	1.18	0.712	0.330	0.201	0.086	0.0058	0.018	0.0016*	0.096	0.0016	Φ62×30

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)												Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Ti	Cd	Na	(mm)
NCS HS 49737-1	Aluminium Alloy	0.039	0.091	0.019	0.092	5.94	0.010	0.0070	0.327	0.0011	0.011	0.00011	0.00020	Φ62X30
NCS HS 49737-2	Aluminium Alloy	0.086	0.238	0.168	0.478	5.16	0.110	0.022	0.258	0.0075	0.129	0.0068	0.00076	Φ62X30
NCS HS 49737-3	Aluminium Alloy	0.138	0.314	0.072	0.370	4.56	0.067	0.044	0.197	0.0068	0.074	0.0053	0.0014	Φ62X30
NCS HS 49737-4	Aluminium Alloy	0.214	0.397	0.105	0.221	3.76	0.173	0.067	0.105	0.015	0.175	0.0087	0.0010*	Φ62X30
NCS HS 49737-5	Aluminium Alloy	0.296	0.471	0.209	0.601	2.94	0.220	0.107	0.050	0.023	0.235	0.019	0.00039*	Φ62X30
NCS HS 49737-6	Aluminium Alloy	0.116	0.284	0.056	0.342	4.25	0.041	0.022	0.055	0.0034	0.041	0.0011	0.00013	Φ62X30

Number	Name	Chemical Composition(Percent)												Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Ca	Na	(mm)
NCS HS 49738-1	Aluminium Alloy	0.147	0.283	1.83	0.043	3.17	0.0026	0.0043	7.24	0.014	0.019	0.00048	0.00070	Φ62×30
NCS HS 49738-2	Aluminium Alloy	0.130	0.239	2.17	0.110	2.75	0.036	0.037	6.42	0.050	0.092	0.0023	0.0027	Φ62×30
NCS HS 49738-3	Aluminium Alloy	0.082	0.184	2.95	0.147	2.11	0.059	0.062	5.35	0.086	0.162	0.00023	0.000077*	Φ62×30
NCS HS 49738-4	Aluminium Alloy	0.019	0.041	3.48	0.207	1.88	0.101	0.104	4.60	0.134	0.198	0.0010	0.00014	Φ62×30
NCS HS 49738-5	Aluminium Alloy	0.055	0.113	2.43	0.254	1.40	0.130	0.133	3.95	0.164	0.207	0.0012	0.0011	Φ62×30

Number	Name	Chemical Composition(Percent)							Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	(mm)
NCS HS49739-1	Aluminium Alloy	8.90	0.655	0.041	0.348	0.043	0.021	0.032	Φ62X30
NCS HS49739-2	Aluminium Alloy	10.32	0.490	0.543	0.456	0.079	0.129	0.078	Φ62X30
NCS HS49739-3	Aluminium Alloy	10.71	0.417	0.233	0.541	0.093	0.067	0.092	Φ62X30
NCS HS49739-4	Aluminium Alloy	12.33	0.342	0.314	0.237	0.130	0.092	0.196	Φ62X30
NCS HS49739-5	Aluminium Alloy	14.28	0.247	0.468	0.150	0.163	0.157	0.195	Φ62X30

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Pb	Sn	Ti	Zr	(mm)
NCS HS 49740-1	Aluminium Alloy	6.92	0.090	0.017*	0.101	0.538	0.295	0.010*	0.0096*	0.027	0.028	Φ62X30
NCS HS 49740-2	Aluminium Alloy	8.24	0.165	0.049	0.395	0.371	0.136	0.105	0.018*	0.069	0.207	Φ62X30
NCS HS 49740-3	Aluminium Alloy	9.21	0.435	0.079	0.608	0.303	0.234	0.046	0.0068	0.175	0.111	Φ62X30
NCS HS 49740-4	Aluminium Alloy	10.02	0.392	0.081	0.240	0.183	0.215	0.085	0.013	0.135	0.078	Φ62X30
NCS HS 49740-5	Aluminium Alloy	11.30	0.269	0.132	0.512	0.089	0.079	0.129	0.018	0.275	0.150	Φ62X30

Number	Name	Chemical Composition(Percent)											Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Pb	Sn	Ti	Zr	Be	(mm)
NCS HS 49741-1	Aluminium Alloy	4.36	0.475	2.52	0.0187	0.163	0.010	0.0090	0.0063*	0.041	0.181	0.0047	Φ62X30
NCS HS 49741-2	Aluminium Alloy	3.69	0.364	2.01	0.134	0.317	0.067	0.029	0.017	0.118	0.172	0.021	Φ62X30
NCS HS 49741-3	Aluminium Alloy	4.89	0.294	1.45	0.245	0.421	0.151	0.051	0.019	0.154	0.107	0.011	Φ62X30
NCS HS 49741-4	Aluminium Alloy	5.05	0.186	1.02	0.347	0.600	0.201	0.088	0.014*	0.175	0.137	0.014	Φ62X30
NCS HS 49741-5	Aluminium Alloy	5.67	0.110	0.514	0.497	0.686	0.305	0.142	0.022	0.234	0.040	0.014	Φ62X30

Number	Name	Chemical Composition(Percent)							Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	(mm)
NCS HS 49742-1	Aluminium Alloy	6.03	0.076	0.080	0.040	0.140	0.038	0.083	Φ62X30
NCS HS 49742-2	Aluminium Alloy	6.53	0.238	0.131	0.130	0.211	0.121	0.127	Φ62X30
NCS HS 49742-3	Aluminium Alloy	7.17	0.396	0.179	0.211	0.290	0.206	0.136	Φ62X30
NCS HS 49742-4	Aluminium Alloy	7.79	0.571	0.243	0.313	0.381	0.304	0.219	Φ62X30
NCS HS 49742-5	Aluminium Alloy	8.00	0.758	0.295	0.404	0.494	0.422	0.223	Φ62X30
NCS HS 49742-6	Aluminium Alloy	5.57	0.076	0.065	0.011	0.584	0.013	0.0070	Φ62X30

Number	Name	Chemical Composition(Percent)							Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ti	(mm)
NCS HS 49743-1	Aluminium Alloy	8.23	0.673	0.660	0.134	0.127	8.99		Φ62X30
NCS HS 49743-2	Aluminium Alloy	6.85	0.409	0.408	0.291	0.217	11.14		Φ62X30
NCS HS 49743-3	Aluminium Alloy	5.42	0.223	0.203	0.509	0.285	12.61		Φ62X30
NCS HS 49743-4	Aluminium Alloy	7.22	0.536	0.251	0.402	0.421	13.02	0.194	Φ62X30
NCS HS 49743-5	Aluminium Alloy	4.76	0.437	0.460	0.208	0.510	13.79	0.159	Φ62X30
NCS HS 49743-6	Aluminium Alloy	3.41	0.224	0.544	0.072	0.713	16.50	0.107	Φ62X30

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Fe	Cu	Mn	Mg	Zn	Ni	Pb	Sn	(mm)
NCS HS 49744-1	Aluminium Alloy	6.78	0.166	4.64	0.531	0.063	0.097	0.024			Φ62×30
NCS HS 49744-2	Aluminium Alloy	7.55	0.443	4.00	0.451	0.124	0.374	0.024	0.0059	0.043	Φ62×30
NCS HS 49744-3	Aluminium Alloy	8.54	0.706	3.31	0.326	0.172	0.736	0.244	0.019	0.072	Φ62×30
NCS HS 49744-4	Aluminium Alloy	9.10	0.998	2.92	0.204	0.239	0.977	0.414	0.065	0.113	Φ62×30
NCS HS 49744-5	Aluminium Alloy	9.99	1.32	2.49	0.099	0.292	1.08	0.515	0.112	0.146	Φ62×30

Number	Name	Chemical Composition(Percent)												Unit Size
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Pb	Sn	Sr	Ca	(mm)
NCS HS 49745-1	Aluminium Alloy	5.45	0.064	0.063	0.010	0.617	0.012	0.0014	0.146	0.0083	0.012	0.097	0.016	0.065	Φ62×30
NCS HS 49745-2	Aluminium Alloy	5.94	0.214	0.0074	0.056	0.500	0.070	0.0053	0.069	0.049	0.073	0.014	0.144*	0.036	Φ62×30
NCS HS 49745-3	Aluminium Alloy	7.63	0.049	0.098	0.160	0.426	0.0081	0.016	0.0091	0.018	0.0060	0.0058	0.031	0.0083	Φ62×30
NCS HS 49745-4	Aluminium Alloy	6.93	0.108	0.015	0.075	0.096	0.051	0.0065	0.098	0.148	0.100	0.088	0.101	0.017	Φ62×30
NCS HS 49745-5	Aluminium Alloy	6.62	0.220	0.042	0.117	0.198	0.030	0.029	0.039	0.179	0.027	0.046	0.067	0.0077	Φ62×30
NCS HS 49745-6	Aluminium Alloy	8.62	0.278	0.027	0.109	0.313	0.040	0.020	0.034	0.105	0.045	0.033	0.0033*	0.0021	Φ62×30

Number	Name	Chemical Composition(Percent)							Unit Size
		Fe	Si	Mn	Ni	Cu	Al	Zn	(mm)
NCS HS 50704-1	ZLD202	0.15	0.37	1.21	1.27	10.00	margin	0.49	50×40×30
NCS HS 50704-2	ZLD202	0.49	0.26	0.51	0.38	10.00	margin	1.70	50×40×30
NCS HS 50704-3	ZLD202	0.99	1.00	0.21	0.78	10.00	margin	0.17	50×40×30
NCS HS 50704-4	ZLD202	0.29	1.70	0.77	0.15	10.00	margin	0.28	50×40×30
NCS HS 50704-5	ZLD202	1.38	0.67	0.33	0.24	10.00	margin	0.91	50×40×30

Number	Name	Chemical Composition(Percent)										Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Al	Zn	Sn	Pb	(mm)
NCS HS 50705-1	ZLD110	1.16	3.25	0.12	0.13	0.068	8.48	margin	0.124	0.0080	0.099	30×35×50
NCS HS 50705-2	ZLD110	0.81	4.13	0.15	0.25	0.48	7.19	margin	0.18	0.0052	0.018	30×35×50
NCS HS 50705-3	ZLD110	1.30	5.13	0.73	0.39	0.176	5.89	margin	0.69	0.017	0.071	30×35×50
NCS HS 50705-4	ZLD110	0.50	6.21	0.46	0.58	0.30	4.81	margin	0.44	0.011	0.042	30×35×50
NCS HS 50705-5	ZLD110	0.21	7.84	0.26	0.89	0.125	3.97	margin	0.26	0.028	0.028	30×35×50

Number	Name	Chemical Composition(Percent)											Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Al	Ti	Zn	Sn	Pb	(mm)
NCS HS 50707-1	ZLD109	0.17	14.06	0.078	0.64	0.62	0.34	margin	0.11	0.12	0.044	0.037	30×35×50
NCS HS 50707-2	ZLD109	0.24	12.35	0.43	0.83	0.86	0.57	margin	0.14	0.43	0.0064	0.089	30×35×50
NCS HS 50707-3	ZLD109	0.39	11.61	0.21	1.19	1.00	0.82	margin	0.19	0.19	0.016	0.058	30×35×50
NCS HS 50707-4	ZLD109	0.58	10.64	0.28	1.28	1.58	1.18	margin	0.26	0.37	0.0074	0.14	30×35×50
NCS HS 50707-5	ZLD109	0.91	9.25	0.12	1.95	2.04	1.91	margin	0.049	0.050	0.031	0.21	30×35×50

Number	Name	Chemical Composition(Percent)											Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Al	Ti	Zn	Sn	Pb	(mm)
NCS HS 50708-1	ZLD108	0.28	14.18	0.24	0.315	0.099	0.70	margin	0.145	0.084	0.0056	0.022	30×35×50
NCS HS 50708-2	ZLD108	0.324	12.61	0.36	1.17	0.19	1.015	margin	0.156	0.235	0.0173	0.034	30×35×50
NCS HS 50708-3	ZLD108	0.406	11.49	0.48	0.86	0.317	1.42	margin	0.18	0.106	0.011	0.052	30×35×50
NCS HS 50708-4	ZLD108	0.90	9.97	0.644	0.655	0.42	1.77	margin	0.105	0.133	0.021	0.071	30×35×50
NCS HS 50708-5	ZLD108	0.62	8.88	0.98	0.43	0.607	2.40	margin		0.487	0.038	0.12	30×35×50

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)									Unit Size
		Cu	Mg	Mn	Fe	Si	Zn	Sn			(mm)
NCS HS 50709a-1	ZLD101	0.086	0.090	0.091	0.29	11.93	0.14				35×35×40
NCS HS 50709a-2	ZLD101	0.18	0.17	0.44	0.78	9.01	0.17	0.0075			35×35×40
NCS HS 50709a-3	ZLD101	0.48	0.074		0.17	9.99	0.30	0.012			35×35×40
NCS HS 50709a-4	ZLD101	0.29	0.31	0.24	1.12	6.28	0.10	0.0041			35×35×40
NCS HS 50709a-5	ZLD101	0.82	0.48	0.7	0.42	5.32	0.50	0.019			35×35×40
Number	Name	Chemical Composition(Percent)									Unit Size
		Fe	Si	Mn	Mg	Cu	Al	Zn	Sn	Pb	(mm)
NCS HS 50710-1	ZLD203		2.05	0.052	0.017	4.47	margin	0.070	0.006	0.020	30×35×50
NCS HS 50710-2	ZLD203	0.37	1.44	0.15	0.096	4.47	margin	0.091	0.022	0.025	30×35×50
NCS HS 50710-3	ZLD203	0.31	0.86	0.084	0.018	4.50	margin	0.30	0.014	0.043	30×35×50
NCS HS 50710-4	ZLD203	0.56	0.49	0.25	0.035	4.48	margin	0.16	0.012	0.072	30×35×50
NCS HS 50710-5	ZLD203	0.81	0.34	0.13	0.068	4.45	margin	0.30		0.13	30×35×50
NCS HS 50710-6	ZLD203	0.27	1.32	0.19	0.062	4.56	margin	0.14	0.0095	0.028	30×35×50
Number	Name	Chemical Composition(Percent)							Unit Size
		Fe	Si	Mn	Mg	Cu	Al	Zn	(mm)
NCS HS 50711-1	ZLD401	0.43	7.00	0.38	0.10	0.68	margin	11.00	30×35×50
NCS HS 50711-2	ZLD401	0.67	7.00	0.19	0.17	0.89	margin	11.00	30×35×50
NCS HS 50711-3	ZLD401	1.01	7.00	0.28	0.20	0.24	margin	11.00	30×35×50
NCS HS 50711-4	ZLD401	0.24	7.00	0.56	0.40	0.42	margin	11.00	30×35×50
NCS HS 50711-5	ZLD401	0.15	7.00	0.95	0.65	0.15	margin	11.00	30×35×50
Number	Name	Chemical Composition(Percent)						Unit Size
		Cu	Mg	Mn	Fe	Si	Zn	(mm)
NCS HS 50712-1	ZLD203	0.28	3.78	0.48	1.00	1.73	0.41	30×35×50
NCS HS 50712-2	ZLD203	0.17	4.34	0.32	0.70	0.85	0.22	30×35×50
NCS HS 50712-3	ZLD203	1.10	5.30	0.172	0.46	1.13	0.164	30×35×50
NCS HS 50712-4	ZLD203	0.055	6.57	0.11	0.29	0.65	0.11	30×35×50
NCS HS 50712-5	ZLD203	0.036	7.68	0.063	0.17	0.48	0.071	30×35×50
Number	Name	Chemical Composition(Percent)							Unit Size
		Si	Mg	Mn	Fe	Cu	Zn	Ni	(mm)
NCS HS 50713-1	ZL3	6.50	0.30	0.14	0.12	5.42	0.18	0.088	30×35×40
NCS HS 50713-2	ZL3	5.31	0.52	0.090	0.22	7.30	0.12	0.42	30×35×40
NCS HS 50713-3	ZL3	4.27	0.19	0.23	0.26	9.01	0.59	0.61	30×35×40
NCS HS 50713-4	ZL3	8.27		0.68	0.44	4.30	0.90	0.052	30×35×40
NCS HS 50713-5	ZL3	6.40	0.67	0.42	0.68	6.18	0.37		30×35×40

Section 8 Nonferrous Metal(Disk)
1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Sn	Pb	RE	(mm)
NCS HS 53703-1	Pure Aluminum	0.071	0.067	0.0077	0.0044	0.0092	0.015	0.012	0.0088				Φ38×32
NCS HS 53703-2	Pure Aluminum	0.166	0.133	0.029	0.017	0.019	0.0093	0.026	0.013				Φ38×32
NCS HS 53703-3	Pure Aluminum	0.59	0.58	0.014	0.022	0.032	0.291	0.041	0.122				Φ38×32
NCS HS 53703-4	Pure Aluminum	0.35	0.29	0.055	0.040	0.054	0.033	0.062	0.035	0.047	0.035	0.029	Φ38×32
NCS HS 53703-5	Pure Aluminum	1.31	1.28	0.112	0.103	0.100	0.079	0.093	0.073				Φ38×32

Number	Name	Chemical Composition(Percent)										Unit Size
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Cr	Be	(mm)
NCS HS53704-1	Al Alloy	1.17	0.907	1.04	1.71	0.153	0.222	0.218	0.293	0.130	0.000498	Φ38×32
NCS HS53704-2	Al Alloy	0.392	0.587	0.417	3.41	0.076	0.083	0.100	0.031	0.066	0.000158	Φ38×32
NCS HS53704-3	Al Alloy	0.654	0.379	0.215	4.72	0.102	0.117	0.168	0.178	0.391	0.00528	Φ38×32
NCS HS53704-4	Al Alloy	0.248	0.187	0.742	6.62	0.034	0.033	0.021	0.111	0.022	0.00146	Φ38×32
NCS HS53704-5	Al Alloy	0.122	0.082	0.102	7.81	0.023	0.012	0.060	0.047	0.183	0.00315	Φ38×32

Number	Name	Chemical Composition(Percent)						Unit Size
		Si	Mg	Mn	Fe	Cu	Zn	(mm)
NCS HS 57701-1	AlSi6 Cu4	4.71	0.19	0.57	0.41	5.28	0.59	45×33×28
NCS HS 57701-2	AlSi6 Cu4	8.61	0.18	0.40	0.63	1.45	0.79	45×33×28
NCS HS 57701-3	AlSi6 Cu4	5.63	0.40	0.79	0.50	3.54	1.25	45×33×28
NCS HS 57701-4	AlSi6 Cu4	6.17	0.21	0.46	0.56	3.98	0.30	45×33×28
NCS HS 57701-5	AlSi6 Cu4	9.49	0.23	0.21	1.01	0.99	0.77	45×33×28
NCS HS 57701-6	AlSi6 Cu4	10.40	0.53	0.30	0.79	2.27	1.16	45×33×28

Number	Name	Chemical Composition(Percent)											Unit Size
		Fe	Si	Zn	Cu	Mg	Mn	Ti	Ga	V	Cr	B	(mm)
NCS HS 91701-1	Pure Aluminum	0.055	0.047	0.0081	0.0056	0.0024	0.0019	0.0018	0.0042	0.0012	0.0005	0.0005	Φ60×33
NCS HS 91701-2	Pure Aluminum	0.14	0.11	0.031	0.01	0.022	0.0084	0.0063	0.03	0.0052	0.0015	0.0006	Φ60×33
NCS HS 91701-3	Pure Aluminum	0.773	0.634	0.035	0.03	0.0096	0.017	0.015	0.026	0.0028	0.0048	0.0022	Φ60×33
NCS HS 91701-4	Pure Aluminum	0.325	0.203	0.126	0.058	0.067	0.026	0.029	0.012	0.0047	0.0099	0.0039	Φ60×33
NCS HS 91701-5	Pure Aluminum	0.435	0.347	0.074	0.097	0.038	0.042	0.048	0.05	0.0086	0.015	0.0097	Φ60×33
NCS HS 91701-6	Pure Aluminum	0.744	0.537	0.106	0.147	0.069	0.065	0.079	0.076	0.029	0.025	0.016	Φ60×33

Number	Name	Chemical Composition(Percent)								Unit Size
		Fe	Si	Zn	Cu	Mg	Mn	Ti	Cr	(mm)
NCS HS 91702-1	Aluminum Alloy	0.587	0.109	0.004	0.306	0.189	0.414	0.002	0.176	Φ60×33
NCS HS 91702-2	Aluminum Alloy	0.457	0.199	0.012	0.202	0.396	0.314	0.0065	0.107	Φ60×33
NCS HS 91702-3	Aluminum Alloy	0.358	0.39	0.158	0.05	0.589	0.053	0.085	0.054	Φ60×33
NCS HS 91702-4	Aluminum Alloy	0.365	0.586	0.048	0.101	0.871	0.207	0.034	0.031	Φ60×33
NCS HS 91702-5	Aluminum Alloy	0.155	0.785	0.071	0.02	1.23	0.105	0.053	0.011	Φ60×33
NCS HS 91702-6	Aluminum Alloy	0.09	1.05	0.022	0.0092	1.51	0.021	0.011	0.0052	Φ60×33

Number	Name	Chemical Composition(Percent)										Unit Size
		Si	Fe	Cu	Mg	Zn	Mn	Ti	Sn	Pb	Zr	Ni	(mm)
NCS HS 11901	Aluminum Alloy	7.18	0.459	0.210	0.43	0.179	0.335	0.123	0.011	0.056	0.117		Φ50×30
NCS HS 11902	Aluminum Alloy	8.24	0.464	1.50	0.52	0.178	0.485	0.225	0.010	0.048		0.012	Φ50×30

Section 8 Nonferrous Metal(Disk)
2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)											Unit Size
		Fe	P	Zn	Sn	Sb	Pb	Bi	Cu	Ni	Si	Mn	Al	(mm)
NCS HS 28703-1	Pb brass	0.028	0.0043	23.99	0.019	0.0036	2.77	0.0009	73	0.003		0.0048		Φ35×28
NCS HS 28703-2	Pb brass	0.036	0.012	33.45	0.32	0.0034	1.87	0.0015	64.43	0.0023	0.0012	0.174	0.015	Φ35×28
NCS HS 28703-3	Pb brass	0.047	0.0042	38.79	0.108	0.0061	0.766	0.0015	60.28	0.0019		0.0046		Φ35×28
NCS HS 28703-4	Pb brass	0.167	0.011	38.85	0.102	0.0077	1.5	0.0024	59.14	0.0027	0.0016	0.031	0.064	Φ35×28
NCS HS 28703-5	Pb brass	0.11	0.02	39.59	0.269	0.013	1.81	0.0025	58.07	0.0025		0.029	0.034	Φ35×28
NCS HS 28703-6	Pb brass	0.037	0.044	41.76	0.478	0.022	0.581	0.001	59.62	0.0023		0.05	0.271	Φ35×28
NCS HS 28703-7	Pb brass	0.502	0.02	34.92	0.75	0.029	3.06	0.0083	59.55	0.0035	0.0077	0.464	0.364	Φ35×28

Number	Name	Chemical Composition(Percent)											Unit Size
		Fe	P	Zn	Sn	Sb	Pb	Bi	Cu	Ni	Si	As		(mm)
NCS HS 28704-1	Copper alloy	0.288	0.084	39.01	0.0047	0.023	0.318	0.0016	59.89	0.015		0.043		Φ35×28
NCS HS 28704-2	Copper alloy	0.116	0.039	37.53	0.0051	0.0046	0.108	0.0028	61.88	0.0032	0.0029	0.0038		Φ35×28
NCS HS 28704-3	Copper alloy	0.052	0.011	30.44	0.0081	0.0072	0.018	0.0043	69.08	0.006		0.0094		Φ35×28
NCS HS 28704-4	Copper alloy	0.11	0.013	18.75	0.01	0.01	0.017	0.0084	80.9	0.013		0.027		Φ35×28
NCS HS 28704-5	Copper alloy	0.028	0.0052	14.79	0.011	0.0091	0.029	0.0066	85.06	0.0045	0.0019	0.0079		Φ35×28
NCS HS 28704-6	Copper alloy	0.024	0.0071	9.76	0.0010	0.0031	0.0084	0.0054	90.02	0.0045		0.0019		Φ35×28
NCS HS 28704-7	Copper alloy	0.012	0.0046	4.02	0.0010	0.0013	0.0028	0.0019	95.9	0.0047	0.0024	0.0021		Φ35×28

Number	Name	Chemical Composition(Percent)										Unit Size
		Fe	Si	Mn	P	Mg	Cu	As	Sb	Pb	Bi		(mm)
NCS HS 43708-1	Monel Metal	(2.33)	0.035	1.12	0.011	0.012	(28.64)	0.030	0.0014	0.0021	0.0011		23×28×70
NCS HS 43708-2	Monel Metal	(2.67)	0.0225	1.16	0.0048	0.096	(28.06)	0.0076	0.0018	0.0026	0.0016		23×28×70
NCS HS 43708-3	Monel Metal	(2.48)	0.21	1.53	0.014	0.40	(27.69)	0.049	0.0063		0.0028		23×28×70
NCS HS 43708-4	Monel Metal	(2.42)	0.035	1.31	0.0054	0.042	(27.85)	0.015	0.0040	0.0056	0.0047		23×28×70
NCS HS 43708-5	Monel Metal	(2.42)	0.078	1.58	0.020	0.19	(28.11)	0.0063	0.0026	0.010	0.0079		23×28×70
NCS HS 43708-6	Monel Metal	(2.36)		1.40			(28.29)			0.0013			23×28×70

Number	Name	Chemical Composition(Percent)										Unit Size
		Fe	Si	Mn	P	Ni	Zn	Sn	As	Sb	Pb		(mm)
NCS HS 43709-1	Silicon Bronze	0.089	(2.83)	(1.21)	0.015	0.075	0.90	0.50	0.0010	0.00104	0.0102		Φ30×57
NCS HS 43709-2	Silicon Bronze	0.16	(3.03)	(1.21)	0.026	0.13	0.55	0.30	0.0017	0.0017	0.017		Φ30×57
NCS HS 43709-3	Silicon Bronze	0.21	(3.04)	(1.24)	0.036	0.18	0.36	0.19	0.0026	0.0025	0.024		Φ30×57
NCS HS 43709-4	Silicon Bronze	0.34	(3.04)	(1.25)	0.56	0.26	0.23	0.12	0.0042	0.0042	0.036		Φ30×57
NCS HS 43709-5	Silicon Bronze	0.56	(2.93)	(1.17)	0.088	0.41	0.16	0.070	0.0068	0.0066	0.059		Φ30×57

Section 8 Nonferrous Metal(Disk)
2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Fe	Mn	Al										
NCS HS 43712-1	Aluminum Bronze	4.94	2.63	7. 76										Φ32×45
NCS HS 43712-2	Aluminum Bronze	4.17	2.92	8. 78										Φ32×45
NCS HS 43712-3	Aluminum Bronze	3.51	2.01	9. 75										Φ32×45
NCS HS 43712-4	Aluminum Bronze	2.45	1.37	11.75										Φ32×45
NCS HS 43712-5	Aluminum Bronze	1.63	0.61	10.85										Φ32×45

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Fe	P	Cu	As	Sb	Pb	Bi						
NCS HS 43714-1	H68,Brass	0.251	0.041	(65.73)	0.016	0.025	0.013	0.0084						Φ32x40
NCS HS 43714-2	H68,Brass	0.138	0.024	(68.37)	0.046	0.0046	0.028	0.0016						Φ32x40
NCS HS 43714-3	H68,Brass	0.078	0.012	(67.24)	0.126	0.0084	0.042	0.0030						Φ32x40
NCS HS 43714-4	H68,Brass	0.041	0.0087	(65.66)	0.078	0.014	0.079	0.0048						Φ32x40
NCS HS 43714-5	H68,Brass	0.024	0.0054	(68.60)	0.027	0.0025	0.139	0.00073						Φ32x40

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Fe	P	Cu	As	Sb	Pb	Bi						
NCS HS 43715-1	Brass	0.046	0.0092	60.03		0.016	0.074	0.0049						Φ35X23
NCS HS 43715-2	Brass	0.018	0.0046	62.40		0.0026	0.132	0.00075						Φ35X23
NCS HS 43715-3	Brass	0.251	0.041	65.73	0.016	0.025	0.013	0.0088						Φ35X23
NCS HS 43715-4	Brass	0.153	0.022	68.73	0.048	0.0051	0.028	0.0016						Φ35X23
NCS HS 43715-5	Brass	0.338	0.013	58.96	0.088	0.011	0.391	0.0030						Φ35X23
NCS HS 43715-6	Brass	0.473	0.038	71.88	0.129	0.020	0.251	0.0061						Φ35X23
NCS HS 43715-7	Brass		0.062	55.39			0.563							Φ35X23

Number	Name	Chemical Composition(Percent)												Unit Size (mm)
		Pb	Fe	Bi	Sb	As	Sn	N1	Zn	P	S	Se	Te	
NCS HS 43716a-1	Pure Copper		0.0022						0.0015	0.02	0.0013	0.0013	0.0016	Φ40X40
NCS HS 43716a-2	Pure Copper	0.0016	0.007	0.0006	0.0021	0.0013	0.00097	0.0025	0.0024	0.0017	0.0021	0.0013	0.0016	Φ40X40
NCS HS 43716a-3	Pure Copper	0.0037	0.0047	0.0033	0.0032	0.0026	0.0018	0.0035	0.0042	0.0029	37	0.0022	0.0016	Φ40X40
NCS HS 43716a-4	Pure Copper	0.00097	0.0032	0.00095	0.00098	0.0032	0.0037	0.0011	0.0087	0.0088	0.0019			Φ40X40
NCS HS 43716a-5	Pure Copper	0.0079		0.0017	0.0052	0.0052	0.007	0.0118	0.0182	0.0103	0.0050	0.0051	0.0052	Φ40X40
NCS HS 43716a-6	Pure Copper	0.0154	0.0475	0.0059	0.0077	0.0083	0.0142	0.009		0.0222	0.0047	0.0071	0.0082	Φ40X40
NCS HS 43716a-7	Pure Copper	0.0445	0.0652	0.019	0.021	0.025	0.0489	0.0423	0.0443	0.0414	0.0044	0.0109	0.012	Φ40X40
NCS HS 43716a-8	Pure Copper	0.0312	0.0198	0.0093	0.0108	0.0136	0.0183	0.0242	0.0331	0.0299	0.0063	0.007	0.0054	Φ40X40
NCS HS 43716a-9	Pure Copper	0.0558		0.0062	0.0078	0.0139	0.0689	0.0687	0.0247	0.0587	0.0091	0.0104	0.0087	Φ40X40
NCS HS43716a-10	Pure Copper	0.0057	0.142	0.0019		0.0201	0.0592	0.0527	0.0512	0.0336	0.0077			Φ40X40

Number	Name	Chemical Composition(Percent)						Unit Size (mm)
		Cu	Fe	Pb	Sb	P	Bi	
NCS HS 43717-1	H62,Brass	(61.96)	0.242	0.022	0.025	0.061	0.0081	Φ35X40
NCS HS 43717-2	H62,Brass	(61.71)	0.131	0.042	0.0046	0.035	0.0015	Φ35X40
NCS HS 43717-3	H62,Brass	(61.33)	0.076	0.255	0.0083	0.018	0.0029	Φ35X40
NCS HS 43717-4	H62,Brass	(60.63)	0.046	0.074	0.016	0.092	0.0049	Φ35X40
NCS HS 43717-5	H62,Brass	62.40	0.018	0.132	0.0026	0.0046	0.00075	Φ35X40

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Cu	Ag	Sn	Ni	Fe	Si	Zn	C	S	Cd	Cr	
NCS HS 43720-1	Copper alloy	99.995	0.0011	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	0.001	Φ35X25
NCS HS 43720-2	Copper alloy	98.5	0.092	0.059	0.039	0.11	0.034	0.12		0.04		0.075	Φ35X25
NCS HS43720-3	Copper alloy	98.77	0.003	0.002	0.053	0.1	0.042					0.81	Φ35X25
NCS HS43720-4	Copper alloy	59.79		0.42	0.39		1.04	35.49					Φ35X25
NCS HS43720-5	Copper alloy	78.22		0.26	4.46	3.34	0.3	0.73					Φ35X25
NCS HS43720-6	Copper alloy	66.53		0.1	29.45	1.08	0.25	0.58	0.1				Φ35X25
NCS HS43720-7	Copper alloy	85.43		0.059	11.07	1.18	0.1	0.42	0.008				Φ35X25

Section 8 Nonferrous Metal(Disk)
2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)												Unit Size
		Zr	Mg	Co	Mn	Sb	Al	As	P	Se	Te	Bi		(mm)
NCS HS 43720-1	Copper alloy	0.0003	0.0003	<0.0002	<0.0001	<0.0002	<0.0002	0.0003	0.0006	<0.0002	<0.0002	<0.0002		
NCS HS 43720-2	Copper alloy		0.005	0.095	0.059	0.061	0.12	0.29	0.071	0.006	0.059	0.035		
NCS HS 43720-3	Copper alloy	0.13	0.081			0.006	0.019	0.015	0.001			0.001		
NCS HS 43720-4	Copper alloy				0.57		1.16	0.023	0.025			0.005		
NCS HS 43720-5	Copper alloy				2.97	0.006	9.44		0.018					
NCS HS 43720-6	Copper alloy		0.07	0.49	1.06	0.021	0.19		0.012					
NCS HS 43720-7	Copper alloy			0.59	1.09	0.006		0.024	0.01			0.006		

Number	Name	Chemical Composition(Percent)												Unit Size
		Sn	Zn	Pb	Fe	Ni	Bi	Sb	P	As	Mg	S	Co	(mm)
NCS HS 43722-1	Copper alloy	0.1	0.294	0.098	0.536	0.05	0.0005	0.006	0.195	0.028	0.073	0.0056	0.024	Φ40×45
NCS HS 43722-2	Copper alloy	0.048	0.047	0.05	1.37	0.03	0.005	0.0021	0.051	0.0094	0.2	0.0028	0.048	Φ40×45
NCS HS 43722-3	Copper alloy	0.03	0.122	0.031	2.25	0.009	0.0022	0.0022	0.027	0.0043	0.015	0.0009	0.1	Φ40×45
NCS HS 43722-4	Copper alloy	0.015	0.0031	0.01	2.61	0.0024	0.011	0.021	0.111	0.002	0.084	0.0009	0.14	Φ40×45
NCS HS 43722-5	Copper alloy	0.0054	0.027	0.0063	2.37	0.001	0.022	0.011	0.0054	0.02	0.011	0.0019	0.01	Φ40×45

Number	Name	Chemical Composition(Percent)										Unit Size
		Sn	Pb	Fe	Ni	Bi	Sb	P	Cu	As	S	(mm)
NCS HS 43723-1	Copper alloy	1.038	0.0054	0.448	0.98	3.002	0.0022	0.015	59.387	0.029	0.0011	Φ40×45
NCS HS 43723-2	Copper alloy	0.306	0.105	0.093	0.32	0.414	0.03	0.0088	60.903	0.015	0.0015	Φ40×45
NCS HS 43723-3	Copper alloy	0.518	0.0161	0.137	2.13	1.561	0.014	0.087	60.088	0.0054	0.012	Φ40×45
NCS HS 43723-4	Copper alloy	2.007	0.0209	0.645	2.94	0.826	0.1	0.0039	60.14	0.0097	0.015	Φ40×45
NCS HS 43723-5	Copper alloy	3.02	0.0059	0.0113	0.11	0.108	0.0047	0.0016	61.642	0.002	0.0018	Φ40×45

Number	Name	Chemical Composition(Percent)												Unit Size
		Cu	Pb	Fe	Ni	Mn	Al	Si	Sn	Bi	Sb	P	S	(mm)
NCS HS 43724-1	Lead Brass	59.984	0.414	0.205	0.474	0.119	0.0749	0.0049	0.0099	(0.0110)	(0.0056)	(0.00077)	(0.00077)	Φ40×20
NCS HS 43724-2	Lead Brass	57.767	0.760	0.0426	0.795	0.184	0.0116	0.0093	0.0979	(0.0050)	(0.0021)	(0.0015)	(0.0015)	Φ40×20
NCS HS 43724-3	Lead Brass	57.089	1.421	0.0104	0.347		0.177	0.0520	0.192	(0.0030)	(0.0116)	(0.00099)	(0.00099)	Φ40×20
NCS HS 43724-4	Lead Brass	58.641	1.810	(0.703)	0.104	0.0188	0.452	(0.0070)	0.293	(0.0049)	(0.0102)	(0.00060)	(0.00060)	Φ40×20
NCS HS 43724-5	Lead Brass	58.761	2.396	0.107	0.0286	0.0517	0.761	0.209	0.689	(0.0010)	(0.0048)	(0.0010)	(0.0010)	Φ40×20
NCS HS 43724-6	Lead Brass	59.597	1.393	0.613	0.386	0.0345	0.262	0.0424	0.206	(0.0030)	(0.0291)	(0.00094)	(0.00094)	Φ40×20

Section 8 Nonferrous Metal(Disk)
2)Copper & Copper Alloy

Number	Name	Chemical Composition(Percent)											Unit Size
		Cu	Ni	Zn	Pb	Fe	Si	Mn	P	Mg	Bi	Sb	As	(mm)
NCS HS 45716-1	Ni Brass	75.85	2.06	20.14	0.064	0.86	0.015	0.97	0.0032	0.0096	0.0102	0.0103	0.0039	Φ38×30
NCS HS 45716-2	Ni Brass	75.44	3.5	19.62	0.04	0.63	0.06	0.65	0.0051	0.032	0.007	0.0072	0.007	Φ38×30
NCS HS 45716-3	Ni Brass	75.43	4.95	18.68	0.025	0.35	0.118	0.37	0.009	0.05	0.0039	0.004	0.0104	Φ38×30
NCS HS 45716-4	Ni Brass	75.87	6.42	16.79	0.015	0.23	0.333	0.24	0.016	0.069	0.002	0.002	0.014	Φ38×30
NCS HS 45716-5	Ni Brass	75.82	7.85	15.48	0.0056	0.085	0.498	0.104	0.022	0.11	0.0011	0.0011	0.02	Φ38×30

Number	Name	Chemical Composition(Percent)								Unit Size
		Cu	Sn	Ni	Al	Fe	Pb	P	Zn	(mm)
NCS HS 45721-1	Sn Bronze	remain	4.06	0.31	0.00096	0.116	0.072	0.33	0.22	Φ39X30
NCS HS 45721-2	Sn Bronze	remain	5.39	0.24	0.00096	0.014	0.091	0.062	0.47	Φ39X30
NCS HS 43715-3	Sn Bronze	remain	6.34	0.178	0.00085	0.034	0.031	0.154	0.43	Φ39X30
NCS HS 45721-4	Sn Bronze	remain	7.16	0.118	0.00098	0.063	0.013	0.218	0.33	Φ39X30
NCS HS 45721-5	Sn Bronze	remain	8.27	0.053	0.004	0.089	0.049	0.289	0.24	Φ39X30
NCS HS 45721-6	Sn Bronze	remain	6.52	0.18	0.0013	0.019	0.02	0.31	34	Φ39X30

Number	Name	Chemical Composition(Percent)											Unit Size
		Se	Te	Bi	Cr	Mn	Sb	Cd	As	P	Pb	S	Sn	(mm)
NCS HS 52704-1	Cathode Copper	0.00002	0.00003	0.00002	0.00002	0.00003	0.00002	0.00001	0.00001	0.00005	0.00003	0.00015	0.00001	Φ40X30
NCS HS 52704-2	Cathode Copper	0.00011	0.00007	0.00004	0.00003	0.00005	0.00003	0.00013	0.00014	0.00015	0.00016	0.00021	0.00009	Φ40X30
NCS HS 52704-3	Cathode Copper	0.00019	0.00015	0.00014	0.00046	0.00042	0.00028	0.00046	0.00057	0.00085	0.00055	0.0019	0.00055	Φ40X30
NCS HS 52704-4	Cathode Copper	0.00034	0.00041	0.00059	0.0012	0.0011	0.0015	0.0012	0.0018	0.0026	0.0021	0.0039	0.0012	Φ40X30
NCS HS 52704-5	Cathode Copper	0.00087	0.0011	0.0012	0.0032	0.0027	0.0031	0.003	0.0038	0.0056	0.0044	0.0082	0.0026	Φ40X30

		Ni	Fe	Si	Zn	Co	Ag
NCS HS 52704-1	Cathode Copper	0.00009	0.00016	0.00015	0.00004	0.00001	0.00007
NCS HS 52704-2	Cathode Copper	0.00021	0.00014	0.00009	0.00014	0.00013	0.0011
NCS HS 52704-3	Cathode Copper	0.00061	0.00066	0.00054	0.00093	0.00056	0.003
NCS HS 52704-4	Cathode Copper	0.0023	0.0024	0.0014	0.0026	0.0018	0.0053
NCS HS 52704-5	Cathode Copper	0.006	0.0054	0.0034	0.0052	0.0035	0.0072

Section 8 Nonferrous Metal(Disk)
3)Magnesium & Other Metal

Number	Name	Chemical Composition(Percent)												Unit Size
		Fe	Si	Al	C	V								(mm)
NCS HS 44701-1	Titanium alloy	0.39	0.277	3.9	0.158	5.65								Φ36X25
NCS HS 44701-2	Titanium alloy	0.314	0.196	4.67	0.119	5.01								Φ36X25
NCS HS 44701-3	Titanium alloy	0.239	0.115	5.38	0.095	3.41								Φ36X25
NCS HS 44701-4	Titanium alloy	0.143	0.052	6.48	0.051	4.46								Φ36X25
NCS HS 44701-5	Titanium alloy	0.131	0.085	6.78	0.023	3.85								Φ36X25
NCS HS 44701-6	Titanium alloy	0 .073	0.031	7.03	0.0193	2.75								Φ36X25

Number	Name	Chemical Composition(Percent)								Unit Size
		S1	Fe	Cu	Mn	Ni	Zn	Al	Be	(mm)
NCS HS 49722-1	Magnesiam Alloy	0.026	0.0025	(0.0024)	0.016	0.0006	(0.0069)	5.81	0.00007	Φ45X25
NCS HS 49722-2	Magnesiam Alloy	0.024	0.0042	0.0036	0.077	0.0010	3.76	4.68	0.00009	Φ45X25
NCS HS 49722-3	Magnesiam Alloy	0.097	0.013	0.087	0.339	0.0045	2.99	7.18	0.00044	Φ45X25
NCS HS 49722-4	Magnesiam Alloy	0. 28	0.023	0.164	0.231	(0.013)	1. 94	6.96	0.0010	Φ45X25
NCS HS4 9722-5	Magnesiam Alloy	0.176	(0.020)	0.295	(0.68)	0.018	0.217	11.52	(0.0023)	Φ45X25
NCS HS 49722-6	Magnesiam Alloy	0.43	0.039	0.0098	0.61	0.0036	0.98	9.07	0.0029	Φ45X25

Number	Name	Chemical Composition(Percent)								Unit Size
		Si	Fe	Cu	Mn	Ni	Zn	Al	Be	(mm)
NCS HS 49723-1	Magnesiam Alloy	0.034	(0.039)	0.0029	0.92	0.0012	0.057	6.10	(0.0020)	Φ45X25
NCS HS 49723-2	Magnesiam Alloy	0.173	0.0089	0. 0081	0.338	0.0008	0.237	2.55	0.0009	Φ45X25
NCS HS 49723-3	Magnesiam Alloy	0.27	0.015	0.020	0.182	(0.0015)	0.171	7.33	0.00015	Φ45X25
NCS HS 49723-4	Magnesiam Alloy	0.286	(0.016)	0.020	0.428	(0.0068)	0.271	6.29	(0.0010)	Φ45X25
NCS HS 49723-5	Magnesiam Alloy	0.239	0.025	0.013	(0.65)	0.0025	0.105	4.57	0.0009	Φ45X25
NCS HS 49723-6	Magnesiam Alloy	0.065	0.0049	0.010	0.130	0.010	0.492	1.36	0.0033	Φ45X25

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Fe	Cu	Mn	Zn	Ti	Ni	Al	Pb	(mm)
NCS HS 49725-1	Pure Magnesium	0.011	0.0028	0.0012	0.017	0.011	0. 00027	0.00035	0.011	0.0052	Φ45X25
NCS HS 49725-2	Pure Magnesium	0.062	0.027	0.0077	0. 085	0.047	0.00018	0.011	0.531	0.037	Φ45X25
NCS HS 49725-3	Pure Magnesium	0.023	0.0083	0.0087	0.019	0.012	0.000062	0.0021	0.017	0.0067	Φ45X25
NCS HS 49725-4	Pure Magnesium	0.034	0.0069	0.014	0. 023	0.019	0.0012	0.0044	0.262	0.012	Φ45X25
NCS HS 49725-5	Pure Magnesium	0. 0063	0.0022	0.00063	0.0060	0.0076	0.000072	0.00033	0.0059	0.0020	Φ45X25
NCS HS 49725-6	Pure Magnesium	0.020	0.020	0.025	0.148	0.025	0.0025	0.0052	1.06	0. 018	Φ45X25
NCS HS 49725-7	Pure Magnesium	0. 030	0.0055	0.0039	0.017	0.013	0.00010	0.0013	0.0082	0.0067	Φ45X25

Number	Name	Chemical Composition(Percent)													Unit Size
		Al	Mo	Nb	Sn	Zr	Cr	Si	Fe	C	O*	N*	H*	V	(mm)
NCS HS 93741	Titanium Alloy	6.24						0.024	0.047	0.013				4.08	Φ36X25
NCS HS 93742	Titanium Alloy	5.99	2.89	1.97	2.24	1.99	1.22	0.067	0.05	0.01	0.13	0.01	0.001		Φ36X25

Section 8 Nonferrous Metal(Disk)
3)Magnesium & Other Metal

Number	Name	Chemical Composition(Percent)							Unit Size (mm)
		As	Bi	Sn	Ag	Sb	Cd	Pb	
NCS HS 45723-1	Pb-Sn Alloy	0.0032	0.0053	0.884	0.0022	0.02	0.0038	remain	D45x25
NCS HS 45723-2	Pb-Sn Alloy	0.0087	0.0191	2.02	0.0068	0.056	0.0042	remain	D45x25
NCS HS 45723-3	Pb-Sn Alloy	0.013	0.034	3.05	0.0112	0.093	0.0091	remain	D45x25
NCS HS 45723-4	Pb-Sn Alloy	0.02	0.0491	4.16	0.0156	0.137	0.0126	remain	D45x25

Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		Cu	Ag	Bi	As	Sb	Sn	Zn	Ni	Cd	Fe*	
NCS HS 52702-1	Pure Lead	0.0004	0.0002	0.00055	0.00012	0.00025	0.00015	0.00015	0.00015	0.0001	0.00025	Φ40X25
NCS HS 52702-2	Pure Lead	0.0011	0.0011	0.0047	0.00043	0.0017	0.0002	0.00032	0.00063	0.00055	0.0003	Φ40X25
NCS HS 52702-3	Pure Lead	0.0029	0.0025	0.021	0.00092	0.0056	0.00025	0.0004	0.0015	0.001	0.0003	Φ40X25
NCS HS 52702-4	Pure Lead	0.0056	0.0051	0.041	0.0053	0.023	0.00075	0.001	0.0019	0.0019	0.00027	Φ40X25
NCS HS 52702-5	Pure Lead	0.0142	0.0102	0.069	0.0145	0.058	0.0012	0.0012	0.0033	0.0029	0.0005	Φ40X25

Number	Name	Chemical Composition(Percent)					Unit Size (mm)
		Ca	Sn	Al	Bi	Ag	
NCS HS 52703-1	Lead-Tin-Calcium alloy	0.021	0.125	0.0037	0.0034	0.0087	Φ48X30
NCS HS 52703-2	Lead-Tin-Calcium alloy	0.067	0.626	0.0093	0.013	0.0065	Φ48X30
NCS HS 52703-3	Lead-Tin-Calcium alloy	0.111	0.95	0.014	0.022	0.0087	Φ48X30
NCS HS 52703-4	Lead-Tin-Calcium alloy	0.168	1.35	0.027	0.033	0.012	Φ48X30
NCS HS 52703-5	Lead-Tin-Calcium alloy	0.302	1.63	0.036	0.048	0.017	Φ48X30

Number	Name	Chemical Composition(Percent)								Unit Size (mm)
		Al	Zn	Mn	Be	Si	Fe	Cu	Ni	
NCS HS 91711-1	Magnesiam Alloy	3.04	1.21	0.082	0.0032	0.037	0.035	0.0096	0.0006	Φ40X25
NCS HS 91711-2	Magnesiam Alloy	5.06	0.954	0.256	0.0022	0.100	0.028	0.085	0.0047	Φ40X25
NCS HS 91711-3	Magnesiam Alloy	6.97	0.709	0.374	0.0017	0.183	0.018	0.151	0.0096	Φ40X25
NCS HS 91711-4	Magnesiam Alloy	9.00	0.463	0.567	0.0013	0.285	0.010	0.222	0.015	Φ40X25
NCS HS 91711-5	Magnesiam Alloy	10.39	0.201	(0.71)	0.0007	0.411	0.0081	0.307	0.019	Φ40X25

Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		Cd	Se	Te	Sb	As	Sn	Cu	Bi	Zn	Ag	
NCS HS 45722-1	Pb-Sb Alloy	0.00055	0.0065	0.0056	0.315	0.0023	0.0022	0.012	0.0036	0.0004	0.0051	Φ45X25
NCS HS 45722-2	Pb-Sb Alloy	0.004	0.012	0.012	1.46	0.011	0.0014	0.057	0.012	0.0011	0.011	Φ45X25
NCS HS 45722-3	Pb-Sb Alloy	0.0061	0.015	0.045	3.02	0.022	0.033	0.085	0.035	0.00075	0.051	Φ45X25
NCS HS 45722-4	Pb-Sb Alloy	0.0082	0.0036	0.055	5.02	0.04	0.057	0.12	0.056	0.0058	0.21	Φ45X25
NCS HS 45722-5	Pb-Sb Alloy	0.02	0.0032	0.065	7.05	0.175	0.362	0.253	0.088	0.015	0.43	Φ45X25

Section 9 Coal(Powder)

Number	Name	Chemical Composition(Percent)									Unit Size
		Total Sulfur	Ash	Volatile matter	Calorific Value	Catbon	Hydrogen	Nitrogen	True Specific Gravity	Coal Type	(in g)
NCS FC 28001L	Coal	0.52	9.80	24.10	31.70	78.77	4.33	1.32	1.32	bitumite	50
NCS FC 28001m	Coal	0.56	9.60	24.03	32.09	79.24	4.35	1.31	1.31	bitumite	50
NCS FC 28002j	Coal	1.61	23.69	30.22	23.75	60.00	3.67	1.07	1.07	bitumite	50
NCS FC 28003f	Coal	0.28	16.27	6.51	26.38	78.10	0.93	0.23	0.23	anthracite	50
NCS FC 28003g	Coal	0.39	24.38	5.39	23.93	70.95	0.76	0.30	0.30	anthracite	50
NCS FC 28004e	Coal	1.00	28.07	4.97	23.78	66.70	1.43	0.72	0.72	anthracite	50
NCS FC 28004f	Coal	1.13	13.80	7.02	29.43	79.13	2.23	1.13	1.13	anthracite	50
NCS FC 28005e	Coal	1.76	14.28	8.69	29.61	77.83	2.73	0.85	0.85	anthracite	50
NCS FC 28006j	Coal	0.88	17.44	30.99	26.88	66.99	4.07	1.19	1.19	bitumite	50
NCS FC 28007g	Coal	1.83	14.70	34.51	27.51	68.05	4.20	1.20	1.20	bitumite	50
NCS FC 28008e	Coal	2.78	15.54	35.09	28.13	68.22	4.44	1.22	1.22	bitumite	50
NCS FC 28019f	Coal	4.34	25.42	21.68	24.71	61.46	3.34	1.06	1.06	bitumite	50
NCS FC 28010e	Coal	1.36	15.75	33.22	26.80	66.92	4.09	1.17	1.17	bitumite	50
NCS FC 28011d	Coal	2.23	20.40	6.39	26.35	72.11	1.84	0.85	0.85	anthracite	50
NCS FC 28012c	Coal	3.07	19.70	10.77	27.37	70.39	2.90	1.10	1.10	anthracite	50
NCS FC 28017a	Coal	0.26	14.56	5.77	27.12	80.19	0.98	0.23	0.23	anthracite	50

Number	Name	Chemical Composition(Percent)			Unit Size
		Ts	Ash	Volatile	(in g)
NCS FC 59001	Coke	0.63	7.22	1.39	60
NCS FC 59002	Coke	0.47	12.62	1.50	60

Number	Name	M_{ad} (%)	A_{ad} (%)	A_d (%)	V_{ad} (%)	V_d (%)	$S_{t,ad}$ (%)	$S_{t,d}$ (%)	$O_{gr,ad}$ (MJ/kg)	$Q_{gr,d}$ (MJ/kg)	Unit Size (in g)
NCS FC 62001	Bituminous Coal for Cement	3.76	21.58	22.42	22.90	23.79	1.43	1.49	24.37	25.32	20
NCS FC 62002	Anthracite Coal for Cement	3.70	25.18	26.15	5.81	6.03	0.21	0.22	22.36	23.22	20

Number	Name	Chemical Composition(Percent)				Unit Size
		As*	P	Cl	F*	(mm)
NCS FC 82001	Coal	15	0.03 1			50
NCS FC 82002	Coal	34	0.007			50
NCS FC 82003	Coal	51	0.092			50
NCS FC 82004	Coal			0.010		50
NCS FC 82005	Coal			0.057		50
NCS FC 82006	Coal			0.110		50
NCS FC 82007	Fluorine in coal				248.00	50
NCS FC 82008	Fluorine in coal				864.00	50
NCS FC 82009	Fluorine in coal				1496.00	50

*Mass Fraction Substance(10^{-6})

Number	Name	Chemical Composition(Percent)										Unit Size
		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	SO_3	TiO_2	K_2O	Na_2O	P_2O_5	(in g)
NCS FC 82012a	Coal Ash	46.99	29.45	7.95	8.73	1.03	0.69	1.28	1.16	0.79	0.28	30
NCS FC 82013a	Coal Ash	41.11	28.54	13.43	5.30	0.71	5.10	2.62	1.61	0.25	0.11	30
NCS FC 82014a	Coal Ash	54.68	28.09	6.04	5.15	1.05	0.49	1.14	1.44	0.52	0.38	30
NCS FC 82015a	Coal Ash	59.66	22.90	6.55	4.01	1.31	0.40	1.13	1.53	0.78	0.55	30
NCS FC 82016a	Coal Ash	51.24	34.20	4.89	4.73	0.76	0.43	1.26	0.86	0.42	0.25	30
NCS FC 82017a	Coal Ash	25.60	10.40	7.17	39.62	3.71	9.04	0.48	0.78	0.83	0.04	30

Number	Name	Chemical Composition(Percent)											Unit Size
		Qgr,d(MJ/kg)	St.d	Ad	Vd	SiO_2	Al_2O_3	CaO	MgO	F_2O_3	TiO_2	Na_2O	K_2O	(in g)
NCS FC 28019	coke	29.08	0.67	11.64	1.31	5.52	4.17	0.45	0.094	0.55	0.18	0.08	0.058	50
NCS FC 28020	coke	28.26	0.76	14.42	1.78	6.52	4.95	0.52	0.15	1.22	0.22	0.05	0.079	50
NCS FC 28022	coke	29.10	0.81	11.90	1.68	5.63	3.98	0.55	0.16	0.63	0.18	0.084	0.069	50
NCS FC 28023	coke	27.56	1.44	16.20	1.80	8.17	5.28	0.57	0.097	0.96	0.20	0.067	0.11	50

		MnO	SrO	P	Cr	Ni	Cu	V	Pb	As	Cl
NCS FC 28019	coke	0.0049	0.01	0.027	0.0015	0.001	0.0018	0.0027	0.0009	0.0001	0.024
NCS FC 28020	coke	0.0052	0.017	0.037	0.0022	0.0008	0.0027	0.0038	0.0011	0.00014	0.02
NCS FC 28022	coke	0.013	0.011	0.018	0.0022	0.0008	0.002	0.0032	0.0008	0.0002	0.049
NCS FC 28023	coke	0.0044	0.0084	0.018	0.0021	0.001	0.0018	0.0037	0.0008	0.00024	0.022

Section 9 Coal(Powder)

Number	Name	Chemical Composition(Percent)					Unit Size
		St, d	Ad	Vd	Qgr,d(MJ/kg)	P	(mm)
NCS FC 28024	coke	0.41	15.43	1.98	28.17	0.041	50
NCS FC 28025	coke	0.62	11.5	1.31	29.32	0.021	50
NCS FC 28026	coke	0.79	12.18	1.36	28.95	0.031	50
NCS FC 28027	coke	0.89	14.83	1.65	28.12	0.026	50

Number	Name	Chemical Composition(Percent)			Unit Size
		Ts	Ash	Volatile	(in g)
NCS FC 93001	Coke	0.60	12.88	1.75	60
NCS FC 93002	Coke	0.78	13.70	2.00	60
NCS FC 93005	Coke	1.31	16.55	3.10	60
NCS FC 93006	Coke	2.15	21.53	4.92	60

Number	Name	Chemical Composition	Unit Size
		Certified Value(HGI)	(in g)
NCS AG 82001	Hadgrove Grindability Index of Coal	34	250
NCS AG 82002	Hadgrove Grindability Index of Coal	59	250
NCS AG 82003	Hadgrove Grindability Index of Coal	88	250
NCS AG 82004	Hadgrove Grindability Index of Coal	121	250

Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True specific Gravity(20℃)	Coal Type	Unit Size (in g)
NCS FC 28101	Coal	0.2	3.95	6.64	34.34	90.27	3.01	0.6	1.47	anthracite	50
NCS FC 28102	Coal	0.19	6.46	7.9	33.1	87.47	2.86	0.6	1.5	anthracite	50
NCS FC 28103	Coal	0.36	10.51	9.45	31.8	81.55	3.33	1.3	1.47	anthracite	50
NCS FC 28104	Coal	0.41	10.09	11	32.04	81.6	3.52	1.34	1.45	anthracite	50
NCS FC 28105	Coal	1.06	9.61	12.21	32.31	81.54	3.7	1.16	1.43	anthracite	50
NCS FC 28106	Coal	1.72	8.56	31.92	32.98	79.09	4.95	1.38	1.35	bitumite	50
NCS FC 28107	Coal	0.67	10.41	15.3	31.64	79.89	3.8	1.12	1.43	bitumite	50
NCS FC 28108	Coal	0.57	13.68	30.84	29.9	72.94	4.46	1.26	1.42	bitumite	50
NCS FC 28109	Coal	0.58	11.98	11.3	30.66	79.42	3.28	1.09	1.49	anthracite	50
NCS FC 28110	Coal	0.87	8.42	32.94	30.92	75.96	4.56	1.33	1.41	bitumite	50
NCS FC 28111	Coal	1.28	25.19	28.39	24.35	60.24	3.37	1.04	1.57	bitumite	50
NCS FC 28112	Coal	2.1	8.08	33.7	33.04	78.75	5.01	1.31	1.33	bitumite	50
NCS FC 28113	Coal	0.27	7.06	33.4	30.03	74.8	4.47	1.02	1.41	bitumite	50
NCS FC 28114	Coal	0.2	4.66	33.07	30.73	76.36	4.54	1.08	1.4	bitumite	50
NCS FC 28115	Coal	0.42	6.38	32.22	31.05	77.44	4.42	1.21	1.41	bitumite	50
NCS FC 28116	Coal	0.54	6.08	32.34	31.82	78.68	4.59	1.34	1.39	bitumite	50
NCS FC 28117	Coke	0.63	14.83	1.3	28.28						50
NCS FC 28118	Coke	0.87	12.08	1.66	29.25						50
NCS FC 28119	Coke	0.81	14.43	1.34	28.3						50
NCS FC 28120	Coke	0.68	14.05	1.43	28.55						50
NCS FC 28121	Coke	0.75	13.29	1.14	28.76						50

Number	Name	Chemical Composition(Percent)									Unit Size
		Si	Al	Fe	Ca	Mg	P	K	Na	Ti	(in g)
NCS FC 28122	Inorganic elements in Coal	0.47	0.25	1.79	0.85	0.24	0.0029	0.016	0.081	0.01	50
NCS FC 28123	Inorganic elements in Coal	1.86	1.88	0.35	0.74	0.081	0.066	0.026	0.11	0.096	50
NCS FC 28124	Inorganic elements in Coal	1.77	1.75	0.34	0.79	0.071	0.044	0.02	0.13	0.079	50
NCS FC 28125	Inorganic elements in Coal	2.69	2.27	0.24	0.28	0.05	0.013	0.09	0.048	0.09	50
NCS FC 28126	Inorganic elements in Coal	1.01	0.83	0.32	0.65	0.06	0.019	0.01	0.034	0.046	50
NCS FC 28127	Inorganic elements in Coal	5.61	3.47	1.02	1.88	0.28	0.01	0.29	0.052	0.018	50
NCS FC 28128	Inorganic elements in Coal	1.64	1.22	0.86	0.19	0.059	0.0044	0.043	0.026	0.059	50

Section 9 Coal(Powder)

Number	Name	Chemical Composition(Percent) V	Mn	Cu	Co	Ni	Zn	Cr	Cd	Pb	Unit Size (in g)
NCS FC 28122	Inorganic elements in Coal	0.0001	0.022	0.0002	0.0008	0.0008		0.0002	(<0.0001)	0.0002	50
NCS FC 28123	Inorganic elements in Coal	0.0012	0.003	0.0012	0.0004	0.0008	(0.001)	0.001	(<0.0001)	0.0016	50
NCS FC 28124	Inorganic elements in Coal	0.0011	0.0016	0.0012	0.0004	0.0008		0.0007	(<0.0001)	0.0016	50
NCS FC 28125	Inorganic elements in Coal	0.0033	0.0009	0.0017	0.0011	0.0018		0.0005	(<0.0001)	0.0016	50
NCS FC 28126	Inorganic elements in Coal	0.0011	0.008	0.0008	0.0003	0.0005		0.0005	0.0002		50
NCS FC 28127	Inorganic elements in Coal	0.006	0.019	0.0023	0.0009	0.0016	0.004	0.0023			50
NCS FC 28128	Inorganic elements in Coal	0.0028	0.0026	0.0012	0.0004	0.0008	(<0.001)	0.0008			50

Number	Name	Chemical Composition(Percent) Si	Al	Fe	Ca	Mg	P	K	Na	Ti	Unit Size (in g)
NCS FC 28129	Element in coke	2.97	2.35	0.75	0.6	0.11	0.02	0.093	0.13	0.12	50
NCS FC 28130	Element in coke	2.35	1.96	0.63	0.52	0.11	0.022	0.061	0.063	0.099	50
NCS FC 28131	Element in coke	3.22	2.72	0.51	0.29	0.046	0.015	0.094	0.05	0.12	50

		V	Mn	Cu	Co	Ni	Zn	Cr	Cd	Pb
NCS FC 28129	Element in coke	0.0041	0.021	0.0021	0.0007	0.0015	0.0011	0.0015		0.0014
NCS FC 28130	Element in coke	0.0034	0.015	0.0017	0.0006	0.0012	0.0011	0.0012	<0.0001	
NCS FC 28131	Element in coke	0.0027	0.008	0.0016	0.0007	0.0013	0.0018	0.0011	<0.0001	

Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	P (%)	Unit Size (in g)
NCS FC 28132	coke	0.50	11.39	2.80	30.23	0.016	50
NCS FC 28133	coke	1.00	12.30	1.79	29.18	0.024	50
NCS FC 28134	coke	1.19	12.70	1.95	29.04	0.024	50

Number	Name	Chemical Composition(Percent) SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	P_2O_5	K_2O	Na_2O	TiO_2	V_2O_5	MnO	Unit Size (in g)
NCS FC 28135	Ash of Coke	42.87	29.95	7.23	5.67	1.25	0.31	1.51	2.36	1.44	0.049	0.18	5
NCS FC 28136	Ash of Coke	41.61	30.666	7.51	6	1.5	0.41	1.22	1.36	1.41	0.05	0.16	5
NCS FC 28137	Ash of Coke	47.81	35.62	5.02	2.82	0.53	0.24	1.57	0.94	1.41	0.033	0.07	5

Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Catbon (%)	Hydrogen (%)	Nitrogen (%)	TRUE Specific Gravity(20˚C)"	Coal Type	Unit Size (in g)
NCS FC 28138	Coal	1.42	44.23	11.11	18.59	47.12	2.48	0.75	1.79	anthracite	50
NCS FC 28139	Coal	1.34	22.8	18.09	27.27	67.41	3.68	1.05	1.51	bitumite	50
NCS FC 28140	Coal	1.29	25.88	30.31	22.71	58.12	3.4	1.04	1.62	bitumite	50
NCS FC 28141	Coal	3.04	29.13	9.99	23.72	60.53	2.73	0.86	1.68	anthracite	50
NCS FC 28142	Coal	4.54	34.45	12.38	22.18	55.14	2.79	0.85	1.71	bitumite	50
NCS FC 28143	Coal	6.62	33.01	11.1	21.92	54.74	2.53	0.76	1.78	anthracite	50
NCS FC 28144	Coal	1.56	73.37	9.44	6.77	18.01	1.45	0.28	2.29	coal waste rock	50

Number	Name	Chemical Composition(Percent) SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	P_2O_5	K_2O	Na_2O	TiO_2	V_2O_5	MnO	Unit Size (in g)
NCS FC 28145	Coal ash	15.66	7.34	39.61	18.37	6.05	0.1	0.6	3.37	0.26	0.0042	0.44	5
NCS FC 28146	Coal ash	37.86	33.71	4.74	9.9	1.27	1.44	0.6	2.9	1.56	0.02	0.037	5
NCS FC 28147	Coal ash	37.52	32.78	4.81	10.97	1.17	1	0.48	3.5	1.34	0.019	0.02	5
NCS FC 28148	Coal ash	48.03	35.8	2.81	3.27	0.69	0.25	1.81	1.08	1.29	0.049	0.0073	5
NCS FC 28149	Coal ash	35.54	25.92	7.56	14.92	1.63	0.72	0.39	1.51	1.3	0.032	0.017	5
NCS FC 28150	Coal ash	47.64	26.03	5.79	10.44	1.87	0.091	2.81	0.56	1.24	0.042	0.097	5
NCS FC 28151	Coal ash	43.42	28.53	15.18	3.33	1.21	0.12	1.29	0.87	1.25	0.062	0.042	5

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Si	Al	Fe	Ca	Mg	P	K	Na	V	Mn	Ti	
NCS FC 28152	Element of Coal waste rock	20.59	10.76	2.57	0.34	0.53	0.026	1.27	0.15	0.012	0.023	0.44	50

Number	Name	Chemical Composition(Percent)										Unit Size (in g)
		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	P_2O_5	KgO	Na_2O	TiO_2	V_2O_5	MnO	
NCS FC 28153	Ash of Coal waste rock	60.03	27.71	5.01	0.65	1.2	0.082	4.18	0.53	1.04	0.028	0.041	5

Number	Name	Chemical Composition(Percent)					Unit Size (in g)
		St.d	Ad	Vd	Qgr,d(MJ/kg)	Coal Type	
NCS FC 28201	Coal	0.47	10.45	17.7	31.57	bitumite	50
NCS FC 28202	Coal	1.05	8.65	33.36	30.77	bitumite	50
NCS FC 28203	Coal	0.71	10.36	20.69	31.66	bitumite	50
NCS FC 28204	Coal	0.96	8.09	34.25	31.34	bitumite	50
NCS FC 28205	Coal	0.31	14.49	11.39	29.98	anthracite	50
NCS FC 28206	Coal	0.86	14.42	28.56	26.73	bitumite	50
NCS FC 28207	Coal	0.43	16.26	7.26	26.1	anthracite	50
NCS FC 28208	Coal	1.03	15.48	20.57	29.19	bitumite	50
NCS FC 28209	Coal	1.76	27.33	8.21	23.96	anthracite	50
NCS FC 28210	Coal	3.17	25.9	8.40	24.47	anthracite	50
NCS FC 28211	Coal	0.88	13.41	9.08	30.23	anthracite	50
NCS FC 28212	Coal	0.53	8.52	25.65	30.94	bitumite	50
NCS FC 28213	Coal	1.49	9.88	36.2	30.76	bitumite	50
NCS FC 28214	Coal	1.66	27.85	29.21	23.63	bitumite	50
NCS FC 28215	Coal	2.17	25.2	28.79	24.83	bitumite	50
NCS FC 28216	Coal	2.79	8.7	10.78	32.34	anthracite	50
NCS FC 28217	Coal	1.79	8.68	36.06	31.33	bitumite	50
NCS FC 28218	Coal	1.35	14.58	6.16	29.26	anthracite	50
NCS FC 28219	Coal	0.28	6.1	31.24	30.09	bitumite	50
NCS FC 28220	Coal	4.03	16.52	11.15	28.67	anthracite	50
NCS FC 28221	Coal	4.04	18.98	32	27.79	bitumite	50

Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	P_2O_5	K_2O	Na_2O	TiO_2	V_2O_5	MnO	SO_3	
NCS FC 28154	Ash of Coal	53.17	32.02	6.47	2.28	0.9	0.19	1.37	0.41	1.34	0.027	0.035	0.78	5

Number	Name	Fusibility(℃) / Atmosphere		Deformation temperature	Softening temperature	Hemisphering temperature	Fluid temperature	Unit size
NCS FS28001	Fusibility of Coal Ash	Mildly reducing atmosphere	Certified Value	1161	1190	1198	1204	5g
		Oxidizing atmosphere	Certified Value	1211	1230	1239	1252	
NCS FS28002	Fusibility of Coal Ash	Mildly reducing atmosphere	Certified Value	1217	1340	1357	1369	
		Oxidizing atmosphere	Certified Value	1356	1408	1420	1445	
NCS FS28003	Fusibility of Coal Ash	Mildly reducing atmosphere	Certified Value	1285	1314	1322	1340	
		Oxidizing atmosphere	Certified Value	1314	1345	1360	1381	

Number	Name	Fusibility(℃) / Atmosphere		Deformation temperature	Softening temperature	Hemisphering temperature	Fluid temperature	Unit size
NCS FS 91001c	Fusibility of coal ash	Mildly reducing atmosphere	Certified Value	1147	1219	1251	1305	30g
		Oxidizing atmosphere	Certified Value	1321	1345	1358	1376	
		Strong reducing atmosphere	Certified Value	1376	1407	1427	1464	

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Number	Name	Chemical Composition									Unit Size (in g)
		Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-9})	Bi(10^{-9})	Br(10^{-6})			
NCS ZC 73009	Wheat	0.0104	0.031	(0.55)	2.4	(0.85)	(2.5)	(0.33)			35
NCS ZC 73010	Mealie	0.032	0.028	0.86	0.45	1.7	2.8	0.46			35
NCS ZC 73011	Soy bean	(0.043)	0.035	15.8	3.3	3.5	(2)	(0.6)			35
		Ca(10^{-2})	Cd(10^{-9})	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	Dy(10^{-9})	
NCS ZC 73009	Wheat	0.034	18	0.009	0.086	(0.008)	0.096	(0.010)	2.7	(0.8)	
NCS ZC 73010	Mealie	0.0055	4.1	0.12	0.05	(0.012)	(0.11)	0.01	0.66	3.2	
NCS ZC 73011	Soy bean	0.153	(11)	0.04	0.008	0.125	0.28	0.043	102	2.4	
		Er(10^{-9})	Er(10^{-9})	Fe(10^{-6})	Gd(10^{-9})	Ge(10^{-9})	Hf(10^{-6})	Hg(10^{-9})	Ho(10^{-9})	I(10^{-6})	
NCS ZC 73009	Wheat	(0.31)	(0.8)	18.5	(0.91)	(2)	(0.03)	(1.6)	(0.12)	(0.06)	
NCS ZC 73010	Mealie	1.7	(0.6)	13.3	4.3	(1)		(1.6)	0.66	(0.06)	
NCS ZC 73011	Soy bean	1	1.3	139	3.3	(2.5)		(1.5	(0.5)	(0.05)	
		K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})	Mn(10^{-6})	Mo(10^{-6})	N(10^{-2})	Na(10^{-6})	
NCS ZC 73009	Wheat	0.14	0.006	0.024	(0.04)	0.045	5.4	0.48	2.4	17	
NCS ZC 73010	Mealie	0.129	0.057	0.038	(0.21)	0.018	1.55	0.045	1.4	(10)	
NCS ZC 73011	Soy bean	1.86	0.023	0.062	(0.13)	0.23	28	0.71	6.7	(15)	
		Nb(10^{-6})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})	Rb(10^{-6})	S(10^{-2})	Sb(10^{-6})	
NCS ZC 73009	Wheat	(0.008)	0.0046	0.06	0.154	0.065	1.1	2.6	0.178	(0.006)	
NCS ZC 73010	Mealie	(0.009)	0.022	0.097	0.061	0.07	7	2.1	0.123	(0.008)	
NCS ZC 73011	Soy bean	(0.011)	0.016	4	0.66	0.07	4.5	14.2	0.364	(0.005)	
		Sc(10^{-9})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-9})	Ti(10^{-6})	Tl(10^{-9})	
NCS ZC 73009	Wheat	(3)	0.053	(0.008)	0.95	2.5	(0.10)	(2)	(2)	(0.5)	
NCS ZC 73010	Mealie	3.5	0.021	0.0008	3.2	0.19	0.73	4.6	1.6	(0.4)	
NCS ZC 73011	Soy bean	(6.6)	(0.022)	(0.013)	3.1	9.9	(0.42)	6.8		(2.3)	
		Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})	Ash(%)			
NCS ZC 73009	Wheat	(0.04)	(1.6)	0.034	0.023	(0.34)	11.6	(1.0)			
NCS ZC 73010	Mealie	(0.27)	(2.3)	0.3	0.021	1.6	2.9	(0.5)			
NCS ZC 73011	Soy bean	(0.2)	(2.5)	(0.08)	0.022	1.2	38	(5.1)			

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Number	Name	Chemical Composition									Unit Size (in g)
		Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-9})	Bi(10^{-9})	Br(10^{-6})			
NCS ZC 73016	Chicken	0.016	0.109	0.76	1.5	(1.3)	1.3	1.6			35
NCS ZC 73017	Apple	0.007	0.02	19	2.5	(1.0)	(2.5)	(0.2)			35
		Ca(10^{-2})	Cd(10^{-9})	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	Dy(10^{-9})	
NCS ZC 73016	Chicken	0.022	(5)	0.06	0.153	(0.010)	0.59	0.07	1.46	1.1	
NCS ZC 73017	Apple	0.049	5.8	0.025	(0.0080)	0.026	0.3	(0.02)	2.5	(1.1)	
		Er(10^{-9})	Er(10^{-9})	Fe(10^{-6})	Gd(10^{-9})	Ge(10^{-9})	Hf(10^{-6})	Hg(10^{-9})	Ho(10^{-9})	I(10^{-6})	
NCS ZC 73016	Chicken	(0.8)	(0.7)	31	(1.4)	(2)		3.6	(0.26)	(0.08)	
NCS ZC 73017	Apple	(0.65)	(0.7)	16	0.95			(2)	(0.25)	0.12	
		K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})	Mn(10^{-6})	Mo(10^{-6})	N(10^{-2})	Na(10^{-6})	
NCS ZC 73016	Chicken	1.46	0.024	0.034	(0.10)	0.128	1.65	0.11	14.8	0.144	
NCS ZC 73017	Apple	0.77	0.014	0.115		0.039	2.7	0.08	0.31	0.116	
		Nb(10^{-6})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})	Rb(10^{-6})	S(10^{-2})	Sb(10^{-6})	
NCS ZC 73016	Chicken	(0.006)	0.0095	0.15	0.96	0.11	2.8	33	0.86		
NCS ZC 73017	Apple		(0.006)	0.14	0.066	0.084	1.8	5	0.063	(0.006)	
		Sc(10^{-9})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-9})	Ti(10^{-6})	Tl(10^{-9})	
NCS ZC 73016	Chicken	(4.5)	0.49	(0.013)	1.3	0.64	(0.23)	(4.5)		(14)	
NCS ZC 73017	Apple		(0.018)	0.005	1.5	6.9		4		(1.8)	
		Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})	Ash(%)			
NCS ZC 73016	Chicken	(0.11)	(3)	(0.06)	0.007	(0.7)	26	(5.0)			
NCS ZC 73017	Apple	(0.12)	8.2	(0.028)	0.008	(0.66)	2.1	(2.4)			

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Number	Name	Chemical Composition									Unit Size (in g)
		Ag(10^{-9})	Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-9})	Bi(10^{-9})			
NCS ZC 73018	Citrus leaves	54	0.115	1.1	32	98	31	230			35
NCS ZC 73019	Fresh Kindney beans	(5)	0.043	0.15	21	11.4	14	4.8			35
NCS ZC 73020	Garlic	(5)	0.021	0.31	7.5	4.1	4.4	13			35
NCS ZC 73021	Laver	73	0.49	27	14.5	10.4	115	31			35
NCS ZC 73022	Scallop	(8)	0.0156	3.6	12	0.62	3.2	3.8			12
		Br(10^{-6})	Ca(10^{-2})	Cd(10^{-6})	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	
NCS ZC 73018	Citrus leaves	3.4	4.2	0.17	1	0.032	0.23	1.25	0.14	6.6	
NCS ZC 73019	Fresh Kindney beans	0.62	0.67	(0.020)	0.35	0.14	0.29	0.66	0.036	8.7	
NCS ZC 73020	Garlic	1.9	0.081	0.062	0.16	0.075	0.056	0.3	0.025	4.6	
NCS ZC 73021	Laver	92	0.153	0.57	4.7	2.8	0.63	2.4	0.35	12.2	
NCS ZC 73022	Scallop	32	0.075	1.06	0.053	0.81	0.047	0.28	0.014	1.34	
		Dy(10^{-9})	Er(10^{-9})	Eu(10^{-9})	F(10^{-6})	Fe(10^{-6})	Gd(10^{-9})	Ge(10^{-9})	Hf(10^{-6})	Hg(10^{-9})	
NCS ZC 73018	Citrus leaves	57	26	(33)	(38)	480	81	(26)	(0.085)	150	
NCS ZC 73019	Fresh Kindney beans	23	12	7.2	(15)	330	28	14		3.8	
NCS ZC 73020	Garlic	8.9	4.2	3.2	(35)	205	11.4	(12)	(0.04)	4	
NCS ZC 73021	Laver	654	312	126	(27)	0.145	760	52		16	
NCS ZC 73022	Scallop	5.3	3.3	0.9	(13)	41	5.2	(8)		40	
		Ho(10^{-9})	I(10^{-6})	K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})	Mn(10^{-6})	Mo(10^{-6})	
NCS ZC 73018	Citrus leaves	11	0.53	0.77	0.57	1	3.7	0.234	30.5	0.2	
NCS ZC 73019	Fresh Kindney beans	4.5	(0.14)	2.26	0.17	0.31	1.77	0.336	29.5	4.9	
NCS ZC 73020	Garlic	1.6	0.57	1.14	0.092	0.13	0.58	0.105	13.4	0.21	
NCS ZC 73021	Laver	126	79	3.36	3.4	2.36	38	0.4	68	0.78	
NCS ZC 73022	Scallop	1.2	1.83	1.15	0.037	0.13	0.49	0.174	19.2	0.066	
		N(10^{-2})	Na(10^{-2})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})	Rb(10^{-6})	S(10^{-2})	
NCS ZC 73018	Citrus leaves	2.47	0.013	0.42	(1.1)	0.125	9.7	108	3	0.41	
NCS ZC 73019	Fresh Kindney beans	2.79	0.081	0.14	4.4	0.38	0.66	38	9.5	0.195	
NCS ZC 73020	Garlic	3.22	0.095	0.066	0.92	0.466	0.72	17	6.5	1.01	
NCS ZC 73021	Laver	5	1.55	3.1	2.25	0.585	2.05	800	10.4	2.26	
NCS ZC 73022	Scallop	12.8	0.46	0.025	0.29	0.88	(0.12)	6	5.1	1.5	
		Sb(10^{-6})	Sc(10^{-6})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sn(10^{-6})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-6})	
NCS ZC 73018	Citrus leaves	0.2	0.14	0.17	0.41	80	3.8	170	11.1	0.14	
NCS ZC 73019	Fresh Kindney beans	0.028	0.067	0.043	(0.27)	29	(0.2)	55	4.1	0.055	
NCS ZC 73020	Garlic	0.023	0.021	0.39	(0.08)	13	(0.07)	12.3	1.66	0.024	
NCS ZC 73021	Laver	0.026	(0.049)	0.124	0.83	81	(0.2)	24	110	0.73	
NCS ZC 73022	Scallop	(0.014)	(0.012)	1.5	(0.013)	4.8	(0.13)	6.5	0.84	(0.012)	
		Ti(10^{-6})	Tl(10^{-6})	Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})	Ash(%)	
NCS ZC 73018	Citrus leaves	38	60	3.8	45	1.16	0.42	25	18	(13.3)	
NCS ZC 73019	Fresh Kindney beans	21	4.2	1.8	90	0.51	0.155	11	32	(6.9)	
NCS ZC 73020	Garlic	10	20	(0.65)	75	0.2	0.057	(4.2)	21.7	(3.4)	
NCS ZC 73021	Laver	(92)	44	43	172	4.2	6.6	253	28	(15.1)	
NCS ZC 73022	Scallop	(6)	2.5	0.52	7.3	0.36	0.107	3.2	75	(4.5)	

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Number	Name	Chemical Composition									Unit Size (in g)
		Ag(10^{-9})	Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-9})	Bi(10^{-9})			
NCS ZC 73023	Spirulina	42	0.033	0.22	(2.8)	11	21	81			12
NCS ZC 73024	Pollen	(5.8)	(0.045)	0.095	85	2.9	10	4.4			12
NCS ZC 73025	Ginseng	(4)	(0.036)	(0.03)	10.5	35	5.3	(2.4)			12
NCS ZC 73026	Huang-qi	(8)	0.18	0.57	16.8	20.5	50	14			35
		Br(10^{-6})	Ca(10^{-2})	Cd(10^{-6})	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	
NCS ZC 73023	Spirulina	4.8	0.158	0.37	7.2	0.49	0.41	1.5	0.034	7.7	
NCS ZC 73024	pollen	1.1	0.308	0.037	0.35	0.033	0.1	0.51	0.061	8.2	
NCS ZC 73025	Gineseng	(0.27)	0.406	0.033	0.06	0.023	0.072	0.13	0.017	5.9	
NCS ZC 73026	Huang-qi	2.6	0.456	0.042	2.03	0.042	0.44	2.2	0.235	8.5	
		Dy(10^{-9})	Er(10^{-9})	Eu(10^{-9})	F(10^{-6})	Fe(10^{-6})	Gd(10^{-9})	Ge(10^{-9})	Hf(10^{-6})	Hg(10^{-9})	
NCS ZC 73023	Spirulina	186	78	87	(37)	0.11	355	(36)	(0.03)	(15)	
NCS ZC 73024	pollen	20	10.8	6.2	(12)	212	27	(8)		3.2	
NCS ZC 73025	Gineseng	3.2	1.7	(8)	(9)	55	5.5			4	
NCS ZC 73026	Huang-qi	122	60	32	(20)	0.113	160	(26)		(12)	
		Ho(10^{-9})	I(10^{-6})	K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})	Mn(10^{-6})	Mo(10^{-6})	
NCS ZC 73023	Spirulina	33	0.54	1.41	4.8	0.24	9.5	0.287	31.7	0.3	
NCS ZC 73024	pollen	3.8	(0.16)	0.585	0.17	0.21	1.22	0.163	22.7	0.42	
NCS ZC 73025	Gineseng	0.67	(0.1)	0.96	0.045	0.087	(0.3)	0.137	21	0.18	
NCS ZC 73026	Huang-qi	23	0.3	0.7	1.07	1.25	9	0.228	33	5.7	
		N(10^{-2})	Na(10^{-2})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})	Rb(10^{-6})	S(10^{-2})	
NCS ZC 73023	Spirulina	10.6	1.9	2.4	1.44	1.17	2.8	705	1.5	0.78	
NCS ZC 73024	pollen	4.3	(0.009)	0.14	0.5	0.65	0.25	38	6.4	0.38	
NCS ZC 73025	Gineseng	1.9	0.0077	0.024	1.11	0.263	0.12	6.5	4.1	0.11	
NCS ZC 73026	Huang-qi	2.35	0.145	0.9	2.26	0.225	1.44	231	10.5	0.193	
		Sb(10^{-6})	Sc(10^{-6})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sn(10^{-6})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-6})	
NCS ZC 73024	pollen	0.083	0.25	0.24	(0.23)	354	(0.2)	36	41	0.17	
NCS ZC 73025	Gineseng	0.014	0.068	0.03	(0.15)	30		13.2	3.7	0.53	
NCS ZC 73026	Huang-qi	(0.008)	(0.017)	0.012	(0.034)	4.5	(0.02)	33	0.65	(0.008)	
		0.063	(0.30)	0.071	(0.71)	172	(0.10)	51	22	0.3	
		Ti(10^{-6})	Tl(10^{-6})	Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})	Ash(%)	
NCS ZC 73023	Spirulina	34	51	10	31	0.7	0.9	62	42	(8.8)	
NCS ZC 73024	pollen	20	11	1.4	12	0.46	0.12	9.8	31	(3.2)	
NCS ZC 73025	Gineseng	5.8	8.2	(0.3)	3.5	0.073	0.16	1.8	11.1	(3.0)	
NCS ZC 73026	Huang-qi	102	51	8.8	122	2.56	0.6	62	22.3	(5.16)	

Number	Name	Chemical Composition(ug/g)									Unit Size (in g)
		K*	Na*	P*	Cl*	Ca	Mg	Cu	Zn	Mn	
NCS ZC 71001	Beef Liver	1.05	0.22	1.30	0.29	189	668	91.6	192	8.92	25
		Fe	Se	Mo	Sr	Co	S*	Ni	Al	Br	
NCS ZC 71001	Beef Liver	346	0.56	3.76	0.53	0.254	(1.27)	(0.28)	(12)	(5.6)	
		Ba	Cd	Hg	Rb	Pb	F	Ti			
NCS ZC 71001	Beef Liver	(3.4)	(0.388)	(0.18)	(26)	(0.54)	(17)	(0.63)			

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Number	Name	Chemical Composition									Unit Size (in g)
		$Ag(10^{-9})$	$Al(10^{-2})$	$As(10^{-6})$	$B(10^{-6})$	$Ba(10^{-6})$	$Be(10^{-9})$	$Bi(10^{-9})$			
NCS ZC 73030	Wheat	(0.004)	(0.021)	(0.025)	0.54±0.11	1.4±0.2	1.5±0.4	(1.8)			35
NCS ZC 73031	Carrot	(0.006)	(0.046)	0.11±0.02	18.1±1.1	24±3	6.5±1.5	(2.5)			35
		$Br(10^{-6})$	$Ca(10^{-2})$	$Cd(10^{-6})$	$Ce(10^{-6})$	$Cl(10^{-2})$	$Co(10^{-9})$	$Cr(10^{-6})$	$Cs(10^{-9})$	$Cu(10^{-6})$	
NCS ZC 73030	Wheat	(0.5)	0.033±0.002	0.018±0.002	13.0±2.4	(0.08)	8.0±1.6	(0.19)	8.1±0.5	2.4±0.1	
NCS ZC 73031	Carrot	(2.4)	0.255±0.010	0.034±0.004	177±38	(0.23)	66±7	1.04±0.13	42±4	4.1±0.3	
		$Dy(10^{-9})$	$Er(10^{-9})$	$Eu(10^{-9})$	$Fe(10^{-6})$	$Gd(10^{-9})$	$Ge(10^{-9})$	$Hg(10^{-9})$	$Ho(10^{-9})$	$I(10^{-6})$	
NCS ZC 73030	Wheat	0.9±0.2	0.5±0.1	0.45±0.14	20±3	11±0.2	16±0.4	(2.2)	0.20±0.05		
NCS ZC 73031	Carrot	11.0±1.4	5.6±0.6	7.6±2.3	148±15	14.5±2.8	6.6±1.5	3.2±0.8	2.0±0.2	(0.08)	
		$K(10^{-2})$	$La(10^{-9})$	$Li(10^{-6})$	$Lu(10^{-9})$	$Mg(10^{-2})$	$Mn(10^{-6})$	$Mo(10^{-6})$	$N(10^{-2})$	$Na(10^{-2})$	
NCS ZC 73030	Wheat	0.21±0.01	8.1±1.4	0.027±0.007	(0.07)	0.048±0.002	10.8±0.4	0.25±0.02	(2.3)	14.2±3.4	
NCS ZC 73031	Carrot	1.08±0.04	114±24	0.16±0.02	(0.8)	0.091±0.003	12.1±0.5	0.10±0.01	(1.06)	0.65±0.03*	
		$Nb(10^{-9})$	$Nd(10^{-9})$	$Ni(10^{-6})$	$P(10^{-2})$	$Pb(10^{-6})$	$Pr(10^{-9})$	$Rb(10^{-6})$	$S(10^{-2})$	$Sb(10^{-9})$	
NCS ZC 73030	Wheat	(2.3)	6.0±1.2	(0.11)	0.15±0.01	0.067±0.016	1.4±0.2	3.2±0.3	0.17±0.02	(8)	
NCS ZC 73031	Carrot	24±4	79±9	0.67±0.10	0.23±0.02	0.43±0.07	21±3	6.9±0.5	(0.1)	(15)	
		$Sc(10^{-9})$	$Se(10^{-6})$	$Si(10^{-2})$	$Sm(10^{-9})$	$Sn(10^{-9})$	$Sr(10^{-6})$	$Tb(10^{-9})$	$Th(10^{-9})$	$Ti(10^{-6})$	
NCS ZC 73030	Wheat	(4)	0.060±0.010	(0.008)	1.06±0.10	(8)	1.4±0.1	0.17±0.05	(3.2)	(2.4)	
NCS ZC 73031	Carrot	(32)	0.031±0.010	(0.156)	14.3±2.3	(22)	22±2	2.1±0.5	28±6	(12)	
		$Tl(10^{-9})$	$Tm(10^{-9})$	$U(10^{-9})$	$V(10^{-6})$	$Y(10^{-6})$	$Yb(10^{-9})$	$Zn(10^{-6})$			
NCS ZC 73030	Wheat	(0.27)	0.12±0.04	(2)	(0.04)	0.10±0.02	0.48±0.12	12.4±0.6			
NCS ZC 73031	Carrot	10.7±2.1	0.83±0.14	9.8±1.7	(0.21)	0.09±0.02	5.5±0.8	11.2±0.5			

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Number	Name	Chemical Composition									Unit Size (in g)
		Ag(10^{-6})	Al(10^{-2})	As(10^{-6})	B(10^{-6})	Ba(10^{-6})	Be(10^{-9})	Bi(10^{-9})			
NCS ZC 73032	Celery	(0.012)	(0.14)	0.39±0.08	32±3	17.3±+2.3	31±5	(13)			35
NCS ZC 73033	Scallion	(0.014)	(0.3)	0.52±0.11	25±2	36±5	59±11	(13)			35
NCS ZC 73034	Prawn	(0.017)	(0.029)	(2.5)	2.0±0.3	2.3+0.3	4.9±0.8	(5.4)			12
NCS ZC 73035	Pork liver		(0.012)	1.4±0.3	(0.6)	(0.24)	0.9±0.3	(0.9)			35
		Br(10^{-6})	Ca(10^{-2})	Cd(10^{-6})	Ce(10^{-6})	Cl(10^{-2})	Co(10^{-6})	Cr(10^{-6})	Cs(10^{-6})	Cu(10^{-6})	
NCS ZC 73032	Celery	16±4	1.66±0.06	0.092±0.006	1.04±0.11	(3.54)	0.25+0.02	1.35±0.22	0.165+0.018	8.2±0.4	
NCS ZC 73033	Scallion	20±2	2.28±0.09	0.19±0.02	2.1±0.3	(0.85)	0.59±0.04	2.6±0.4	0.19±0.02	5.5±0.3	
NCS ZC 73034	Prawn	8.5+1.1	0.30±0.01	0.039±0.002	0.13±0.03	(0.189)	0.044±0.005	0.35±0.11	0.027±0.002	10.3±0.7	
NCS ZC 73035	Pork liver	(2.8)	(0.023)	1.00±0.07	(0.005)	(0.17)	0.057±0.004	0.23±0.06	0.070±0.007	52±3	
		Dy(10^{-9})	Er(10^{-9})	Eu(10^{-9})	Fe(10^{-6})	Gd(10^{-9})	Ge(10^{-9})	Hg(10^{-9})	Ho(10^{-9})	I(10^{-6})	
NCS ZC 73032	Celery	64±11	30±4	20±2	597±34	81±13	21±7	14.6±2.4	12.4±1.3	(0.43)	
NCS ZC 73033	Scallion	119±12	57±12	39±4	1010±55	155±34	(32)	12.0±2.3	22±4	(0.44)	
NCS ZC 73034	Prawn	7.9±0.5	4.4±0.4	2.5±0.3	112±12	10.5±1.2	6.0±1.4	49±8	1.5±0.2	(0.43)	
NCS ZC 73035	Pork liver	(0.3)	(0.2)	(0.2)	519±34	(0.6)	(12)	45±8	(0.14)	(0.18)	
		K(10^{-2})	La(10^{-6})	Li(10^{-6})	Lu(10^{-9})	Mg(10^{-2})	Mn(10^{-6})	Mo(10^{-6})	N(10^{-2})	Na(10^{-2})	
NCS ZC 73032	Celery	2.7±0.2	0.55±0.05	3.2±0.2	4.5±1.3	0.53±0.03	45±2	1.02±0.09	(2.6)	2.17±0.23	
NCS ZC 73033	Scallion	2.1±0.1	1.16±0.10	1.6±0.2	(8)	0.27±0.01	173±7	0.12±0.03	(2.9)	(0.03)	
NCS ZC 73034	Prawn	0.49±0.01	0.066±0.005	0.15±0.01	0.64±0.21	0.169±0.006	8.9±0.3	0.037±0.012	(13.5)	0.31±0.02	
NCS ZC 73035	Pork liver	0.66±0.03	(0.004)	(0.02)		0.063±0.004	10.1±0.4	4.2±0.2	(11.2)	0.163±0.010	
		Nb(10^{-9})	Nd(10^{-6})	Ni(10^{-6})	P(10^{-2})	Pb(10^{-6})	Pr(10^{-9})	Rb(10^{-6})	S(10^{-2})	Sb(10^{-9})	
NCS ZC 73032	Celery	(85)	0.47±0.08	1.8±0.4	0.35±0.01	2.7±0.7	118+13	18.5±1.2	(1)	(56)	
NCS ZC 73033	Scallion	(215)	0.91±0.11	(1.9)	0.36±0.02	1.34±0.16	235±29	9.4±0.8	0.46±0.04	(45)	
NCS ZC 73034	Prawn	16.5±4.0	0.056±0.006	(0.23)	0.77±0.03	0.20±0.05	14.5±1.1	1.4+0.1	(1)	(16)	
NCS ZC 73035	Pork liver		(0.003)	(0.1)	1.14±0.06	0.12±0.03	(0.6)	27±2	0.80±0.12	(12)	
		Sc(10^{-6})	Se(10^{-6})	Si(10^{-2})	Sm(10^{-9})	Sn(10^{-6})	Sr(10^{-6})	Tb(10^{-9})	Th(10^{-6})	Ti(10^{-6})	
NCS ZC 73032	Celery	(0.16)	0.118±0.017	(0.38)	87±9	(0.1)	213±19	12.6±2.6	177±31	(45)	
NCS ZC 73033	Scallion	(0.26)	0.069±0.009	(1.1)	167±18	(0.07)	74±5	22±5	364±58	(62)	
NCS ZC 73034	Prawn	(0.02)	(5.1)	(0.048)	10.7±1.8	(0.024)	20±2	1.5±0.2	28±8	(17)	
NCS ZC 73035	Pork liver	(0.012)	1.54±0.29		(0.5)		0.51±0.04	(0.25)	(4.5)		
		Tl(10^{-9})	Tm(10^{-9})	U(10^{-9})	V(10^{-6})	Y(10^{-6})	Yb(10^{-9})	Zn(10^{-6})		Ash(%)	
NCS ZC 73032	Celery	21±4	4.2±1.1	48±12	1.3±0.3	0.35±0.08	29±7	26±2			
NCS ZC 73033	Scallion	37±8	7.8±1.5	(50)	(3)	0.61±0.14	57±17	25±1			
NCS ZC 73034	Prawn	2.0±0.5	0.69±0.18	9.7±0.8	0.24±0.07	0.09±0.02	4.1±0.8	76±4			
NCS ZC 73035	Pork liver	1.2±0.2		3.2±0.9	(0.078)	(0.04)	(0.17)	211±11			

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Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Cu	Pb	Zn	Cd	Cr	As	Hg	Se	Ni	Co	Ba	Sr	Rb	
NCS ZC 75001	Kelp	5.01	1.41	27.9	1.14	0.63	13.9	0.23	0.062	0.71	0.2	81.1	1033	11.7	12
		I	TiO_2	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Ho	Er	Tm	
NCS ZC 75001	Kelp	515	(58.39)	(0.29)	(1.15)	(0.06)	(0.2)	(0.062)	(0.067)	(0.0099)	(0.079)	(0.014)	(0.041)	(0.007)	
		Yb	Lu	Y	Sc	Th	U	V	Sb	Cs	Bi	Hf	Li	Mo	
NCS ZC 75001	Kelp	(0.051)	(0.008)	(0.56)	(0.241)	(0.070)	(0.241)	(1.72)	(0.066)	(0.028)	(0.033)	(0.013)	(0.69)	(0.129)	
		Be	F	Cl	Br	Fe_2O_3(T)	Mno								
NCS ZC 75001	Kelp	(0.022)	(49)	(698)	(111)	215	42.1								
Number	Name	Chemical Composition(percent)													Unit Size (in g)
		Al_2O_3	CaO	MgO	K_2O	Na_2O	P_2O_5	N	S						
NCS ZC 75001	Main Content	0.37	2.28	1.09	4.56	1.22	0.46	(2.5)	(0.96)						12
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Cu	Zn	As	Hg	Se	Ni	Co	Sr	MnO	Rb	Cl	Pb	Cs	
NCS ZC 75002	Yellow Croaker	1.36	28.8	5.08	0.169	1.76	1.5	0.057	0.9	0.78	3.34	205*10	(0.25)	(0.054)	12
		Cr	Ba	MO	Cd	F	I	Br	Fe_2O_3(T)						
NCS ZC 75002	Yellow Croaker	(0.43)	(1.75)	(0.016)	(0.015)	(52)	(0.568)	(10.3)	23.9						
		Chemical composition(percent)													
		CaO	MgO	K_2O	Na_2O	P_2O_5	Al_2O_3	S	N						
NCS ZC 75002	Yellow Croaker	0.071	0.22	1.97	0.23	1.95	0.166	(1.05)	(12.69)						
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Cr	TAs	Cd	Hg	Pb	As inorganic								
NCS ZC 11001	Rice	0.064	0.23	0.24	0.005	0.12	0.18								35
NCS ZC 11002	Rice	0.056	0.25	0.41	0.0041	0.15	0.19								35
NCS ZC 11003	Rice	0.046	0.16	0.32	0.0043	0.071	(0.13)								35
NCS ZC 11004	Rice	0.043	0.15	0.42	0.0036	0.11	0.12								35
NCS ZC 11005	Rice	0.040	0.19	0.87	0.0033	0.056	0.15								35
NCS ZC 11006	Rice	0.050	0.18	0.48	0.004	0.042	0.14								35
NCS ZC 11007	Rice	0.06	0.11	1.28	0.0037	0.10	(0.084)								35
NCS ZC 11008	Rice	0.045	0.11	0.99	0.0037	0.071	0.08								35
NCS ZC 11009	Rice	0.05	0.106	1.72	0.004	0.25	0.078								35
NCS ZC 11010	Rice	0.063	0.105	2.16	0.0038	0.11	0.081								35
NCS ZC 11011	Rice	0.053	0.16	0.62	0.0038	0.064	0.13								35
NCS ZC 11012	Rice	0.034	0.15	0.030	0.0040	0.062	0.13								35
NCS ZC 11013	Rice	0.052	0.12	0.22	0.003	0.049	(0.082)								35
NCS ZC 11014	Rice	0.050	0.12	0.11	0.0027	0.037	0.089								35
NCS ZC 11015	Rice	0.05	0.061	0.007	(0.0017)	0.11	0.046								35
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Pb	Cd	Cr											
NCS ZC 76024	Pb, Cd, Cr in wheat powder	1.63	0.074	0.095											30
NCS ZC 76025	Pb, Cd, Cr in wheat powder	0.810	0.015	0.105											30
Number	Name	Chemical Composition(μg/g)													Unit Size (in g)
		Pb	As												
NCS ZC 83005	Pb, As in Cosmetic	37.2	9.0												10

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Number	Name	Nominal Concentration of Substancde(μmol/L)	Unit Size (in mL)
NCS ZC 75301	Ammonia-Nitrogen Series Solution	2.00	50
NCS ZC 75302	Ammonia-Nitrogen Series Solution	4.00	50
NCS ZC 75303	Ammonia-Nitrogen Series Solution	6.00	50
NCS ZC 75304	Nitrate-Nitrogen Serie Solution	2.50	50
NCS ZC 75305	Nitrate-Nitrogen Serie Solution	5.00	50
NCS ZC 75306	Nitrate-Nitrogen Serie Solution	10.00	50
NCS ZC 75307	Nitrate-Nitrogen Serie Solution	15.00	50
NCS ZC 75308	Nitrate-Nitrogen Serie Solution	0.50	50
NCS ZC 75309	Nitrate-Nitrogen Serie Solution	1.00	50
NCS ZC 75310	Nitrate-Nitrogen Serie Solution	2.00	50
NCS ZC 75311	Nitrate-Nitrogen Serie Solution	4.00	50
NCS ZC 75312	Silicate-Silicon Serie Solution	1.00	50
NCS ZC 75313	Silicate-Silicon Serie Solution	2.00	50
NCS ZC 75314	Silicate-Silicon Serie Solution	5.00	50
NCS ZC 75315	Silicate-Silicon Serie Solution	10.00	50
NCS ZC 75316	Silicate-Silicon Serie Solution	12.5	50
NCS ZC 75317	Silicate-Silicon Serie Solution	25.0	50
NCS ZC 75318	Silicate-Silicon Serie Solution	50.0	50
NCS ZC 75319	Silicate-Silicon Serie Solution	100.0	50
Number	Name	Nominal Consistence(μmol/L)	Unit Size (in mL)
NCS ZC 75320	Potassium Iodate Solution	0.01000	140
NCS ZC 75321	Hydrochloric Acid Solution	0.00600	400
Number	Name	Nominal Consistence(μmol/L)	Unit Size (in mL)
NCS ZC 75322	Phosphate Series Solution	0.40	50
		0.80	50
		1.60	50
		3.20	50
		4.80	50

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Number	Name	Chemical Composition(mg/mL)	Unit Size (in mL)
NCS ZC 76011	Amaranth	0.50	5
NCS ZC 76012	Ponceau 4R	0.50	5
NCS ZC 76013	Tartra Zine	0.50	5
NCS ZC 76014	Brilliant Blue	0.50	5
NCS ZC 76015	Sunset Yellow	0.50	5

Number	Name	Chemical Composition(μg/g)											Unit Size (in g)
		As	Be	Cd	Co	Cu	Mn	Pb	Se	Y	Zn	Fe*	
NCS ZC 78001	Coal Fly Ash	11.4	10.7	0.16	33.2	53	1178	33.8	1.13	95	61	7.65	30or50

		Cr	Ba	Hg
NCS ZC 78001	Coal Fly Ash	60	(1450)	(0.039)

*Chemical Composition(percent)

Number	Name	Chemical Composition(μg/g)											Unit Size (in g)
		Zn	Se	Cr	Mg	Mn	As	Ca	Fe	Cu	Sr	Hg	Na
NCS ZC 81002b	Human Hair	191	0.59	8.74	248	3.83	0.198	1537	160	33.6	8.17	1.06	445	7

		Pb	Ni	Cd	Al	Co	Mo	Sc*	Br	Sb	K	Ag	Ba
NCS ZC 81002b	Human Hair	3.83	5.77	0.072	23.2	0.153	1.06		(0.59)	0.12	(14.4)	0.037	11.1

		P	I	V	Cl	La	S***	Ti
NCS ZC 81002b	Human Hair	174	0.96	(0.089)	(48.2)	(0.029)	(4.62)	(2.10)

* Unit of Certifiea Value of the element is μg/kg

* * Unit of Certified Value of the elencent is weight percent

Number	Name	Range Concentration(mg/L)	Unit Size (in mL)
NCS ZC 85301	COD	70~200	20
NCS ZC 85302	COD	50~150	20
NCS ZC 85303	Phenol	0.01~1.5	20

Number	Name	Chemical Composition(Percent)									Unit Size (in g)
		Pb	Cd	Ni	Cr*	Co	Cu	Sb	As	Hg	
NCS ZC 93018	Metals in leather	94	86.6	95.5	56.3	91.4	97.1	89.6	90.7	93.5	2

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Alt	V	Ti	W	Als	(mm)
NCS AH 11302a	Low Alloy steel	0.078	0.117	1.85	0.0071	0.0027	0.017	0.0048	0.016	0.033		0.1		0.032	Φ37×40
NCS AH 11304	Low Alloy Steel	0.092	0.825	1.04	0.014	0.066	0.166	1.94	0.572	0.044	0.131	0.049	1.50		Φ38×30
NCS AH 11311	60Si_2Mn	0.661	1.82	0.825	0.027	0.017	0.021	0.020	0.136						Φ38×45

		Co	Nb	Zr	B	Sn	As	Sb	Pb	Bi	Mb
NCS AH 11304	Low Alloy Steel	0.397	0.050	0.0025	0.0007	0.0041	0.019	0.0023	0.0007	0.0043	0.912
NCS AH 11311	60Si_2Mn	0.011					0.016				

Number	Name	Chemical Composition(percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Co	Alt	B	(in g)
NCS AH 11316e	Carbon Steel	0.201	0.207	0.487	0.018	0.006	0.011	0.004	0.0047						Φ37×40
NCS AH 11319	Carbon Steel	0.101	0.249	0.400	0.043	0.030	0.068	0.066	0.086				0.264	0.0014	Φ37×45
NCS AH 11320c	Alloy Steel	0.164	0.401	1.46	0.014	0.0097	0.046	0.016	0.018						Φ37×40
NCS AH 11321	Carbon Steel	0.397	0.401	0.555	0.024	0.022	0.238	0.188	0.133				0.466	0.0023	Φ37×45
NCS AH11321b	Carbon Steel	0.341	0.216	0.566	0.017	0.015	0.053	0.019	0.107						Φ37×40
NCS AH 11322c	Carbon Steel	0.461	0.293	0.598	0.016	0.0013	0.02	0.012	0.011	0.0029			0.024		Φ37×45
NCS AH 11323	Carbon Steel	0.543	0.361	0.663	0.024	0.024	0.169	0.164	0.118				0.089	0.0021	Φ37×45
NCS AH 11324	Carbon Steel	0.235	0.318	0.632	0.037	0.028	0.076	0.103	0.106				0.071		Φ37×40
NCS AH 11326	Low Alloy Steel	0.225	0.386	1.04	0.012	0.016	1.06	0.122	0.174		0.073		0.096	0.0016	Φ37×45
NCS AH 11327	Low Alloy Steel	0.263	1.40	1.34	0.044	0.023	0.083	0.063	0.125				0.064		Φ37×40
NCS AH 11329	Low Alloy Steel	0.447	1.20	0.825	0.028	0.022	1.10	0.434	0.252	0.219	0.065	0.016	0.070	0.015	Φ37×40
NCS AH 11330	Low Alloy Steel	0.803	0.882	0.294	0.020	0.031	2.76	0.140	0.055	0.144	0.132	0.228	0.194	0.0060	Φ37×40
NCS AH 11331	Low Alloy Steel	0.238	0.290	0.712	0.014	0.015	1.05	1.42	0.154	0.013	0.0022	0.052	0.067	0.0015	Φ37×40
NCS AH 11334	G Cr 15	1.02	0.250	0.340	0.015	0.023	1.48	0.036	0.037	0.022					

		W	Mo	Nb	Zr	Sb	Sn	As	Pb	N	Als	Ca
NCS AH 11319	Carbon Steel						0.0024	0.0058				
NCS AH 11320c	Alloy Steel							0.0061				
NCS AH 11321	Carbon Steel						0.0050	0.012				
NCS AH11321b	Carbon steel							0.048				
NCS AH 11322c	Carbon Steel						0.012	0.007		0.010	0.022	0.0013
NCS AH 11322	Carbon Steel						0.0035	0.012				
NCS AH 11323	Carbon Steel						0.0026	0.012				
NCS AH 11324	Carbon Steel					0.014	0.024	0.015	0.0011			
NCS AH 11326	Low Alloy Steel						0.0031	0.0055				
NCS AH 11327	Low Alloy Steel					0.018	0.015	0.012				
NCS AH 11329	Low Alloy Steel	0.015	0.036	0.096	0.0011	0.0018	0.0063	0.023	0.0062			
NCS AH 11330	Low Alloy Steel	0.233	0.983	0.059	0.0010	0.020	0.0059	0.011	0.0062			
NCS AH 11331	Low Alloy Steel	0.057	0.164	0.0066	0.0011		0.059	0.0079	0.0003			

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Alt	V	Mo	W	As	(in g)
NCS AH 11335	50#	0.49	0.376	0.625	0.025	0.013	0.019	0.026	0.027	0.098					Φ38×40
NCS AH 11336	25#	0.245	0.272	0.721	0.025	0.027	0.153	0.282	0.125						Φ37×35
NCS AH 11337	A3	0.183	0.277	0.622	0.029	0.011	0.033	0.028	0.185						Φ37×35
NCS AH 11339	GCr15SiMn	1.18	0.842	1.02	0.018	0.006	1.44	0.046	0.152			0.027			Φ38×40
NCS AH 11340	15CrMo	0.144	0.244	0.553	0.024	0.028	0.975	0.067	0.054		0.018	0.452			Φ38×40
NCS AH 11341	42CrMo	0.422	0.349	0.66	0.021	0.006	1.05	0.066	0.063		0.012	0.195			Φ38×40
NCS AH11341d	Alloy Steel	0.396	0.248	0.566	0.023	0.0056	0.953	0.05	0.05			0.029		0.16	Φ37×40
NCS AH 11342	5CrMnMo	0.533	0.413	1.33	0.016	0.012	0.723	0.177	0.133		0.0071	0.167			Φ38×40
NCS AH 11343	9SiCr	0.861	1.44	0.446	0.026	0.014	1.11	0.031	0.038	0.039	0.011				Φ38×40
NCS AH 11344	CrWMn	0.964	0.266	0.947	0.023	0.006	1.06	0.02	0.128			0.034	1.42		Φ38×40

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Ti	(mm)
NCS AH 11351	Pure iron	0.0018	0.0038	0.0057	0.0031	0.0016	0.032	0.066	0.022	<0.001	<0.001	0.019	0.0041	<0.001	Φ37×40
NCS AH 11353	Cast iron	3.15	2.3	0.47	0.02	0.0006	0.025	0.59	0.029	0.032	0.003	0.002	0.015	0.027	Φ30×25

Number	Name	Nb	Sn	As	Sb	Al	Pb	Bi	N	Alt	B	Mg	La	Ce
NCS AH 11351	Pure iron	<0.0005	0.0019	0.0021	0.0003	0.001	<0.0001	<0.0001						
NCS AH 11353	Cast iron		0.0037						0.003	0.023	0.004	0.029		

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	W	(mm)
NCS AH 11354	Cast iron	2.11	3.44	1.26	0.45	0.09	0.109	0.17	1.4	0.04	0.45	0.225	0.055	0.31	Φ28×20
NCS AH 11355	Cast iron	4.14	1.57	0.21	0.049	0.012	2.14	2.14	0.184	0.01	0.034	0.05	0.831	0.051	Φ28×20
NCS AH 11356	Cast iron	3.63	2.55	0.64	0.097	0.02	0.14	0.488	0.682	0.018	0.236	0.118	0.336	0.074	Φ28×20

Number	Name	Nb	Co	Sb	Sn	Bi	Zr	La	Mg	B	Ce
NCS AH 11354	Cast iron	0.179	0.083	0.115	0.028	0.015	0.0023	0.0013	0.0025	0.062	0.0014
NCS AH 11355	Cast iron	0.03	0.052	0.021	0.134	0.009	0.0014	0.0094	0.015	0.0012	0.012
NCS AH 11356	Cast iron	0.072	0.056	0.035	0.079	0.0083	0.0015	0.0085	0.037	0.016	0.012

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Alt	Co	(mm)
NCS AH 11357	Alloy Structure Steel	0.147	0.369	1.11	0.019	0.015	0.0091	0.0053	0.016						Φ38×40
NCS AH 11358	Alloy Structure Steel	0.402	0.226	0.690	0.011	0.0083	0.95	0.015	0.015	0.0045					Φ36×40
NCS AH11358c	Alloy Steel	0.39	0.243	0.583	0.02	0.0061	0.848	0.014	0.011						Φ37×40
NCS AH 11359	Alloy Structure Steel	0.225	0.220	0.616	0.013	0.0081	0.815	0.012	0.0081	0.0046	0.0032				Φ37×40
NCS AH11359b	Alloy Steel	0.212	0.22	0.59	0.0074	0.013	0.803	0.011	0.0094	0.0034					Φ37×40
NCS AH11359c	Alloy Steel	O.212	0.247	0.579	0.017	0.0078	0.782	0.042	0.016						Φ37×40
NCS AH 11360	Stainless Steel	0.058	0.854	1.49	0.027	0.010	17.39	11.91	0.168	0.043	0.366	2.33	0.046	0.105	Φ36×30
NCS AH 11361	Carbon Structure Steel	0.066	0.0096	0.455	0.011	0.010	0.016	0.0041	0.0059				0.041		Φ38×40
NCS AH 11363	Alloy tool Steel	0.482	0.63	0.158	0.021	0.0086	1.15	0.078	0.094			0.026			Φ35×35

Number	Name	W	Als	As
NCS AH11359b	Alloy Steel			0.0024
NCS AH 11360	Stainless Steel	0.060		
NCS AH 11361	Carbon Structure Steel		0.039	
NCS AH 11363	Alloy tool Steel	2.16		

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Ni	Cr	Cu	V	Ca	Als	Alt	Sn	(mm)
NCS AH 11364	Carbon Steel	0.057	0.026	0.121	0.010	0.0032	0.010	0.016	0.0087	0.0010	0.0019	0.032	0.034	0.0097	Φ38×40
NCS AH 11365	line pipe steel	0.054	0.266	1.53	0.011	0.0052	0.05	0.013	0.010	0.014	0.0015	0.019	0.021	0.017	Φ38×40
NCS AH 11366	stainless steel 2Cr13	0.176	0.388	0.501	0.024	0.0036	0.115	12.29	0.074	0.024					Φ37×30
NCS AH 11367	stainless steel 316L	0.017	0.476	0.847	0.034	0.0008	10.23	16.65	1.09	0.066			(0.007)	0.032	Φ38×30
NCS AH 11368	stainless steel 304	0.066	0.76	1.16	0.030	0.0091	8.23	17.49	0.355	0.061			0.014	0.012	Φ38×30
NCS AH 11369	stainless steel 304L	0.026	0.522	0.857	0.033	0.0020	8.11	18.18	0.445	0.068			(0.004)	0.013	Φ38×30
NCS AH 11370	stainless steel321(0Cr18Ni10Ti)	0.046	0.609	1.18	0.027	0.016	11.65	17.57	0.199	0.075			0.053	0.011	Φ33×30
NCS AH 11371	stainless steel(9Cr18)	0.95	0.487	0.315	0.027	0.003	0.171	17.70	0.064	0.022			0.014	0.0063	Φ33×30
NCS AH 11372	stainless steel 630(0Cr17Ni4CuNb)	0.037	0.552	0.604	0.041	0.0056	4.12	15.73	3.46	0.067			(0.004)	0.019	Φ38×30
NCS AH 11373	stainless steel(CrMnN)	0.160	0.484	5.56	0.040	0.035	5.21	13.72	0.520	0.046				0.013	Φ38×30
NCS AH 11374	stainless steel(CrMnN)	0.085	0.458	11.03	0.032	0.014	0.68	13.79	1.16	0.056				0.012	Φ38×30
NCS AH 11375	high speed tool steel(W6Mo5Cr4V2)	0.84	0.305	0.328	0.028	0.015	0.090	3.89	0.103	1.83				0.012	Φ38×30
NCS AH 11376	high speed tool steel(W18Cr4V)	0.72	0.300	0.227	0.027	0.026	0.074	4.09	0.107	1.12			(0.005)	0.028	Φ33×30
NCS AH 11377	Cast iron	2.13	4.03	0.722	0.47	0.027	0.144	0.136	0.344	0.062				0.0168	Φ32×19
NCS AH 11378	Cast iron	3.67	2.61	0.530	0.044	0.047	0.304	0.330	0.565	0.071				0.050	Φ32×19

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

		As	N	W	Co	MO	Nb	Ti	La	Ce	Mg	Sb
NCS AH 11364	Carbon Steel	0.0051	0.010			0.209	0.039	0.015				
NCS AH 11365	line pipe steel	0.012	0.0085		0.032	0.013						
NCS AH 11366	stainless steel 2Cr13			0.045	0.144	2.08	0.012					
NCS AH 11367	stainless steel 316L			0.021	0.099	0.205	0.011	(0.0007)				
NCS AH 11368	stainless steel 304			0.015	0.152	0.119	0.0052	0.006				
NCS AH 11369	stainless steel 304L			0.036	0.057	0.438	0.0039	(0.002)				
NCS AH 11370	stainless steel321(0Cr18Ni10Ti)			0.037	0.018	0.014		0.325				
NCS AH 11371	stainless steel(9Cr18)			0.054	0.067	0.191	0.287					
NCS AH 11372	stainless steel 630(OCr17Ni4CuNb)			0.050	0.079	0.255	0.007					
NCS AH 11373	stainless steel(CrMnN)		0.077	(0.003)	0.063	0.013	(0.002)					
NCS AH 11374	stainless steel(CrMnN)		0.136	5.93	0.017	5.08						
NCS AH 11375	high speed tool steel(W6Mo5Cr4V2)			17.45	0.019	0.076		(0.003)				
NCS AH 11376	high speed tool steel(W18Cr4V)					0.063		0.056	0.011	0.019	0.049	0.039

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Ti	Nb	Al	(mm)
NCS AH 11385	High Chromium Cast Iron	3.20	0.77	0.625	0.039	0.041	25.95	0.777	0.806	0.281	0.516	0.029	0.011	0.112	Φ30×24
NCS AH 11386	High Chromium Cast Iron	2.96	0.87	1.18	0.047	0.053	13.57	0.559	0.546	0.175	0.346	0.02	0.025		Φ30×24
NCS AH 11387	High Chromium Cast Iron	2.33	1.13	0.614	0.102	0.1	5.43	0.373	0.979	0.454	0.212	0.053	0.032	0.136	Φ30×24
NCS AH11394	Stainless Steel	0.116	0.417	0.392	0.024	0.029	12.11	0.124	0.126	0.031	0.059				Φ37×35
NCS AH11395	Alloy Steel	0.0025	0.0047	1.16	0.075	0.0038	0.02	0.005	0.015			0.021	0.019		Φ37×40
NCS AH11396	Carbon Steel	0.307	0.249	0.571	0.015	0.052	0.175	0.138	0.02	0.0019		0.012			Φ37×40

		As	Co	Als	Alt	N	Ca
NCS AH11394	Stainless Steel		0.026			0.013	
NCS AH11395	Alloy Steel			0.038	0.039		
NCS AH11396	Carbon Steel	0.011	0.021	0.019	0.021		0.0022

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Ni	Cr	W	V	Mo	Als	Alt	Ti	(mm)
NCS AH 15303	Alloy steel	1.21	1.16	0.19	0.039	0.037	2.11	2.41	0.003	0.281	0.431	0.319	0.323	0.415	Φ40×30

		Cu	Nb	B
NCS AH 15303	Alloy steel	0.069	0.0028	0.0006

Number	Name	Chemical Composition(Percent)									Unit Size
		C	Si	Mn	P	S	Ni	Cr	Cu	Mo	(mm)
NCS AH 18301	Carbon Steel	0.48	0.322	0.613	0.028	0.018	0.177	0.456	0.097	0.129	Φ37×30
NCS AH 18302	Carbon Steel	0.442	0.376	0.577	0.023	0.023					Φ37×30
NCS AH 18303	Carbon Steel	0.072	0.022	0.507	0.016	0.02	0.013	0.017	0.048		Φ37×30
NCS AH 18304	Carbon Steel	0.669	0.273	0.571	0.012	0.015					Φ37×30
NCS AH 18305	Carbon Steel	0.094	0.229	0.55	0.015	0.018					Φ37×30
NCS AH 18306	Carbon Steel	0.196	0.223	0.465	0.014	0.012					Φ37×30
NCS AH 18307	Carbon Steel	0.455	0.22	0.582	0.021	0.01					Φ37×30
NCS AH 18308	Carbon Steel	0.442	0.23	0.6	0.011	0.014					Φ37×30
NCS AH 18309	Carbon Steel	0.742	0.219	0.553	0.008	0.011					Φ37×30
NCS AH 18310	Carbon Steel	0.689	0.279	0.581	0.008	0.015					Φ37×30
NCS AH 18311	Carbon Steel	0.205	0.603	1.37	0.019	0.021	0.014	0.019	0.041		Φ37×30

Number	Name	Chemical Composition(Percent)												Unit Size
		C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Al	B	(mm)
NCS AH 20304	60SiMnA	0.588	0.012	0.699	0.015	1.72	0.258	0.042		0.102		0.010		Φ42×40
NCS AH 20305	50CrVA	0.497	0.018	0.629	0.011	0.253	0.944	0.062		0.122	0.143	0.020		Φ42×40
NCS AH 20306	35CrMo	0.376	0.018	0.534	0.026	0.283	1.00	0.110	0.197	0.096		0.037		Φ42×40
NCS AH 20307	12CrMoV	0.109	0.014	0.527	0.011	0.247	1.04	0.064		0.095	0.203	0.032		Φ42×40
NCS AH 20308	20MnVB	0.208	0.011	1.36	0.012	0.256	0.044	0.041		0.085	0.101	0.038	0.0023	Φ42×40
NCS AH 20309	40Cr	0.406	0.020	0.629	0.019	0.302	1.01	0.068		0.105		0.030		Φ42×40
NCS AH 20310	42CrMo	0.407	0.018	0.628	0.017	0.243	0.953	0.057	0.163	0.096		0.022		Φ42×40

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Mo	Cu	V	Ti	Al	Ni	Nb	(mm)
NCS AH 20311	Steel	0.0058	0.0049	0.031	0.0069	0.0064	0.015	(0.0004)	0.006	0.00014	0.00013	0.01	0.0047	(<0.0015)	Φ35×40
NCS AH 20312	Steel	0.011	0.179	0.19	0.049	0.0034	27.77	0.0095	0.022	0.032		0.046	0.34	0.11	Φ35×40
NCS AH 20313	Steel			10.34			8.52			0.44	0.91	0.83	6.51		Φ35×40
NCS AH 20314	Steel	0.262	2.65	2.27	0.007	0.041	0.973	2.9	0.396		0.019		25.14		Φ35×40

		B	W	N	Pb	Bi	Sb	As	Sn	Ca	Ce
NCS AH 20311	Steel	<0.001	(<0.001)	0.0039	(<0.00015)	(<0.0001)	0.0002	0.0006	0.0005	(<0.0003)	
NCS AH 20312	Steel	0.0083	0.25		0.0042		0.008	0.0031	0.0019		
NCS AH 20313	Steel			0.044				0.007	0.018	(<0.0015)	
NCS AH 20314	Steel	0.001	0.028								

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Mo	Cu	V	Ti	Al	Ni	Nb	(mm)
NCS AH 20315	Carbon Steel	0.015	0.632	1.91	0.0037	0.057	0.099	0.564	0.384	0.57	0.026	0.013	0.55	0.099	Φ35×40
NCS AH 20316	Carbon Steel	0.92	0.091	0.075	0.047	0.0016	1.29	0.016	0.04	0.0016	0.55	0.102	0.062	0.0006	Φ35×40

		B	W	Bi	Pb	Zn	Sb	As	Sn	Ca
NCS AH 20315	Carbon Steel	0.0009	0.076	(<0.0005)	(<0.0006)	(<0.004)	0.0005	0.011	0.0018	(<0.001)
NCS AH 20316	Carbon Steel	0.009	0.0019	0.0004	0.003	0.0017	0.0043	0.0035	0.012	(<0.001)

Number	Name	Chemical Composition(Percent)												Unit Size
		C	Si	Mn	P	S	Ni	Cr	Mo	V	Cu	Alt		(mm)
NCS AH 20317	SL9N590	0.072	0.30	1.13	0.006	0.021	8.84	0.21	0.056		0.048	0.026		Φ40×45
NCS AH 20318	20Mn23AlV	0.220	0.31	23.92	0.016	0.0056	0.02	0.054		0.124	0.016	2.57		Φ40×45

Number	Name	Chemical Composition(percent)												Unit Size
		C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Sb	B	(mm)
NCS AH 21308	Pure Iron	0.003	0.004	0.017	0.005	1.48	1.05	0.980	0.312	0.192			0.0011	Φ40×40
NCS AH 21309	Middle Low Alloy	0.701	0.039	2.06	0.013	0.042	0.065	0.026	0.003	0.022	0.094	0.0034	0.0041	Φ40×40
NCS AH 21310	Stainless Steel	0.082	0.030	1.15	0.020	0.429	17.63	10.04	2.00	1.01	1.04			Φ40×40
NCS AH 21311	High Speed tool Steel	0.856	0.005	0.312	0.017	0.33	3.93	0.048	4.83	0.261	1.90			Φ40×40
NCS AH 21312	High Manganese Steel	0.297	0.117	16.24	0.033	0.48	0.69	0.43	0.506	0.208	0.23			Φ40×40
NCS AH 21313	High Speed tool Steel	0.75	0.002	0.16	0.017	0.282	4.20	0.041	0.10	0.137	0.17			Φ40×40
NCS AH 21314	Stainless steel	0.100	0.0022	19.56	0.0207	0.359	19.87	0.279	0.205	0.059				Φ40×40

		Ti	Sn	Alt	W	Co	As	Nb	Ta	Ca	Al	N	B*
NCS AH 20308	Pure Iron	0.001	0.007	0.250	0.001	0.003				0.0005			
NCS AH 20309	Middle Low Alloy		0.017	0.107	0.193	0.010	0.017	0.313	0.098	0.0009			
NCS AH 20310	Stainless Steel	0.472		0.129	0.438	0.22		0.520					
NCS AH 20311	High Speed tool Steel	0.17		0.36	6.25	4.86							
NCS AH 20312	High Manganese Steel	0.045		2.98	0.35	0.032							
NCS AH 20313	High Speed tool Steel		0.045		17.99	0.010	0.027						
NCS AH 21314	Stainless steel					0.021					0.008	0.66	<0.0005

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Als	Alt	Cu	Co	(mm)
NCS AH 28302	Stainless steel	0.322	0.613	0.83	0.018	0.017	8.63	0.148	0.016	0.014	0.023	0.027	0.47	0.019	Φ40×35
NCS AH 28303	Stainless steel	0.329	0.397	0.433	0.018	0.027	11.95	2.66	0.026	0.016	0.0019	0.0073	0.08	0.057	Φ40×35
NCS AH 28304	Stainless steel	0.193	0.905	0.49	0.022	0.01	19.4	6.48	0.021	0.029	0.034	0.037	0.079	0.095	Φ40×35
NCS AH 28305	Heat resisting alloy	0.392	2.41	0.508	0.019	0.022	10.09	0.247	1.09	0.015	0.0031	0.0057	0.093	0.019	Φ40×35
NCS AH 28307	Heat resisting alloy	0.157	0.827	0.8	0.021	0.023	13.31	13.9	0.24	0.02	0.067	0.074	0.03	0.147	Φ40×35
NCS AH 28308	Heat resisting alloy	0.182	0.865	0.37	0.019	0.025	17.3	1.33	0.023	0.021	0.0025	0.0061	0.074	0.051	Φ40×35
NCS AH 28309	Heat resisting alloy	0.178	0.542	2.37	0.023	0.0084	22.71	16.2	0.0071	0.031	0.045	0.053	0.058	0.186	Φ40×35
NCS AH 28310	Carbon steel	0.162	0.21	0.373	0.019	0.015	0.129	0.137	0.024	0.0011	0.0018	0.0029	0.091	0.0071	Φ40×35
NCS AH 28311	Alloy steel	0.345	0.318	0.424	0.022	0.011	1.58	0.099	0.171	0.0034	0.807	0.824	0.116	0.0092	Φ40×35
NCS AH 28312	Alloy steel	0.21	0.385	1.295	0.013	0.0208	0.169	0.099	0.015	0.011	0.054	0.061	0.101	0.0064	Φ40×35
NCS AH 28313	Alloy steel	0.118	0.237	0.257	0.023	0.023	0.147	0.154	0.02	0.0023	0.101	0.106	0.354	0.0093	Φ40×35
NCS AH 28314	Alloy steel	0.397	1	0.701	0.013	0.012	1.91	1.29	0.446	0.377	0.01	0.012	0.091	0.021	Φ40×35
NCS AH 28315	Alloy steel	0.249	0.464	0.444	0.016	0.021	1.64	1.73	0.426	0.218	0.0042	0.0087	0.097	0.024	Φ40×35
NCS AH 28316	Alloy steel	0.384	0.862	0.583	0.014	0.012	2.06	1.32	0.382	0.35	0.014	0.018	0.095	0.021	Φ40×35
NCS AH 28317	Q235	0.196	0.107	0.298	0.029	0.038	0.11	0.13	0.0041	0.0015	0.017	0.019	0.119	0.0063	Φ40×35
NCS AH 28318	CrMo	0.408	0.668	0.501	0.014	0.0013	1.51	0.115	0.112	0.0051	0.188	0.2	0.117	0.0083	Φ40×35
NCS AH 28319	16Mn	0.178	0.247	1.37	0.025	0.026	0.144	0.126	0.0058	0.0017	0.069	0.074	0.11	0.0044	Φ40×35
NCS AH 28320	38CrMoAl	0.436	0.207	0.495	0.016	0.026	1.51	0.127	0.182	0.0037	1.06	1.1	0.096	0.0085	Φ40×35
NCS AH 28321	38CrMoAl	0.411	0.357	0.502	0.014	0.0013	1.52	0.118	0.112	0.0051	0.557	0.56	0.118	0.0084	Φ40×35
NCS AH 28322	$60Si_2W$	0.582	1.72	1.03	0.024	0.02	0.301	0.304	0.017	0.0037	0.011	0.012	0.091	0.0091	Φ40×35
NCS AH 28323	$60Si_2W$	0.615	1.99	0.868	0.025	0.036	0.095	0.119	0.019	0.0022	0.017	0.02	0.098	0.0056	Φ40×35
NCS AH 28324	4Cr10NiCuTi	0.37	0.862	0.889	0.018	0.016	10.83	0.17	0.015	0.017	0.014	0.02	0.275	0.022	Φ40×35
NCS AH 28325	1Cr13	0.151	0.572	0.681	0.02	0.035	11.55	0.398	0.017	0.015	0.0048	0.015	0.078	0.034	Φ40×35
NCS AH 28326	2Cr13	0.207	0.472	0.594	0.02	0.026	14.27	0.867	0.026	0.021	0.0017	0.0064	0.077	0.039	Φ40×35
NCS AH 28327	Cr18	0.433	0.693	0.933	0.019	0.014	18.52	0.176	0.013	0.028	0.011	0.015	0.095	0.034	Φ40×35
NCS AH 28328	Cr21Ni5Ti	0.129	0.97	0.599	0.048	0.012	22.53	6.01	0.013	0.037	0.144	0.148	0.106	0.089	Φ40×35
NCS AH 28329	Cr23Ni18	0.124	1.19	0.934	0.021	0.017	22.23	18.25	0.0023	0.035	0.053	0.062	0.021	0.206	Φ40×35

		W	Ti	As	B	Sn	Sb	Zn
NCS AH 28302	Stainless steel	0.004	0.076	0.0054	0.0002	0.0037	0.0018	0.0034
NCS AH 28303	Stainless steel	0.0031	0.029	0.0049		0.0049	0.0016	0.0018
NCS AH 28304	Stainless steel	0.0052	0.206	0.0046		0.0028	0.0015	0.0016
NCS AH 28305	Heat resisting alloy	0.0065	0.0032	0.0054		0.0047	0.0021	0.0009
NCS AH 28307	Heat resisting alloy	2.75	0.0011	0.0041	0.0004	0.004	0.0004	0.005
NCS AH 28308	Heat resisting alloy	0.0032	0.0011	0.0051		0.004	0.0016	0.002
NCS AH 28309	Heat resisting alloy	0.0034	0.051	0.0038		0.0023	0.0006	0.0036
NCS AH 28310	Carbon steel	0.0047	0.0005	0.0068	0.0002	0.0046	0.0019	0.0004
NCS AH 28311	Alloy steel	0.0053	0.0036	0.0061	0.0003	0.0047	0.002	0.02
NCS AH 28312	Alloy steel	0.161	0.0009	0.0056	0.0003	0.0054	0.0019	0.0006
NCS AH 28313	Alloy steel	0.013	0.109	0.0067	0.0003	0.0048	0.0023	0.0023
NCS AH 28314	Alloy steel	1.2	0.081	0.0064	0.0013	0.0057	0.002	0.0014
NCS AH 28315	Alloy steel	0.583	0.043	0.0087	0.0003	0.021	0.0056	0.0014
NCS AH 28316	Alloy steel	1.44	0.061	0.0075	0.0014	0.006	0.0021	0.0016
NCS AH 28317	Q235	0.0017	0.001					
NCS AH 28318	CrMo	0.0064	0.021					
NCS AH 28319	16Mn	0.0066	0.002					
NCS AH 28320	38CrMoAl	0.0069	0.0023					
NCS AH 28321	38CrMoAl	0.005	0.0066					
NCS AH 28322	$60Si_2W$	1.37	0.0037					
NCS AH 28323	$60Si_2W$	0.682	0.0063					
NCS AH 28324	4Cr10NiCuTi	0.0053	0.06					
NCS AH 28325	1Cr13	0.0049	0.036					
NCS AH 28326	2Cr13	0.0044	0.01					
NCS AH 28327	Cr18	0.0052	0.043					
NCS AH 28328	Cr21Ni5Ti	0.011	0.853					
NCS AH 28329	Cr23Ni18	0.003	0.011					

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt	As	(mm)
NCS AH 28330	15CrMo	0.164	0.222	0.540	0.011	0.0028	0.98	0.045	0.040	0.472	0.0067	0.0023	0.020	0.0078	Φ40×40
NCS AH 28331	Steel	0.062	0.849	1.49	0.011	0.011	0.012	0.0040	0.0098	0.001	0.0012	0.0019	0.002	0.0058	Φ40×40
NCS AH 28332	Steel	0.254	0.293	0.305	0.012	0.0020	0.93	0.183	0.016	0.205	0.040	0.030	0.033	0.0043	Φ40×40
NCS AH 28333	Q460	0.164	0.323	1.44	0.019	0.0091	0.016	0.012	0.015	0.0017	0.019	0.019	0.033	0.0067	Φ40×40
NCS AH 28334	Q345	0.158	0.309	1.45	0.017	0.0033	0.035	0.019	0.022	0.0085	0.030	0.018	0.035	0.0073	Φ40×40
NCS AH 28335	Q550	0.170	0.221	1.34	0.019	0.0079	0.224	0.013	0.016	0.0067	0.0025	0.020	0.025	0.0075	Φ40×40
NCS AH 28336	Q690	0.164	0.174	1.04	0.013	0.0067	0.194	0.014	0.017	0.108	0.0023	0.016	0.023	0.0076	Φ40×40
NCS AH 28337	20MnSiV	0.250	0.435	1.31	0.022	0.015	0.013	0.0064	0.014	0.001	0.047	0.0017	0.002	0.010	Φ40×40

		Nb	Sn	B	Co
NCS AH 28333	Q460	0.018		0.0003	
NCS AH 28334	Q345	0.036		0.0008	
NCS AH 28335	Q550			0.0020	
NCS AH 28336	Q690			0.0014	
NCS AH 28337	20MnSiV		0.0007		0.0044

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt	As	(mm)
NCS AH28338	Q235(15#)	0.129	0.254	0.468	0.030	0.035	0.063	0.050	0.153	0.011	0.002	0.0016	0.003	0.0082	Φ40×40
NCS AH28339	45#	0.453	0.272	0.604	0.022	0.016	0.044	0.039	0.141	0.0066	0.002	0.0012	0.005	0.0060	Φ40×40
NCS AH28340	20CrMo	0.204	0.226	0.503	0.020	0.019	0.909	0.050	0.181	0.192	0.003	0.0011	0.014	0.0080	Φ40×40
NCS AH28341	15Mn	0.166	0.216	0.815	0.012	0.0048	0.065	0.0089	0.013	0.0011	0.002	0.014	0.028	0.0028	Φ40×40
NCS AH28342	20Mn	0.182	0.208	0.801	0.012	0.0064	0.033	0.0085	0.012	0.0014	0.002	0.0019	0.017	0.0018	Φ40×40
NCS AH28343	65Mn	0.620	0.288	0.942	0.024	0.027	0.074	0.036	0.123	0.0064	0.003	0.0021	0.004	0.0067	Φ40×40
NCS AH28344	M20Mn	0.195	0.272	1.18	0.015	0.015	0.083	0.132	0.222	0.017	0.001	0.024	0.042	0.0088	Φ40×40
NCS AH28345	30CrMnTi	0.266	0.317	0.929	0.013	0.014	1.13	0.082	0.148	0.011	0.004	0.071	0.020	0.0073	Φ40×40
NCS AH28346	60Si2Mn	0.574	1.76	0.792	0.020	0.014	0.024	0.019	0.011						Φ40×40
NCS AH28347	ER50-6	0.076	0.90	1.49	0.020	0.011	0.024	0.0059	0.0076						Φ40×40
NCS AH28348	SAE1215	0.065	0.013	1.31	0.056	0.364	0.023	0.0082	0.010						Φ40×40

		Co
NCS AH28338	Q235(15#)	0.011
NCS AH28339	45#	0.011
NCS AH28340	20CrMo	0.013
NCS AH28341	15Mn	0.0048
NCS AH28342	20Mn	0.0040
NCS AH28343	65Mn	0.011
NCS AH28344	M20Mn	0.011
NCS AH28345	30CrMnTi	0.012

Number	Name	Chemical Composition(Percent)												Unit Size
		C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	B	Nb	(mm)
NCS AH 93303	Low Alloy Steel	0.120	0.014	0.258	0.013	0.120	0.022	0.034		0.122				Φ35×50
NCS AH 93304	Low Alloy Steel	0.172	0.060	0.400	0.018	0.143	0.033	0.041		0.110				Φ35×50
NCS AH 93305	Low Alloy Steel	0.251	0.022	0.518	0.023	0.280	0.041	0.042		0.110				Φ35×50
NCS AH 93306	Low Alloy Steel	0.310	0.031	0.870	0.051	0.480	0.280	0.120		0.355				Φ35×50
NCS AH 93307	Low Alloy Steel	0.458	0.017	0.582	0.022	0.188	0.036	0.042		0.132				Φ35×50
NCS AH 93308	Low Alloy Steel	0.512	0.010	0.690	0.022	0.352	0.077	0.060		0.154				Φ35×50
NCS AH 93309	Low Alloy Steel	0.375	0.047	1.84	0.053	0.770	0.290	0.290		0.225				Φ35×50
NCS AH 93310	Low Alloy Steel	0.182	0.036	1.23	0.028	0.460	0.045	0.040		0.128				Φ35×50
NCS AH 93323	Line Pipe Steel	0.042	0.0028	1.582	0.0078	0.187	0.04	0.175	0.272	0.172	0.04	0.00019	0.03	Φ35×50

		Ti	Al	Ca
NCS AH 93323	Low Alloy Steel	0.024	0.03	0.00034

Section 11 Set-up Sample
1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	W	Al	(mm)
NCS AH37301	High Manganese Steel	1.24	0.314	12.47	0.061	0.021	1.91	1.11	0.500	0.023	0.162	0.014	0.301		Φ36×36
NCS AH37302	High Manganese Steel	1.28	0.508	13.77	0.057	0.0056	2.42	2.09	1.00	0.041	0.049	0.056	0.004		Φ36×36
NCS AH37303	High Manganese Steel	1.20	0.351	24.20	0.060	0.0031	1.86	1.65	1.01	0.037	0.049	0.066	0.040		Φ36×36
NCS AH37304	High Manganese Steel	1.05	0.70	12.07	0.037	0.016	1.72	0.026			0.014				Φ36×36
NCS AH37305	High Manganese Steel	0.532	0.091	3.76	0.018	0.008	0.459	0.091	0.397		0.030	0.008	0.140	0.004*	Φ34×34
NCS AH37306	High Manganese Steel	0.734	0.254	6.02	0.019	0.012	0.941	0.582	0.735		0.088	0.027	0.313	0.010*	Φ34×34
NCS AH37307	High Manganese Steel	0.780	0.609	9.84	0.028	0.021	1.56	1.62	1.08		0.232	0.092	0.494	0.019*	Φ34×34
NCS AH37308	High Manganese Steel	1.07	0.733	13.97	0.055	0.016	1.89	2.43	1.39		0.311	0.124	0.762	0.023*	Φ34×34
NCS AH37309	High Manganese Steel	1.25	0.949	17.76	0.075	0.027	2.17	3.17	1.69		0.294	0.182	1.05	0.020*	Φ34×34
NCS AH37310	High Manganese Steel	1.10	0.67	22.39	0.020	0.004	1.23	1.69	0.58		0.082	0.088	0.49	0.023*	Φ36×36
NCS AH37311	High Manganese Steel	1.13	0.69	17.93	0.020	0.008	1.45	1.68	0.58		0.108	0.101	0.53	0.019*	Φ36×36
NCS AH37312	High Manganese Steel	1.12	0.70	13.20	0.026	0.007	1.76	1.59	0.70		0.107	0.127	0.65	0.026*	Φ36×36

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	W	Co	N	(mm)
NCS AH37313	Stainless Steel	0.098	0.100	8.54	0.035	0.008	17.27	3.88		0.272			0.114	0.076	Φ36×36
NCS AH37314	Stainless Steel	0.132	0.77	8.44	0.044	0.016	16.78	5.42		1.115			0.150	0.101	Φ36×36
NCS AH37315	Stainless Steel	0.138	0.47	0.97	0.028	0.018	16.20	6.19		0.189			0.093	0.128	Φ36×36
NCS AH37316	Stainless Steel	0.081	0.72	1.45	0.029	0.013	18.29	8.03		0.093			0.139	0.069	Φ36×36
NCS AH37317	Stainless Steel	0.106	0.41	1.72	0.027	0.024	24.37	19.13		0.100			0.114	0.078	Φ36×36
NCS AH37318	Stainless Steel	0.538	0.202	8.49	0.018	0.0063	20.31	3.50	0.056	0.033	0.067	0.034	0.034	0.463	Φ36×36
NCS AH37319	Stainless Steel	0.036	0.363	0.807	0.043	0.0096	16.19	10.27	2.02	0.479	0.062	0.054	0.159	0.054	Φ36×36
NCS AH37320	Stainless Steel	0.017	0.290	1.04	0.048	0.031	16.06	10.07	2.01	0.630	0.071	0.040	0.207	0.040	Φ36×36
NCS AH37321	Stainless Steel	0.020	0.338	1.10	0.068	0.049	15.93	10.11	2.03	0.367	0.059	0.089	0.722	0.028	Φ36×36

		Nb
NCS AH37318	Stainless Steel	0.066
NCS AH37319	Stainless Steel	0.011
NCS AH37320	Stainless Steel	/
NCS AH37321	Stainless Steel	/

Number	Name	Chemical Composition(Percent)													Unit Size
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	V	Ti	W	Al	(mm)
NCS AH37322	316L	0.032	0.78	1.45	0.026	0.019	16.14	10.30	2.28	0.026		/			Φ36×36
NCS AH37323	304	0.075	0.77	1.44	0.033	0.025	18.56	8.49	0.089	0.225		/			Φ36×36
NCS AH37324	OCr18Ni10Ti	0.086	0.84	1.45	0.032	0.014	17.45	9.26	0.040	0.16		0.56			Φ36×36
NCS AH37325	1Cr18Ni9Ti	0.134	1.06	1.51	0.033	0.021	17.01	8.56	0.062	0.16		0.61			Φ36×36
NCS AH37326	1Cr13	0.144	0.56	0.71	0.038	0.028	12.07	0.184	/	0.207		/			Φ36×36
NCS AH37327	2Cr13	0.232	0.82	0.80	0.042	0.027	12.42	0.68	0.073	0.12		/			Φ36×36
NCS AH37328	High Manganese Steel	0.78	0.60	9.84	0.028	0.016	1.56	1.62	1.08		0.232	0.092	0.49	0.019*	Φ36×36
NCS AH37329	High Manganese Steel	1.25	0.95	17.76	0.076	0.015	2.17	3.17	1.69		0.294	0.182	1.05	0.020*	Φ36×36

		Co
NCS AH37322	316L	0.039
NCS AH37323	304	0.17
NCS AH37324	OCr18Ni10Ti	0.17
NCS AH37325	1Cr18Ni9Ti	0.16
NCS AH37326	1Cr13	0.017
NCS AH37327	2Cr13	0.030

Section 11 Set-up Sample
2) Nonferrous Metal

Number	Name	Chemical Composition(percent)										Unit Size
		Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	Zr	B	V	(mm)
NCS AH 49301	Aluminum Alloy	0.096	0.252	0.076	0.188	7.30	0.078	0.146					Φ62×30
NCS AH 49302	Aluminum Alloy	0.495	0.029	0.487	0.769	11.30	0.253						Φ62×30
NCS AH 49303	Aluminum Alloy	3.42	0.169	0.314	0.872	8.27	0.906						Φ62×30
NCS AH 49304	Aluminum Alloy	0.227	1.45	0.066	0.678	10.24	0.170						Φ62×30
NCS AH 49305	Aluminum Alloy	3.87	1.77	0.680	0.419	0.314	0.272	0.078	0.036				Φ62×30
NCS AH 49306	Aluminum Alloy	4.81	0.036	0.718	0.237	0.233	0.161	0.230					Φ62×30
NCS AH 49307	Aluminum Alloy	3.99			0.204	7.18				0.149			Φ62×30
NCS AH 49308	Aluminum Alloy	6.01	0.0171		0.213	0.091	0.020	0.107			0.083	0.157	Φ62×30

Section 12 Solution Standard

Number	Name	Nomonal Composition(μg/mL)	Medium	Unit Size (mL)
NCS AH 11401	Lithium	1000	HCl(10%)	50
NCS AH 11402	Beryllium	1000	HNO_3(10%)	50
NCS AH 11403	Boron	1000	H_2O	50
NCS AH 11404	Sodium	1000	H_2O	50
NCS AH 11405	Magnesium	1000	HCl(5%)	50
NCS AH 11406	Aluminum	1000	HCl(10%)	50
NCS AH 11407	Silicon	1000	Na_2CO_3	50
NCS AH 11408	Phosphorus(NH_4)	1000	H_2O	50
NCS AH 11409	Phosphorus(K)	1000	H_2O	50
NCS AH 11410	Sulfur	1000	H_2O	50
NCS AH 11411	Potassium	1000	H_2O	50
NCS AH 11412	Calcium	1000	HCl(5%)	50
NCS AH 11413	Scandium	1000	HNO_3(20%)	50
NCS AH 11414	Titanium	1000	H_2SO_4(10%)	50
NCS AH 11415	Vanadium	1000	H_2SO_4(10%)	50
NCS AH 11416	Vanadium	1000	HCl(10%)	50
NCS AH 11417	Cnromium	1000	HCl(10%)	50
NCS AH 11418	Manganese	1000	H_2SO_4(5%)	50
NCS AH 11419	Manganese	1000	HNO_3(10%)	50
NCS AH 11420	Iron	1000	HCl(10%)	50
NCS AH 11421	Cobalt	1000	HNO_3(5%)	50
NCS AH 11422	Nickel	1000	HNO_3(5%)	50
NCS AH 11423	Copper	1000	H_2SO_4(5%)	50
NCS AH 11424	Copper	1000	HCl(10%)	50
NCS AH 11425	Zinc	1000	HCl(10%)	50
NCS AH 11426	Gallium	1000	HCl(10%)	50
NCS AH 11427	Arsenic	1000	H_2SO_4(5%)	50
NCS AH 11428	Arsenic	1000	HCl(10%)	50
NCS AH 11429	Selenium	1000	HCl(10%)	50
NCS AH 11430	Rubidium	1000	HNO_3(5%)	50
NCS AH 11431	Strontium	1000	H_2O	50
NCS AH 11432	Yttrium	1000	HCl(10%)	50
NCS AH 11433	Ziconium	1000	HCl(10%)	50
NCS AH 11434	Niobium	1000	HF(5%)	50
NCS AH 11435	Molybdenum	1000	H_2SO_4(5%)	50
NCS AH 11436	Ruthenium	1000	HCl(10%)	50
NCS AH 11437	Rhodium	1000	HNO_3(10%)	50
NCS AH 11438	Palladium	1000	HCl(10%)	50
NCS AH 11439	Silver	1000	HNO_3(5%)	50
NCS AH 11440	Cadmium	1000	HCl(10%)	50
NCS AH 11441	Indium	1000	HCl(10%)	50
NCS AH 11442	Tin	1000	HCl(20%)	50
NCS AH 11443	Antimony	1000	H_2SO_4(25%)	50
NCS AH 11444	Tellurium	1000	HCl(10%)	50
NCS AH 11445	Cesium	1000	HNO_3(5%)	50
NCS AH 11446	Beryllium	1000	HCl(10%)	50
NCS AH 11447	Lanthanum	1000	HCl(10%)	50
NCS AH 11448	Cerium	1000	HNO_3(10%)	50
NCS AH 11449	Praseodymium	1000	HCl(10%)	50
NCS AH 11450	Neodymium	1000	HCl(10%)	50

Section 12 Solution Standard

Number	Name	Nomonal Composition(μg/mL)	Medium	Unit Size (mL)
NCS AH 11401	Lithium	1000	HCl(10%)	50
NCS AH 11402	Beryllium	1000	HNO_3(10%)	50
NCS AH 11403	Boron	1000	H_2O	50
NCS AH 11404	Sodium	1000	H_2O	50
NCS AH 11405	Magnesium	1000	HCl(5%)	50
NCS AH 11406	Aluminum	1000	HCl(10%)	50
NCS AH 11407	Silicon	1000	Na_2CO_3	50
NCS AH 11408	Phosphorus(NH_4)	1000	H_2O	50
NCS AH 11409	Phosphorus(K)	1000	H_2O	50
NCS AH 11410	Sulfur	1000	H_2O	50
NCS AH 11411	Potassium	1000	H_2O	50
NCS AH 11412	Calcium	1000	HCl(5%)	50
NCS AH 11413	Scandium	1000	HNO_3(20%)	50
NCS AH 11414	Titanium	1000	H_2SO_4(10%)	50
NCS AH 11415	Vanadium	1000	H_2SO_4(10%)	50
NCS AH 11416	Vanadium	1000	HCl(10%)	50
NCS AH 11417	Cnromium	1000	HCl(10%)	50
NCS AH 11418	Manganese	1000	H_2SO_4(5%)	50
NCS AH 11419	Manganese	1000	HNO_3(10%)	50
NCS AH 11420	Iron	1000	HCl(10%)	50
NCS AH 11421	Cobalt	1000	HNO_3(5%)	50
NCS AH 11422	Nickel	1000	HNO_3(5%)	50
NCS AH 11423	Copper	1000	H_2SO_4(5%)	50
NCS AH 11424	Copper	1000	HCl(10%)	50
NCS AH 11425	Zinc	1000	HCl(10%)	50
NCS AH 11426	Gallium	1000	HCl(10%)	50
NCS AH 11427	Arsenic	1000	H_2SO_4(5%)	50
NCS AH 11428	Arsenic	1000	HCl(10%)	50
NCS AH 11429	Selenium	1000	HCl(10%)	50
NCS AH 11430	Rubidium	1000	HNO_3(5%)	50
NCS AH 11431	Strontium	1000	H_2O	50
NCS AH 11432	Yttrium	1000	HCl(10%)	50
NCS AH 11433	Ziconium	1000	HCl(10%)	50
NCS AH 11434	Niobium	1000	HF(5%)	50
NCS AH 11435	Molybdenum	1000	H_2SO_4(5%)	50
NCS AH 11436	Ruthenium	1000	HCl(10%)	50
NCS AH 11437	Rhodium	1000	HNO_3(10%)	50
NCS AH 11438	Palladium	1000	HCl(10%)	50
NCS AH 11439	Silver	1000	HNO_3(5%)	50
NCS AH 11440	Cadmium	1000	HCl(10%)	50
NCS AH 11441	Indium	1000	HCl(10%)	50
NCS AH 11442	Tin	1000	HCl(20%)	50
NCS AH 11443	Antimony	1000	H_2SO_4(25%)	50
NCS AH 11444	Tellurium	1000	HCl(10%)	50
NCS AH 11445	Cesium	1000	HNO_3(5%)	50
NCS AH 11446	Beryllium	1000	HCl(10%)	50
NCS AH 11447	Lanthanum	1000	HCl(10%)	50
NCS AH 11448	Cerium	1000	HNO_3(10%)	50
NCS AH 11449	Praseodymium	1000	HCl(10%)	50
NCS AH 11450	Neodymium	1000	HCl(10%)	50

Section 12 Solution Standard

Number	Name	Nominal Consistence(μg/mL)	Medium	Unit Size (mL)
NCS AH 11451	Samarium	1000	HCl(10%)	50
NCS AH 11452	Europium	1000	HCl(10%)	50
NCS AH 11453	Gadolinium	1000	HCl(10%)	50
NCS AH 11454	Terbium	1000	HCl(10%)	50
NCS AH 11455	Dysprosium	1000	HCl(10%)	50
NCS AH 11456	Holmium	1000	HCl(10%)	50
NCS AH 11457	Erbium	1000	HCl(10%)	50
NCS AH 11458	Thulium	1000	HCl(10%)	50
NCS AH 11459	Yttbium	1000	HCl(10%)	50
NCS AH 11460	Latetium	1000	HCl(10%)	50
NCS AH 11461	Hafnium	1000	H_2SO_4(10%)	50
NCS AH 11462	Tantalum	1000	HF(20%)	50
NCS AH 11463	Tungsten	1000	NaOH(2%)	50
NCS AH 11464	Rhenium	1000	HCl(10%)	50
NCS AH 11465	Osmium	1000	HCl(20%)	50
NCS AH 11466	Irdium	1000	HCl(10%)	50
NCS AH 11467	Platinum	1000	HCl(10%)	50
NCS AH 11468	Gold	1000	HCl(10%)	50
NCS AH 11469	Mercury	1000	HNO_3(5%)	50
NCS AH 11470	Thallium	1000	HNO_3(20%)	50
NCS AH 11471	Lead	1000	HNO_3(10%)	50
NCS AH 11472	Bismuth	1000	HNO_3(10%)	50
NCS AH 11473	Germanium	1000	H_2O	50

Number	Name	Nominal Consistence(μg/g)	Unit Size (in mL)
NCS AH 76401	Lead in Water	1.00	20or100
NCS AH 76402	Cadmium in Water	0.100	20or100
NCS AH 76403	Mercury in Water	0.010	20or50
NCS AH 76404	Fluoride in Water	1.00	100
NCS AH 76404	Arsenic in Water	0.50	20or100

Number	Name	Nominal Consistence(μg/g)				Unit Size (in mL)
		Cl^-	NO_3^-	SO_4^{2-}		
NCS AH 76406	Anions in Water	22.0	4.50	38.0	1000	20or100

Number	Name	Nominal Consistence(μg/g)						Unit Size (in mL)
		Cd	Pb	Cu	Cr	Zn	Ni	
NCS AH 76407	Matal in Water	0.100	1.00	1.00	0.500	5.00	0.500	20or100
NCS AH 76408	Matal in Water	10.0*	50*	30*	50*	90*	60*	20or100

* Unit Cerfified Value of the element is ng/g.

Number	Name	Concentration(μg/g)	Unit Size (in mL)
NCS AH 76409	Silver in Water	1000	20
NCS AH 76410	Arsenic in Water	1000	20
NCS AH 76411	Cadmium in Water	1000	20
NCS AH 76412	Cobalt in Water	1000	20
NCS AH 76413	Chromium in Water	1000	20
NCS AH 76414	Copper in Water	1000	20
NCS AH 76415	Iron in Water	1000	20
NCS AH 76416	Mercury in Water	1000	20
NCS AH 76417	Nicked in Water	1000	20
NCS AH 76418	Lead in Water	1000	20
NCS AH 76419	Zinc in Water	1000	20

Section 12 Solution Standard

Number	Name	Mass Fraction of Substance(10^{-6})	Unit Size (in mL)
NCS AH 76423	Gold Solution	100.0	20
NCS AH 76424	Lanthanum Solution	982.3	20
NCS AH 76425	Cerium Solution	951.5	20
NCS AH 76426	Samarium Solution	982.3	20
NCS AH 76427	Europium Solution	982.3	20
NCS AH 76428	Ytterbium Solution	982.3	20
NCS AH 76429	Lutetium Solution	982.3	20
NCS AH 76430	Yttrium Solution	982.3	20
Number	Name	Range Concentration(mg/L)	Unit Size (mL)
NCS AH 85401	Arsenic	0.1~0.8	20
NCS AH 85402	Ammonia Nitrogen	0.5~5	20
NCS AH 85403	Nitrite Nitrogen	0.05~0.2	20
NCS AH 85404	Nitrite Nitrogen	0.5~5	20
NCS AH 85405	Cu,Pb,Zn,Cd,Ni,Cr	Cu0.5~2,Pb0.5~2,Zn0.1~1,Cd0.1~1,Ni0.1~2,Cr0.1~2	20
NCS AH 85406	F^-,Cl^-,So_4^{2-}	F^-0.2~5,Cl^-0.5~100,SO_4^{2-}5~100	20
NCS AH 85407	Copper	0.01~2	20
NCS AH 85408	Lead	0.01~2	20
NCS AH 85409	Zinc	0.01~2	20
NCS AH 85140	Cadmium	0.01~2	20
NCS AH 85141	Nickel	0.1~2	20
NCS AH 85412	Chromium	0.1~2	20
NCS AH 85413	Fluorine	0.2~5	20
NCS AH 85414	Chlorine	0.01~100	20
NCS AH 85415	Sulfate	0.1~100	20
NCS AH 85416	Mercury	6~20(μg/L)	20
NCS AH 85417	Total Cyanide	0.05~1	20
NCS AH 85418	Fe,Mn	0.01~2	20
NCS AH 85419	K,Na,Ca,Mg	K0.1~0.5,Na0.1~5,Ca0.1~10,Mg0.1~5	20
NCS AH 85420	Potassium	0.1~5	20
NCS AH 85421	Sodium	0.1~5	20
NCS AH 85422	Calcium	0.1~10	20
NCS AH 85423	Magneium	0.2~5	20
NCS AH 85424	Iron	0.1~5	20
NCS AH 85425	Manganese	0.1~5	20
NCS AH 85426	Total Nitrogen	1~8	20
NCS AH 85427	Vanadium	0.1~1	20
NCS AH 85428	Cobalt	0.05~1	20
NCS AH 85429	Selenium	0.01~1	20
NCS AH 85430	Molybdenum	0.05~1	20
NCS AH 85431	Cr^{6+}	0.01~5	20
NCS AH 85432	Phosphrate	0.05~5	20
NCS AH 85433	Total Phosphrous	0.05~5	20
NCS AH 85434	Barium	0.2~2	20
NCS AH 85435	Silver	0.2~1	20
NCS AH 85436	Antimony	0.5~2	20
NCS AH 85437	Aluminum	0.05~2	20
NCS AH 85438	Beryllium	5~20(μg/L)	20
NCS AH 85439	Lithium	0.2~2.0	20
NCS AH 85440	Strontium	0.3~10	20
NCS AH 85441	Bromine	0.5~3	20

Section 13 Accelerator And Others

Number	Name	Chemical Composition(Percent)					
		Type	Grain size(mm)	Tap Density	C%	S%	Unit size
NCS NC 1111	Tungsten Accelerator	T11	0.9-1.6	7.6-8.6	≦ 0.0008	≦ 0.0005	1kg/2kg

Number	Name	Melting Point (℃)			Unit Size
		F=1, △ T=0	0.20℃ /min	1.0℃ /min	(in g)
NCS AS 93101b	P-Nitrotoluene	51.64	52.09	52.66	2
NCS AS 93102b	Naphthalene	80.08	80.50	81.01	2
NCS AS 93103b	Benzoic acid	122.35	122.85	123.37	2
NCS AS 93104b	1.6-Adipic acid	151.62	152.51	153.12	2
NCS AS 93105a	Anisic acid	183.28	184.05	184.64	2
NCS AS 93106	Anthracene	215.88	216.32	216.92	2
NCS AS 93107b	P-Nitrobenzoic acid	239.58	240.57	241.33	2
NCS AS 93108b	Anthraquinone	284.55	284.98	285.36	2

Number	Name	Melting Point (℃)			Unit Size
		0.2℃ /min	0.5℃ /min	1.0℃ /min	(in g)
NCS AS 93109	Azobenzol	68.34	68.50	68.60	2
NCS AS 93110	Methylprotocatechuic	81.85	82.12	82.33	2
NCS AS 93111	Acetanil	114.55	114.74	115.00	2
NCS AS 93112	P-Acetophenetidine	134.96	135.08	135.23	2
NCS AS 93113	Albexan	164.70	165.04	165.16	2
NCS AS 93114	Amber acid	184.02	184.90	185.97	2
NCS AS 93115	Sulfadimidine	198.32	198.60	198.71	2
NCS AS 93116	Cyanoguanidine	208.62	209.38	210.16	2
NCS AS 93117	Saccharin	228.41	228.65	228.84	2
NCS AS 93118	Coffeine	236.26	236.51	236.60	2
NCS AS 93119	Chocolax	261.43	261.67	262.61	2

NATIONAL ANALYSIS CENTER FOR IRON & STEEL
NCS Testing Technology Co., Ltd.

Tel: 86-10-62176511
Fex: 86-10-62187223
E-mail: nacis @ncscrm.com
Website: www.ncsstandard.com
Add: #13 Gaoliangqiao Xiejie Haidian District Beijing China 100081