

NCS

Reference Material (2016–2017)



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 Research 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 materials and production of metal, alloy, ore, ferrous alloy 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 for CRM production and quality 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.

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Section 1 Iron, Steel & Alloy(Chip)

1)Pure Iron, Pig Iron, Cast Iron

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Co		
NCS HC 11001	High Pure Iron	0.0016	0.001	0.0063	0.0064	0.0053	0.0032	0.012	0.0044				0.0026	0.0063	100	
NCS HC 11001a	High Pure Iron	0.0019	0.0011	0.0046	0.0064	0.0053	0.005	0.015	0.0051					0.009	100	
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 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														
NCS HC 11001	High Pure Iron	0.0074														
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	B	Ti	Co	V	W		
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	
		Mo	Mg	Sn	N	La	Ce	Al _s	As	R _e	Sb					
		0.0016	0.012	0.0037	0.0047	0.013	0.019	0.021	0.011	0.036	(0.0005)					
Number	Name	Chemical Composition(Percent)											Unit Size (in g)			
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo				
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	0.842	100			
Number	Name	Chemical Composition(Percent)											Unit Size (in g)			
		C	Si	Mn	P	S	Cr	Ni	Cu	Al _s	V	Ti		Mo	Co	
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Co		
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 15004	Pure Iron	0.0272	0.0994	0.246	0.0094	0.012	0.013	0.0202	0.031	0.37					100	
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 15007	Pure Iron	0.091	0.341	0.399	0.0246	0.017	0.148	0.243	0.201	0.180					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						
		Chemical Composition(Percent)														
		C	Si	Mn	P	S	Cu	Cr	Ni	Al	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	
		Chemical Composition(Percent)														
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Mo	Sn	As	Sb	Unit Size (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 16015	Pig Iron	3.51	2.31	0.882	0.083	0.025			0.308						100	
NCS HC 16016	Pig Iron	3.04	0.850	0.646	0.032	0.102									150	
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 16025	Pig Iron	3.46	2.61	0.67	0.081	0.058									150	
NCS HC 16026	Pig Iron	3.22	2.25	0.726	0.085	0.059									150	
		Chemical Composition(Percent)														
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Sn	Zn	Unit Size (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 (in g)			
		C	Si	Mn	P	S	As	RE	Mg						
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 18004	Pig Iron	4.00	0.796	0.26	0.11	0.023	0.095							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 18007	Pig Iron	4.17	1.03	0.348	0.078	0.0233	0.017							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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Co		
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	
Number	Name	Ca	Mg	RE											Unit Size (in g)
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Co	Sn	
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Sn	
NCS HC 28023	High Phosphorus Cast Iron	3.08	1.61	0.704	0.847	0.13	0.094		0.294						150
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 28030	Alloy Cast Iron	3.23	1.28	0.736	0.109	0.124	0.12		0.12					150	
NCS HC 28031	Alloy Cast Iron	2.95	1.75	0.595	0.065	0.107	0.23		0.642			0.030	0.155	150	
NCS HC 28032	Alloy Cast Iron	3.19	1.295	0.955	0.107	0.108	0.54		0.745			0.040	0.303	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 (in g)
		C	S	Si	Mn	P	Cr	Ni	Mo	Nb	Mg	Cu	ΣRE	Ce	
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 (in g)						
		C	Si	Mn	P	S	Cu								
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 (in g)				
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo					
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Mg	R _e	Bi		
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 37012	Cast Iron	3.75	2.15	0.730	0.152	0.068								80	
NCS HC 37013	Wrought Iron	2.11	1.70	0.353	0.167	0.139	0.119						0.0025	80	
NCS HC 37014	Wrought Iron	2.25	1.03	0.537	0.241	0.088	0.163						0.00093	80	
NCS HC 37015	High Chromium Cast Iron	3.40	1.35	0.89	0.060	0.054	13.45	0.63	1.22	1.03				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 (in g)			
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Co				
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Mg	R _e	Bi		
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 37033	Pig Iron	2.63	2.82	0.762	0.187	0.070									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 (in g)						
		C	Si	Mn	P	S	B								
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 39005	Cast Iron	3.18	1.57	0.76	0.122	0.073								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 39012	Boron Cast Iron	3.03	2.08	0.68	0.128	0.064	0.125							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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	Sn	
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	
NCS HC 41013	Cast Iron	2.46	2.66	0.93	0.41	0.041	0.105	0.036	0.132	0.026	0.024	0.061		150	
		As	Sb	Pb	Ali										
NCS HC 41002	DT4				0.003										
NCS HC 41013	Cast Iron		0.0011	0.0008											
Number	Name	Chemical Composition(Percent)						Unit Size (in g)							
		C	Si	Mn	P	S									
NCS HC 93001	pig iron	4.01	1.49	1.15	0.097	0.069		100							
Numberw	Name	Chemical Composition(Percent)												Unit Size (in g)	
		C	S	Si	Mu	P	Cr	Ni	Mo	Cu	Ti	ΣRe	V*		
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 (in g)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Al _i	Ti _i			
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 11120	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 11129	Carbon Steel	0.049	0.353	1.11	0.023	0.017	0.035	0.28	0.127	0.023	0.012	0.064					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 (in g)					
		C	Si	Mn	P	S	Cr	Ni	Cu	As							
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 13113	Carbon Steel,20 #	0.22	0.23	0.45	0.015	0.030	0.027	0.020	0.017	0.003							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	150		
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	150		
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	150		

Section 1 Iron, Steel & Alloy(Chip)

2)Non-Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Mo	Co	Sn		
NCS HC 28101	Carbon Steel	0.102	0.228	0.550	0.0170	0.017	0.035	0.026	0.034	0.017			0.0059	0.0058	0.0030	100
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			0.097				150
NCS HC 28123	Carbon Steel	0.152	0.175	0.491	0.019	0.0199	0.027	0.030	0.108			0.028				150
NCS HC 28125	Carbon Steel	0.327	0.304	0.515	0.0079	0.026	0.168	0.130	0.255			0.022				150
NCS HC 28126	Carbon Steel	0.670	0.417	0.978	0.0486	0.040	0.0385	0.019	0.102			0.158				150
NCS HC 28127	Carbon Steel	0.167	0.475	1.00	0.0208	0.0182	0.018	0.023	0.029			0.568				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 28101	Carbon Steel	0.0066	0.0010	0.00020	<0.00001											
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 (in g)						
		C	Si	Mn	P	S	Cr	Ni	Cu							
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 (in g)						
		C	Si	Mn	P	S	Cr	Ni	Cu							
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co		
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 41104	Carbon Steel	0.854	0.34	1.07	0.068	0.295	0.018	0.025	0.040	0.040	0.0022		0.0042	0.008	150	
NCS HC 41107	Carbon Steel	0.316	0.069	1.18	0.0425	0.014	0.0195	0.035	0.052	0.760	0.0017		0.0065	0.009	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 41114	Carbon Steel	0.295	0.306	0.661	0.019	0.0127	0.042	0.024	0.089	0.059	0.001				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 41127	Carbon Steel	0.647	0.471	0.839	0.047	0.042	0.335	0.363	0.361		(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	Al	Nt							
NCS HC 41102	Carbon Steel			0.015	(<0.001)			0.007								
NCS HC 41104	Carbon Steel	0.0054	0.0078		(<0.0001)	0.0082	0.002	0.0086								
NCS HC 41107	Carbon Steel	0.0063	0.010				0.0025									
NCS HC 41109	Carbon Steel	0.0074	0.010				0.002									
NCS HC 41114	Carbon Steel						0.0050									
NCS HC 41116	Carbon Steel						0.005									
NCS HC 41117	Carbon Steel						0.005									
Number	Name	Chemical Composition(Percent)							Unit Size (in g)							
		C	Si	Mn	P	S										
NCS HC 56101	S,P Easy Cutting Steel	0.132	0.167	0.475	0.152	0.057		150								
NCS HC 56102	S,P Easy Cutting Steel	0.251	0.527	0.804	0.104	0.129		150								

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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	38CrWVAI	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 ₃ MoWV	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 ₃ CrV	1.60	0.41	0.59	0.044		0.38				0.26		2.70		100	
NCS HC 11209a	W ₃ MoV	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 ₂ Mo	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 ₂ Mn	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 ₂ V	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 ₂ Mn	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	
		Co	B	Sn	As	Sb	Pb	N	Bi	R _E	Nb	Zr				
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 ₂ Mn	0.011			0.016											
NCS HC 11235	Medium Low Alloy Steel	0.340		0.011	0.012						0.025	0.156				
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B				
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 ₂ CrCuAl	0.035	0.59	1.79	0.089	0.009	1.03	0.020	0.46	0.59					150	
NCS HC 13206	CrCu	0.81	0.29	0.19	0.060	0.047	0.53	0.11	0.295	0.065					150	
NCS HC 13207	30Mn ₂ MoVTiAlB	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 ₂ MoVTiAlB	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B		
NCS HC 13209	09SiMoTiAlB	0.042	1.11	0.309	0.012	0.006	0.013	0.021	0.035	0.186	0.25	0.70	0.485	0.010	100	
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	B		
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	Re	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	W	Mo	Co		
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	
NCS HC 14219	Calcium Steel	0.114	1.57	0.501	0.0090	0.021	0.557	0.298	0.122		0.474		0.50	0.0080	100	
NCS HC 14220	Calcium Steel	0.312	0.85	0.113	0.0062	0.0046	2.66	0.042	0.054		0.042		1.06	0.012	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													
NCS HC 14219	Calcium Steel	0.0139		0.115	0.0030											
NCS HC 14220	Calcium Steel	0.121		0.613	0.0015											

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3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 (in g)		
		C	Si	Mn	P	S	Al _t	Al _s	B _t	B _s	Al	N	W		Mo	
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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W	Mo	B		
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 ₂ MoV	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 ₂ WV	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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W	Mo	B		
NCS HC 16207	15SiMn ₃ Mo	0.121	1.160	3.320	0.0242	0.0490	0.215	0.201	0.210				0.560		150	
NCS HC 16208	30Mn ₂ MoV	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 ₂ Mo2V	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 ₂ MoTi	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 ₂ VW	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 _i	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Al _i	Al _s	Bt	
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Nb	B	
NCS HC 18201a	Low Alloy Steel	0.044	1.53	1.3	0.0063	0.0027	0.026	0.025	0.099	0.387	0.286	0.019	0.013	0.0014	100
NCS HC 18202a	Low Alloy Steel	0.247	1.05	0.915	0.03	0.04	0.186	0.304	0.133	0.349	0.145	0.489	0.095	0.0087	100
NCS HC 18203a	Low Alloy Steel	0.331	0.64	0.549	0.051	0.032	1.62	0.977	0.213	0.481	0.444	0.184	0.024	0.0025	100
NCS HC 18204a	Low Alloy Steel	0.603	0.466	0.735	0.038	0.034	0.99	0.739	0.326	0.221	0.382	0.248	0.053	0.0036	100
NCS HC 18205a	Low Alloy Steel	0.431	0.212	1.48	0.034	0.025	0.27	1.44	0.036	0.018	0.061	0.33	0.061	0.0054	100
NCS HC 18206a	Low Alloy Steel	0.853	0.754	0.258	0.012	0.014	0.769	0.454	0.191	0.164	0.175	0.404	0.066	0.0038	100
NCS HC 18207a	Low Alloy Steel	0.144	0.168	1.66	0.021	0.02	0.533	0.133	0.285	0.1	0.079	0.078	0.068	0.0025	100
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 ₂ Mn	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 _i Al _s Zn															
NCS HC 18201a	Low Alloy Steel	0.003	0.092	0.0059	0.015	0.014	0.0047								
NCS HC 18202a	Low Alloy Steel	0.016	0.075	0.016	0.052	0.049	0.0068								
NCS HC 18203a	Low Alloy Steel	0.052	0.055	0.0075	0.22	0.217	0.0063								
NCS HC 18204a	Low Alloy Steel	0.022	0.036	0.0093	0.067	0.064	0.0036								
NCS HC 18205a	Low Alloy Steel	0.09	0.012	0.0036	0.128	0.12	0.002								
NCS HC 18206a	Low Alloy Steel	0.061	0.053	0.011	0.196	0.188	0.03								
NCS HC 18207a	Low Alloy Steel	0.079	0.026	0.026	0.056	0.053	0.035								
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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Co	B		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 ₂ Mn	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 ₂ Mn	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 ₂ Mn	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 ₂ Mn	0.706	1.10	0.857	0.0256	0.0374	0.760	0.393	0.303	0.158	0.168			0.176	0.273	100
NCS HC 21211	60Si ₂ Mn	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 ₂ SiA	0.087	0.827	1.90	0.0107	0.0156	0.035	0.061	0.091							100
NCS HC 21215	35MoVAITiR _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	0.0396		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														
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 ₂ Mn	0.0012														
NCS HC 21211	60Si ₂ Mn	0.0013														
NCS HC 21218	CrMnV+Mo					0.097										
NCS HC 21220	CrMnN					0.29										

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Mn	P	S	Si	Ni	Cr	Cu	Mo	W	Als	Alt	Sn	
NCSHC21222	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 (in g)	
		C	S	P	Si	Mn	Cr	Ni	Cu	Nb	Re	Al(s)	N		
NCSHC22201	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	150	
NCSHC22202	Alloy structure steel	0.069	0.0076	0.0135	0.715	0.991	0.228	0.071	0.075	0.076	0.018	0.123	0.014	150	
NCSHC22203	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		150	
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
NCSHC23202	30CrNi ₂ MoV	0.302	0.278	0.503	0.039	0.061	0.94	2.31	0.257	0.011	0.217			0.244	150
NCSHC23205	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
NCSHC23206	30CrMnSi	0.289	1.15	0.930	0.014	0.023	0.943	0.162	0.152	0.089			0.216	0.150	100
NCSHC23208	45CrV	0.41	0.364	0.67	0.0184	0.0165	0.96	0.139	0.095						150
NCSHC23209	38CrMoAl	0.360	0.310	0.490	0.0310	0.0140	1.540	0.410	0.185	1.13				0.270	150
NCSHC23210	38CrMoAl	0.39	0.335	0.425	0.0246	0.011	1.44	0.238	0.275	0.93				0.17	150
NCSHC23211	PCrNi ₄ Mo	0.367	0.375	0.56	0.018	0.027	0.957	3.95						0.43	150
NCSHC23214	30CrMnMoTi	0.328	0.326	0.770	0.0205	0.021	1.160	0.058	0.060					0.270	150
NCSHC23215	6 [#] Si ₂ M [#] W	0.691	1.836	0.813	0.019	0.0223	0.227	0.273	0.038				1.03		150
NCSHC23217	45CrNiMoY	0.43	0.337	0.635	0.027	0.016	0.994	1.64	0.206		0.15			0.28	150
NCSHC23218	35MnWMoVB	0.33	0.40	1.02	0.032	0.024	0.18	0.26	0.17		0.25		0.50	0.137	150
NCSHC23220	12CrNiA	0.144	0.24	0.49	0.0247	0.011	0.82	2.41	0.11						150
NCSHC23221	38CrA	0.375	0.345	0.69	0.026	0.0315	1.00	0.26	0.16	0.17					150
NCSHC23222	45CrNiWV	0.467	0.47	0.687	0.022	0.0248	1.03	1.515			0.146		0.693		150
NCSHC23223	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								
NCSHC23218	35MnWMoVB			0.0034											
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	W	Mo			
NCSHC24202	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	Mo	B	Bt	
NCSHC28201	20Cr	0.197	0.252	0.738	0.0195	0.015	0.785	0.026	0.029						150
NCSHC28202	40Cr	0.44	0.335	0.665	0.014	0.0055	0.998	0.053	0.741						150
NCSHC28204	35CrMo	0.390	0.304	0.558	0.029	0.0054	0.948	0.070	0.096			0.137			100
NCSHC28205	45Mn ₂	0.422	0.298	1.63	0.015	0.017	0.012	0.021	0.014						100

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	Sn	Als	
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		

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCSHC29215	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	
NCSHC29216	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								
NCSHC29215	Bearing Steel		0.018	0.0078	0.0013	0.0005										
NCSHC29216	Bearing Steel		0.0057	0.013	0.0020	0.0011										
Number	Name	Chemical Composition(Percent)											Unit Size (in g)			
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W					
NCSHC30201	40Cr	0.42	0.325	0.614	0.0206	0.0123	0.96		0.222						150	
NCSHC30202	60Si ₂ Ni ₂	0.613	1.71	0.628	0.0213	0.009	0.239	1.54	0.218						150	
NCSHC30204	60Si ₂ MnW	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Sn		
NCSHC31202	30CrMoSiA	0.313	1.245	0.952	0.0147	0.010	1.05								100	
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCSHC41202	GCr15	0.982	0.301	0.282	0.014	0.0061	1.52	0.42	0.064	Al0.040	0.002	0.0073	0.0049	0.010	150	
NCSHC41203	GCr ₁₅ SiMn	1.01	0.529	1.11	0.0135	0.005	1.50				0.005				150	
NCSHC41204	Silicon Steel	0.054	2.33	0.183	0.017	0.0325				0.008	Al0.005				150	
NCSHC41205	Silicon Steel	0.049	3.27	0.245	0.012	0.005				0.024	Al0.006				150	
NCSHC41206	Silicon Steel	0.050	4.38	0.091	0.0095	0.002				0.028	Al0.002				150	
NCSHC41207	20Cr	0.244	0.304	0.668	0.0155	0.010	0.881				0.002				100	
NCSHC41208	40Cr	0.443	0.282	0.795	0.0265	0.0105	1.004				0.003				100	
NCSHC41209	45CrV	0.425	0.277	0.667	0.024	0.0090	0.973	0.083	0.146		0.175				150	
NCSHC41210	45CrNiMoV	0.446	0.239	0.680	0.018	0.014	1.00	1.56	0.057		0.150		0.013	0.286	150	
NCSHC41211	40CrMo	0.398	0.303	0.612	0.0225	0.012	1.11	0.139	0.162		0.006		0.016	0.229	150	
NCSHC41212	38SiMnMo	0.411	1.33	1.31	0.0205	0.010								0.254	150	
NCSHC41213	W4Cr ₂ MoVSiAl	0.473	0.970	0.167	0.018	0.0051	1.47				1.05		3.85	1.29	150	
NCSHC41214	18Cr ₂ ni ₄ W	1.45	0.311	0.402	0.100	0.0060	1.45	4.32			0.0028		0.85		150	
NCSHC41215	20MnMo	0.205	0.317	1.37	0.021	0.0079	0.137		0.129	0.028	0.002	Al0.0017	0.016	0.295	150	
NCSHC41216	25CrMoV	0.235	0.246	0.703	0.0072	0.0016	1.07		0.027	0.0011	0.294	Al0.0029	0.0074	1.03	150	
NCSHC41217	26Cr ₂ Ni ₄ MoV	0.237	0.011	0.240	0.0062	0.0062	1.62	3.87	0.038	0.0005	0.092	Al0.0003	0.002	0.367	150	
NCSHC41218	5CrW ₂ Si	0.489	0.633	0.263	0.017	0.0032	1.09	0.058	0.082		0.001		2.21	0.051	150	
NCSHC41219b	35CrMo	0.368	0.288	0.534	0.014	0.0085	0.934	0.051	0.164					0.156	100	
NCSHC41220	20CrMoA	0.188	0.272	0.538	0.0165	0.0063	0.931	0.130	0.086	0.011	0.002	Al0.0049		0.202	150	
NCSHC41221	25CrMoNiSiA	0.309	1.08	1.14	0.0145	0.0060	1.13	1.62	0.087		0.004				150	
NCSHC41222	40CrNiMoA	0.447	0.329	0.693	0.0155	0.0145	0.741	1.31	0.197	0.008	0.003	Al0.005		0.179	150	
NCSHC41223	20MnV	0.184	0.306	1.44	0.025	0.0154	0.035	0.026	0.079		0.108				150	
NCSHC41224	60Si ₂ Mn	0.603	1.76	0.710	0.019	0.011					(0.003)				150	
NCSHC41226	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	
NCSHC41227	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	
NCSHC41228	CrWMn	1.00	0.238	0.925	0.0190	0.0036	1.08	0.049	0.074		0.003		1.40		150	
NCSHC41229	35CrMoV	0.347	0.263	0.520	0.205	0.0062	1.14	0.059	0.070	Al0.009	0.145	0.0017	0.033	0.259	100	
NCSHC41230	38CrMoAl	0.395	0.312	0.441	0.0140	0.0028	1.53	0.183	0.067	0.933	0.022	0.0018	0.0078	0.178	100	
NCSHC41231	20CrMnTi	0.187	0.294	0.921	0.020	0.0075	1.10					0.054			150	

Section 1 Iron, Steel & Alloy(Chip)

3)Low Alloy Steel

		Co	Nb	Sn	As	Sb	Pb	N		
NCS HC 41202	GCr15	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 ₂ Ni ₄ MoV	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		
NCS HC 41230	38CrMoAl	0.011		0.011	0.0065	0.0014		0.008		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCS HC 11301	Cr ₁₈ Mn ₁₀ Ni ₅ Mo ₃	0.059	0.94	10.03	0.018	0.003	17.82	5.72						2.92	100	
NCS HC 11302	4Cr ₃ Si ₄	0.46	4.01	0.52	0.035	0.010	3.08	0.40							100	
NCS HC 11303	Cr ₂₀ Al ₅ Co 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 ₅ Mn ₉	0.19	0.69	9.94	0.099	0.009	12.49	4.86	0.031						100	
NCS HC 11307a	Cr ₁₃ Ni ₅ Mn 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 ₄ Si	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 ₃ Ti	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 ₆ Ti	0.093	0.841	1.42	0.030	0.0049	17.61	9.77	0.098		0.041	0.320			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 ₅ Si ₂	0.327	2.36	0.896	0.018	0.0084	9.11	0.129	0.068						100	
NCS HC 11320	Cr ₂₄ Ni ₇ SiN	0.26	1.29	1.21	0.018	0.0085	24.45						0.007		100	
NCS HC 11321	Cr ₇ Al ₇	0.12	1.02	0.47	0.011		7.68			7.99					100	
NCS HC 11321a	Cr ₇ Al 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 11329	Stainless Steel	0.018	0.100	0.135	0.058	0.030	15.40	15.51	0.360	1.18	0.069	0.499	0.860	0.300	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								
NCS HC 11301	Cr ₁₈ Mn ₁₀ Ni ₅ Mo ₃				0.022											
NCS HC 11303	Cr ₂₀ Al ₅ Co ₂	2.02														
NCS HC 11307a	Cr ₁₃ Ni ₅ Mn ₉	0.027														
NCS HC 11317	Cr ₁₈ Ni ₁₁ Nb	0.019	0.84													
NCS HC 11320	Cr ₂₄ Ni ₇ SiN				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 11329	Stainless Steel	0.290	0.156	0.013	0.005	0.008	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	Cr	Ni	Cu	Al	Ti	Mo	N	Co			
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 ₉ Ti	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		
		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	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		
		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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 ₄ Ni 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 ₅ Mn ₅ Mo ₃ Al	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 ₉ Ti	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 ₉ MoS 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 ₂ Cu 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 ₄ Ni ₂₂	0.011	0.0022	0.0026	0.011											
NCS HC 20307	1Cr ₁₁ Ni ₅ Mn ₅ Mo ₃ Al	0.044	0.015	0.0093	0.040											
NCS HC 20311	1Cr ₁₈ Ni ₉ Ti	0.086	0.010	0.0071												
NCS HC 20312	YoCr ₁₈ Ni ₉ MoS ₁	0.176	0.012	0.0073												
NCS HC 20313	Ni ₂₅ Cr ₁₈ Mo ₂ Cu ₂	0.097	0.0070	0.0052												
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCS HC 21301	1Cr ₁₇ Ni ₂ Ti	0.126	0.560	0.563	0.0126	0.017	16.66	1.95	0.107						100	
NCS HC 21302	R00Cr ₁₈ Mo ₂ Ca	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 ₂ Ca	0.0048														
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Mn	P	S	Si	Ni	Cr	Cu	Mo	W	Als	Alt	As		
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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCS HC 23301	18Cr ₂ Ni ₄ W	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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
NCS HC 24312	Cr ₁₄ Mo ₅ VRE	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 ₅ VRE	0.041														

Section 1 Iron, Steel & Alloy(Chip)

4)Alloy Steel

Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	Sn	Als	V		
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	Als	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							
		Chemical Composition(Percent)														
Number	Name	C	Si	Mn	P	S	Cr	Ni	Al	Ti	Fe	Mo	Cu	V	Unit Size (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	
		Chemical Composition(Percent)														
Number	Name	C	Si	Mn	P	S	Cr	Ni	Mo							
NCS HC 37301	High Manganese Steel	1.25	0.464	11.59	0.073	0.0056										
NCS HC 37302b	High Manganese Steel	1.26	0.595	12.00	0.079	0.013										
NCS HC 37303	Stainless Steel	0.032	0.78	1.45	0.026	0.019	16.14	10.30	2.28							
NCS HC 37304	0Cr ₁₈ Ni ₉	0.075	0.77	1.44	0.033	0.025	8.56									
NCS HC 37305	0Cr ₁₈ Ni ₁₀ Ti	0.086	0.84	1.45	0.032	0.014	17.45									
NCS HC 37306	1Cr ₁₈ Ni ₉ Ti	0.134	0.021	1.06	0.033	0.021	17.01									
NCS HC 37307	1Cr ₁₃	0.144	0.56	0.71	0.038	0.028	12.07									
NCS HC 37308	2Cr ₁₃	0.232	0.82	0.80	0.042	0.027	12.42									
		Chemical Composition(Percent)														
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	Unit Size (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 ₄ W ₂ Mo 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 ₉ Ti	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 ₉ Ti	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 (in g)		
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo			
NCS HC 11401	W ₁₈ Cr ₄ V	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 ₄ V	0.87	0.23	0.24	0.044	0.004	3.72				1.19	19.16	0.28	150	
NCS HC 11402	W ₆ Mo ₅ Cr ₄ V 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 ₄ Cr ₂ V	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 ₂ V	0.84	0.23	2.02	0.051	0.006	0.10	0.034				0.16		150	
NCS HC 11411	5CrW ₂ Si	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 (in g)		
NCS HC 13401	T ₈ A	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 (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 (in g)		
NCS HC 17401	W ₁₈ Cr ₄ V	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 ₆ Mo ₅ Cr ₄ V 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 ₂ W ₈ V	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Sn	Co	
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	R _E		
NCS HC 23402	Cr ₄ Mo ₄ VR _E	0.85	0.39	0.35	0.034	0.014	4.07			0.99		4.38	0.035	150	
NCS HC 23403	W ₉ Mo ₃ Cr ₄ V	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 ₉ Mo ₃ Cr ₄ V	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Ti	
NCS HC 28401	T10	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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo	
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 ₄ V	0.740	0.165	0.178	0.025	0.0015	4.18				1.30		17.97		150
NCS HC 41406	W ₆ Mo ₅ Cr ₄ V 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 (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo			
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 ₂ MoTi	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	
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	
NCS HC 11520	Superalloy Trace Elements	Ag	As	Bi	Ca	Cd	In	Mg	Pb	Sb	So	Sn	Te	Ti			
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														

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6) Superalloy, Precious Alloy & Heat Resisting Alloy

Number	Name	Chemical Composition(µg/g)														Unit Size (in g)
		Ag	As	B	Bi	Cd	Ce	Cl	Hf	Ga	Ge	In	P	Pb		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti	W	Mo	Co		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mo		
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Fe	Ti	Co	Mo		
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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Zr	B	Sn	Sb	
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 _i											
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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	W	Alt	
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	ø38×30
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	ø38×30
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	ø38×30
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	ø38×30
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	ø38×30
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	ø38×30
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	ø38×30
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	ø38×30
		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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	W	Mo	Co	Sn	
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 _i											
NCS HS 11709a-1	Stainless Steel	0.0027	0.0004	0.107											
NCS HS 11709a-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											

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Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Mg	Sn	N		
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 (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	V	Co	Alf		
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 (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Nb	Alf		
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	ø33×21	
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	ø33×21	
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	ø33×21	
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	ø33×21	
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	ø33×21	
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	ø33×21	
		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													
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Ti	Al	V	Sb		
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)											

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Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	W	Mo	V	Co	Ti	
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										
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Co	Mo	V	B	Ti	
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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	Co	Cu	Ti	V	Alt	
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									

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Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Mo	W	V	B ₁	B ₂			
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 (mm)
		C	Si	Mn	P	S	Cr	Mo	W	V	B ₁	B ₂	Ni	Cu	
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													
Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Mo	Als			
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 (mm)			
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Ti				
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 (mm)			
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	Fe				
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	0.615	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 (mm)			
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo				
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	

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Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	V	Ti	As	Mo			
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 (mm)		
		C	S	Si	Mn	P	Ni	Cr	Cu	Mo	V	W		Nb	Ti
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
Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		Sn	Pb	Sb	Mg	La	Ce	As	B	Co	Al	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						
Number	Name	Chemical Composition(Percent)											Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	W		Mo	Co
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 (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo				
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

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Number	Name	Chemical Composition(Percent)															Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	W	Co	Sn	Pb	
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	0.0075	0.011	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	0.007	0.074	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	0.0076	0.0087	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	0.02	(0.0001)	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	0.052	0.0053	ø35×30
NCS HS 23716-6	Heat Die Steel	0.2	0.65	1.21	0.01	0.045	4.91	0.095	0.301	1.61	1.01	0.084	0.2	1.49	0.032	(0.0001)	ø35×30
Number	Name	Chemical Composition(Percent)													Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	W	Co				
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 (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Alt				
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 (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Alt	W	Co			
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		
		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 (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	V	Alt				
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			

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Sn	Co	Ti		
NCS HS 28705-1	Pig Iron	4.32	0.361	1.42	0.032	0.154	0.034	0.015	0.013	0.53	0.018	0.005	0.0057	0.024	ø30×30	
NCS HS 28705-2	Pig Iron	3.9	0.626	1.38	0.057	0.128	0.021	0.013	0.0018	0.467	0.021	0.0019	0.034	0.093	ø30×30	
NCS HS 28705-3	Pig Iron	3.61	1.27	0.882	0.218	0.101	0.041	0.05	0.02	0.361	0.036	0.0012	0.01	0.131	ø30×30	
NCS HS 28705-4	Pig Iron	3.27	1.85	0.726	0.16	0.066	0.093	0.099	0.055	0.224	0.077	0.0018	0.011	0.252	ø30×30	
NCS HS 28705-5	Pig Iron	3.07	0.252	0.608	0.098	0.048	0.099	0.304	0.09	0.135	0.111	0.001	0.0083	0.334	ø30×30	
NCS HS 28705-6	Pig Iron	2.52	3.16	0.402	0.305	0.028	0.208	0.754	0.207	0.033	0.208	0.0088	0.0092	0.38	ø30×30	
NCS HS 28705-7	Pig Iron	1.76	3.79	0.247	0.468	0.0095	0.345	1.05	0.56	0.014	0.507	0.036	0.0039	0.51	ø30×30	
		Sb	Pb	As	Alt	Als	Zn									
NCS HS 28705-1	Pig Iron	0.0004	0.0009	0.023	0.035	0.033	0.0009									
NCS HS 28705-2	Pig Iron	0.0004	0.0009	0.0025	0.025	0.023										
NCS HS 28705-3	Pig Iron	0.0005	0.0007	0.0027	0.024	0.022										
NCS HS 28705-4	Pig Iron	0.001	0.01	0.0025	0.0092	0.007	0.001									
NCS HS 28705-5	Pig Iron	0.0003	0.0006	0.0026	0.045	0.042	0.002									
NCS HS 28705-6	Pig Iron	0.037	0.013	0.0021	0.0065	0.0049	0.0039									
NCS HS 28705-7	Pig Iron	0.052	0.105	0.035	0.022	0.02	0.0045									
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	N	Nb	Ti		
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 (mm)	
		C	Si	Mn	P	S	Cr	Ni	W	Mo	Ti	Al	B	Zr		Ce
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)	0.0054	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)	0.053	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	0.066	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)

Number	Name	Chemical Composition(Percent)										Unit Size (mm)				
		C	Si	Mn	P	S	Cr	Ni	Cu	Al						
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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al _i	V	Ti	W	Mo		
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	
Number	Name	Chemical Composition(Percent)										Unit Size (mm)				
		C	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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Co	W	As		
NCS HS 11751	60Si ₂ Mn	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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Al _i	B			
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	
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		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 (mm)						
		C	Si	Mn	P	S	Cr	Ni								
NCS HS 11775	Alloy Steel	0.084	0.787	1.62	0.029	0.002	25.53	20.72						ø35×20		
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	W	V	Ti	Nb		
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	
Number	Name	Chemical Composition(Percent)												Unit Size (mm)		
		Al _t	Al _s	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			

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Number	Name	Chemical Composition(Percent)												Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Al _s	Cu	Al _t	V	Ti	Mo			
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 (mm)		
C	Si	Mn	P	S	Cr	Al _s	Cu	Al _t	V	Ti	Mo					
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 (mm)	
C	Si	Mn	P	S	Cr	Ni	Cu	Al _t	V	Ti	Mo	N				
NCS HS 15744	4Cr ₃ MoSiV	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 (mm)
C	Si	Mn	P	S	Al _t	Al _s	Bt	Bs	Cr	Ni	Mo	Co				
NCS HS 15749	Low Carbon Silicoon 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	
NCS HS 15752	Stainless steel		Ti	Cu	V	N	Sb	Sn	As							
			0.314			0.046										
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
C	Si	Mn	P	S	Cr	Al _s	Cu	Al _t	As	Ti	Mo					
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		
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
C	Si	Mn	P	S	Cr	Al _t	Al _s	N	V	Ti	Mo	Cu				
NCS HS 20741	1Cr13Mo	0.125	0.0045	0.957	0.017	0.0045	12.91					0.41		ø35×40		
NCS HS 20742	1Cr17	0.083	0.636	1.02	0.015	0.0035	16.58							ø35×40		
NCS HS 20743	0Cr11Ti	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			0.297	ø35×40		
NCS HS 20747	09MnNb	0.083	0.472	0.967	0.02	0.015								ø35×40		
NCS HS 20745	10PCuRE		Ca	Ce	Nb	La										
				0.014		0.0076										
NCS HS 20747	09MnNb				0.052											

Section 2 Iron, Steel & Alloy(Disk)

Number	Name	Chemical Composition(Percent)												Unit Size (mm)			
		C	Si	Mn	P	S	Cr	Ni	Al	Co	Ti	Mo	Cu				
NCS HS 31741	3Cr13	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	1Cr18Ni9Ti	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(00Cr19Ni10)	0.028	0.445	0.98	0.050	0.009	17.94	8.18		0.144		0.298	1.23	ø38×30			
NCS HS 31744	316(0Cr17Ni12Mo2)	0.083	0.463	1.37	0.043	0.014	16.71	10.14	0.010	0.207		1.91	0.537	ø38×30			
Number	Name	Chemical Composition(Percent)													Unit Size (mm)		
		C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	As	Sn	V			
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		
Number	Name	Chemical Composition(Percent)															Unit Size (mm)
		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 (mm)		
		C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	Pb	As	Sn			
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		
Number	Name	Chemical Composition(Percent)															Unit Size (mm)
		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 (mm)		
		C	Si	Mn	P	S	Cr	Ni									
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 (mm)		
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	Ti	Al	Co			
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		
Number	Name	Chemical Composition(Percent)													Unit Size (mm)		
		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 (mm)	
		C	S	Mn	Si	P	Ni	Cr	Fe	Mo	Ti	Al	Cu	V		
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 (mm)	
		C	S	Mn	Si	P	Cr	Ni	Cu	Mo	Al	V	Ti	Mo		
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 (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Ti	W	B		Nb
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	0.018	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	0.182	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	0.149	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	0.071	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	0.022	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	0.014	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	0.010	ø30×30
Number	Name	Chemical Composition(Percent)													Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Mg	Ti	B		
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												

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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	Cr	Ni	Cu	Mg	Al	Ca	Ba	TFe		Sr
NCS HC 11605	Si-Ca-Ba-Sr	0.385	53.46	0.075	0.014	0.039	0.054	0.023	0.079	0.022	2.34	13.22	14.02	13.57	0.235	60
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 14606	Ferro Silicon	0.024	78.96	0.058	0.0093	0.0037	0.0053	0.049	0.24	0.064	20.24	0.035	0.0060		70	
NCS HC 14607	Ferro Silicon	0.19	55.73	0.22	0.038	0.0048	0.014	0.060	0.78	0.14	41.89	0.0063	0.0043		70	
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		80	
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		80	
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		80	
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		80	
Number	Name	Chemical Composition(Percent)										Unit Size (in g)				
		V	Co	Ti	B	Mo	Mg	Sn	As	O	Sr					
NCS HC 14606	Ferro Silicon	0.0024	0.0031	0.032	0.0029	0.0013	0.0051	0.0003	0.0012	(0.256)						
NCS HC 14607	Ferro Silicon	0.011	0.0047	0.119	0.0032	0.011	0.0068	0.0004	0.0015	(0.665)						
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					
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Mg	Al	Ca	Ba	TFe		Sr
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		80	
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	
Number	Name	Chemical Composition(Percent)			Unit Size (in g)											
		Co	Ti	B												
NCS HC 14612	Ferro Silicon	0.0012	0.011	0.0022												
Number	Name	Chemical Composition(Percent)												Unit Size (in g)		
		C	Si	Mn	P	S	Cr	Cu	Al	Ca	Fe	Ni	Ti		Mo	
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				100	
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	
Number	Name	Chemical Composition(Percent)	Unit Size (in g)													
		V														
NCS HC 15601	Ferro Titanium	0.011														
NCS HC 15602	Ferro Titanium	0.0036														

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ca	Ni	Ti	Nb	Ta	
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												
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	Cr	Al	Ca	Fe	S	V	Sn	Ti	Cu	
NCS HC 19602	Ferro Silicon	0.12	69.47	0.308	0.027	0.077	2.45	2.47	23.81						100
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 19607	Silicon Manganese Alloy	1.56	18.41	66.20	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
		V ₂ O ₅	K ₂ O	Na ₂	As	Mo									
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										
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	W	Mo	B	Ca	
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 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 25606a	Ferro Tungsten					0.041	0.041								

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		Cr	Si	Mn	P	S	S	Al	Ca	Cu	Ni	B	Ti	N		
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 25640	Si-Mn alloy	66.85	24.74	65.85	0.104	0.181	0.010					0.30				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	Chemical Composition(Percent)													Unit Size (in g)	
		Cr	Si	Mn	P	S	S	Al*	Mo	Cu	Ni	V	Ti	Zn*		
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
		Pb	Sn	Sb	As	W	V ₂ O ₅	S*	K ₂ O	Na ₂ O	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 (in g)						
		Si	Mn	Al	Cr	P	Ca	C	S							
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 (in g)
		C	Si	Mn	P	S	Cr	Cu	Al	Ti	Fe	V	Mo	As	
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 ₂ O ₅	K ₂ O	Na ₂ O	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 (in g)		
		Cr ₂ O ₃	SiO ₂	Fe ₂ O ₃	Crs	T.C	T.S	As	ZrO ₂	Al ₂ O ₃	CaO	MgO		TiO ₂	
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 (in g)
		Si	Mn	Ti	Fe	Ca	Mg	RE	Ce	La	P	C	S	Cr	
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	Ferroboration	0.180	0.310	0.017							0.025	0.400	0.0023	0.025	50
NCS HC 28632	Ferroboration	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 ₂ O ₅	K ₂ O	Na ₂ O	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												
		Chemical Composition(Percent)													Unit Size
Number	Name	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
		Chemical Composition(Percent)													Unit Size
Number	Name	V ₂ O ₅	Si	P	Fe	K ₂ O	Na ₂ O	S	As						
NCS HC 28643	Vanadium Pentoxide	98.44	0.054	0.0056	0.23	0.14	0.81	0.011	0.0013						25

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Number	Name	Chemical Composition(Percent)								Unit Size (in g)						
		Si	Mn	P	Cr	Al	Fe	Ca								
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 (in g)						
		Ca	Si	Mn	Ti	Fe	RE	Mg								
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 (in g)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Co	Sn	As	Sb		
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 (in g)
		C	Si	P	S	Cu	Mo	Mn	Ti	Cr	B	V	Al	Ca		
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 37610	Ferroboron	0.41	0.4	0.018	0.007						20.99				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														

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		C	S	Si	Mn	P	Cr	Al	Ca	Fe	Cu	Ni	Ti	Mo		
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	
		Sb	Nb	Ta	B	V	N	Ba	Mg	Sr						
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						
		Chemical Composition(%)													Unit Size	
Number	Name	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
		Chemical Composition(%)													Unit Size	
Number	Name	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		

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	Cu	K ₂ O	Na ₂ O	MgO	CaO	Pb	
NCS DC 11001	Magnetite	44.73	18.22	0.75	0.20	12.91	0.013	1.50				4.18	7.14		100
NCS DC 11010	Iron ore	42.59	16.73	2.29	0.197	15.60	0.026	1.56	0.023	0.191	0.161	3.74	11.21	0.0023	70
NCS DC 11012	Iron ore	64.89	3.51	1.18	0.119	25.63	0.0064	0.409	0.0080	0.154	0.064	1.72	1.36	0.0008	70
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	Fe ₂ O ₃	LOI	TiO ₂	As									
NCS DC 11010	Iron ore	0.019			0.113	0.0026									
NCS DC 11012	Iron ore	0.013			0.084	0.0006									
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 (in g)	
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	P	S	FeO	Cu	C	Fe ₂ O ₃	L.O.I		
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 ₂ O	K ₂ O	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 (in g)	
		TMn	MnO ₂	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	TiO ₂	K ₂ O	Na ₂ O	Cr	FeO		
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					
					0.056			0.0062		0.017	0.36	0.125			
					0.093			0.012		0.021	0.120	1.61			

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Number	Name	Chemical Composition(Percent)									Unit Size (in g)				
		Zn	TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	TiO ₂					
NCS DC 13019c	Iron Concentrate	0.0030	68.96	3.98	0.174	0.049	28.98	0.010	0.0277	0.0174				100	
NCS DC 13020a	Iron Concentrate	0.0024	66.71	7.01	0.768	0.0392	28.68	0.0115	0.0179	0.0124				100	
NCS DC 13033	Iron Ore		35.36	48.50	0.11	0.125	5.18	0.022	0.0064	0.007				100	
NCS DC 13034	Iron Ore		58.70	14.47	0.54	0.061	26.09	0.584	0.047	0.014				100	
		K ₂ O	Na ₂ O	MgO	CaO	Pb									
NCS DC 13019c	Iron Concentrate	0.0068	0.0060	0.268	0.196	0.0052									
NCS DC 13020a	Iron Concentrate	0.0084	0.0035	0.381	0.185	0.0056									
NCS DC 13033	Iron Ore			0.20	0.13										
NCS DC 13034	Iron Ore			0.30	1.77										
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	Cu	K ₂ O	Na ₂ O	MgO	CaO	Ni	
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		100
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		100
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		100
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	100
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	100
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		100
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		100
NCS DC 14012a	Iron Ore	37.79	16.54	3.29		18.53	0.078	0.60	0.089	0.72	0.54	3.62	7.63		100
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		100
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		70
NCS DC 14020a	Dolomite		0.25	0.11	0.020		0.0012	0.046		0.019	0.015	15.38	37.59		70
NCS DC 14021a	Dolomite		0.048	0.025	0.020		0.0012	0.009		0.0011	0.013	17.88	35.02		70
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				100
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	100
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	100
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	100

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		Chemical Composition(Percent)														
		Mn	Ti	L.O.I	Fe ₂ O 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 14012a	Iron Ore	0.15								0.171		0.023				
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													
Number	Name	Chemical Composition(Percent)												Unit Size		
		CaF ₂	SiO ₂	CaCO ₃	S	P	K ₂ O	Na ₂ O	TFe	Al ₂ O 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		100
NCS DC 14050	Limestone		7.97		0.039	0.0033	0.021	0.015		0.36			9.45	42.62		50
		Mn	Fe ₂ O 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 ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O	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 ₂ O 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									

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	P	S	Cu	Mn	Ti	K ₂ O	Na ₂ O	
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	100
NCS DC 14209	Manganese Ore	8.83		21.83	5.57	12.70	0.60	0.199	0.115				1.04	0.046	50
NCS DC 14210	Manganese Ore	9.66		28.05	7.47	2.46	1.67	0.171	0.100				1.11	0.061	50
NCS DC 14211	Manganese Ore	10.96		21.85	6.91	2.30	0.74	0.163	0.084				0.99	0.059	50
NCS DC 14212	Manganese Ore	10.16		19.80	6.48	1.87	0.65	0.149	0.079				0.86	0.058	50
NCS DC 14213	Manganese Ore	10.28		13.04	3.77	2.47	0.75	0.104	0.053				0.40	0.056	50
		TMn	TiO ₂	MnO ₂	As										
NCS DC 14209	Manganese Ore	18.26	0.20	25.41	0.031										
NCS DC 14210	Manganese Ore	22.09	0.26	30.28	0.034										
NCS DC 14211	Manganese Ore	26.25	0.24	36.87	0.051										
NCS DC 14212	Manganese Ore	29.40	0.22	42.13	0.059										
NCS DC 14213	Manganese Ore	35.71	0.14	53.06	0.107										
Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
TFe	SiO ₂	Al ₂ O ₃	MnO	P	S	Cu	TiO ₂	MgO	CaO						
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 ₂ O	Na ₂ O	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 insoluble	Unit Size (in g)	
TFe	SiO ₂	Al ₂ O ₃	Mn	P	S	MgO	FeO	CaO	MnO	TMn	B ₂ O ₃				
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				25
		K ₂ O	Na ₂ O	Fe ₂ O ₃	L.O.I										
NCS DC 16006	Limestone	0.19	0.021	0.46	25.06										
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO				
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 18015	Iron Ore	53.28	6.37	2.59	0.539	5.88	0.076	0.065	0.70			2.61		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	

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		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											
Number	Name	Chemical Composition(Percent)										Unit Size (in g)				
NCS DC 19013	Iron Ore	TFe	SiO ₂	Al ₂ O ₃	MnO	P	TiO ₂	MgO	CaO			100				
NCS DC 19013	Iron Ore	42.89	22.08	4.1	1.66	0.099	0.26	0.51	0.124			100				
Number	Name	SiO ₂	Al ₂ O ₃	CaO	MgO	V ₂ O ₅	FeO	MnO	TFe	K ₂ O			Unit Size (in g)			
NCS DC 19003b	V-Ti Iron Concentrate	1.4	3.36	0.055	1.34	0.78	26.53	0.43	59.51			100				
NCS DC 19004b	V-Ti Iron Concentrate	3.21	4.08	0.84	3.13	0.56	32.36	0.37	53.65	0.011			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			100			
Number	Name	Cr ₂ O ₃	P	S	Zn	Co	Ni	TiO ₂	Na ₂ O				Unit Size (in g)			
NCS DC 19003b	V-Ti Iron Concentrate	0.042	0.0049	0.013	0.028	0.015	0.014	10.21				100				
NCS DC 19004b	V-Ti Iron Concentrate	0.027	0.0016	0.762	0.037	0.023	0.011	12.85	0.054				100			
NCS DC 19016	V-Ti Pellet	0.34	0.037	0.0087	0.033	0.01	0.021	7.69	0.173				100			
Number	Name	TFe	SiO ₂	Al ₂ O ₃	MnO	P	S	TiO ₂	MgO	CaO	L.O.I			Unit Size (in g)		
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	TFe	SiO ₂	Al ₂ O ₃	P	S	MgO	CaO	Cr ₂ O ₃	Ca	Al	Fe	Mn	Ti	Unit Size (in g)	
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	9.43	9.51	6.81	0.091	29.30	0.077	0.071						50		
		B														
NCS DC 25008	Manganese Ores	0.0018														
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
NCS DC 26701	Manganese ore	TMn	TFe	SiO ₂	P	CaO	MgO	Al ₂ O ₃	MnO ₂	Ti	Zn	Pb	Co	Cu	50	
NCS DC 26701	Manganese ore	44.95	10.5	5.41	0.033	7.53	1.05	0.37	(32.31)	0.01	0.013	0.013	0.008	0.009	50	
NCS DC 26702	Manganese ore	58.8	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 26703	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 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						25		
Number	Name	Ni	C	S	TiO ₂	FeO	MnO	V ₂ O ₅	Cr ₂ O 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	0.039	0.090	0.028												
NCS DC 26706	Nickel Iron Ore	0.043		0.004	51.35	23.81	0.90	0.22	(0.07)							

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Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	P	S	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO		
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	100	
NCS DC 28009	Limestone		2.08	0.364	0.0053		0.0026	0.115	0.0205	0.080	0.011	10.62	42.77	50	
		Fe ₂ O ₃ Mn SrO L.O.I 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													
NCS DC 28006	Limonite	1.2													
NCS DC 28009	Limestone	0.200	0.027										42.57		
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	MnO	P	TiO ₂	SrO	K ₂ O	Na ₂ O	S		L.O.I
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 (in g)	
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O		Cu
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
		Zn V As Pb Cr													
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													
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O		Cu
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 (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	Ni	Cr	Co	TiO ₂	Mn	P	S	
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 (in g)
		S	Ni	Ti	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	Cr	Cu	Mn	Co	Zn	
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 (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	P	TiO ₂	S	K ₂ O	Na ₂ O	As	
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	100
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				100
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				100
NCS DC 28083	Iron ore	50.98	8.92	9.40	5.03		1.05	0.306	0.963	0.125	0.112				100
		Cu	Zn	Cr	C	Pb									
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 28083	Iron ore				0.89										

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		TFe	FeO	SiO ₂	CaO	MgO	Al ₂ O ₃	Ti	Mn	P	S	K ₂ O	Na ₂ O	Cu	
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		70
NCS DC 28042	Manganese Ores	10.62		24.73	6.2	3.14	2.8			0.074	0.044	0.83	0.049		80
NCS DC 28043	Manganese Ores	10.68		17.3	1.15	0.7	6.4			0.171	0.1	0.65	0.058		80
NCS DC 28044	Manganese Ores	6.9		17.7	3.3	1.29	2.08			0.105	0.021	0.49	0.076		80
NCS DC 28045	Manganese Ores	2.75		16	0.195	0.182	2.35			0.23	0.0086	1.48	0.034		80
		Co	As	Pb	Cr	Zn	B ₂ O 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 (in g)	
NCS DC 35001	Tin Concentrate	TFe	SiO ₂	Al ₂ O ₃	Mn	Sb	S	Cu	MgO	As	Pb	Zn	Bi	Ag	100
NCS DC 35002	Tin Concentrate	21.33				0.024	0.183			0.574	2.89	0.264	0.034	0.00255	100
NCS DC 35003	Lead Concentrate	9.53	0.930			0.016	0.090	0.043		0.306	1.62	0.120	0.020		100
NCS DC 35004	Zinc Concentrate	10.68	0.348	0.142				1.12	0.484	0.042	1.26	58.09	0.987	1.52	0.209
NCS DC 35008	Tin Ore	4.14	19.83			0.0017		0.135		0.023	0.357	43.02			80
NCS DC 35009	Tin Ore	22.62				0.013		0.037		0.084	2.07	0.51		19.8(g/t)	60
NCS DC 35011	Sn Ore		4.99					1.09		2.17	0.095	1.49	1.20		60
NCS DC 35012	Sn Ore							0.077		0.046					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

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		WO ₃	Sn	F	Cd	Fe	Ni	Co	MnO ₂	TMn					
NCS DC 35001	Tin Concentrate		45.80												
NCS DC 35002	Tin Concentrate	0.182	62.49												
NCS DC 35003	Lead Concentrate		3.46												
NCS DC 35004	Zinc Concentrate		0.062	(0.0082)	0.042										
NCS DC 35008	Tin Ore		0.125												
NCS DC 35009	Tin Ore		0.930												
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	
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	Mn	Ti	P	S	K ₂ O	Na ₂ O	(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 ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	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 ₂ O ₃	S	P	K ₂ O	Na ₂ O	MgO	Al ₂ O 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		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 ₂ O ₃	Al ₂ O ₃	MnO	P ₂ O ₅	TiO ₂	SrO	K ₂ O	Na ₂ O	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)		
NCS DC 28101	Gold ore	Au	Ag											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)
NCS DC 28108	MAGNETIC IRON ORE	TFe	FeO	SiO ₂	S	P	Ti	TiO ₂	Al ₂ O ₃	MgO	K ₂ O	Na ₂ O	Mn	Cu	70	
NCS DC 28109	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 28110	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 28111	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 28112	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 28113	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 28114	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 28115	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 28116	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	
Number	Name	Zn	As	CaO	Pb	Ag	Cd	Sb	Bi							Unit Size (in g)
NCS DC 28108	MAGNETIC IRON ORE	0.0038		7.12												70
NCS DC 28109	MAGNETIC IRON ORE	0.0052		1.1												70
NCS DC 28110	MAGNETIC IRON ORE	0.01		1.09												70
NCS DC 28111	MAGNETIC IRON ORE	0.017	0.083	4.85												70
NCS DC 28112	MAGNETIC IRON ORE	0.037	0.167	2.73												70
NCS DC 28113	MAGNETIC IRON ORE	0.0096	0.013	1.06												70
NCS DC 28114	MAGNETIC IRON ORE	0.008		0.72												70
NCS DC 28115	MAGNETIC IRON ORE	0.0037		0.7												70
NCS DC 28116	LEAD ORE	1.44	0.068	17.16	15.09	0.022	0.0097	0.0084	0.085							25
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
NCS DC 28117	Graphite	St,d	Ad	Vd	SiO ₂	Fe ₂ O ₃	CaO	MgO	Al ₂ O ₃	TiO ₂	MnO	K ₂ O	Na ₂ O	P ₂ O ₅	50	
NCS DC 28118	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 28119	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 28120	Graphite Ore	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 28121	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)	
NCS DC 28122	Vanadium-titanium-Magnetic Iron Ore	TFe	TiO ₂	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	V ₂ O ₅	Cr ₂ O ₃	FeO	MnO	Ni	70	
NCS DC 28123	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 28124	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 28125	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 28126	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 28127	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	
Number	Name	Cu	Co	Zn											Unit Size (in g)	
NCS DC 28122	Vanadium-titanium-Magnetic Iron Ore	0.0048	0.010	0.061											70	
NCS DC 28123	Vanadium-titanium-Magnetic Iron Ore	0.0070	0.0066	0.0085											70	
NCS DC 28124	Vanadium-titanium-Magnetic Iron Ore	0.0061	0.010	0.028											70	
NCS DC 28125	Vanadium-titanium-Magnetic Iron Ore	0.0065	0.015	0.055											70	
NCS DC 28126	Vanadium-titanium-Magnetic Iron Ore	0.0042	0.015	0.050											70	
NCS DC 28127	Vanadium-titanium-Magnetic Iron Ore	0.0058	0.012	0.040											70	

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Cr ₂ O ₃	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	Ti	V	Mn	Ni	K ₂ O	
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 (in g)
		TFe	TiO ₂	SiO ₂	Al ₂ O ₃	CaO	MgO	S	P	V ₂ O ₅	Cr ₂ O ₃	FeO	MnO	Ni	
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											

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Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	MnO	P	S	L.O.I	TiO ₂	SrO			
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	Dolomite	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 (in g)
		TMn	MnO ₂	TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	Cu	Zn	Ni	S	
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 (in g)		
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	S	P				
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				100
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				100
NCS DC 28214	Iron Ore	65.97	27	5.02	0.7	0.43	0.45	0.094	0.541	0.291	0.013				100
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				100
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				100
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				100
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				100
NCS DC 28219	Iron Ore	68.55	23	3.21	0.54	0.21	0.2	0.052	0.116	0.027	0.0054				100
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				100
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P	S				
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				100
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				100
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				100
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				100
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				100
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		CaF ₂	CaCO ₃	SiO ₂	TFe	Mn	S	P							
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 (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P	S	Cu	C		
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				100
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				100
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				100
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				100
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		100
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		100
Number	Name	Chemical Composition(Percent)											Unit Size (in g)		
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	Cr	Ni	Mn	Ti	Co	S			
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 (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P	S	
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	100
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	100
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	100
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	100
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	100
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	100

Number	Name	Chemical Composition								Unit Size (in g)	
		Au(mg/g)	Ag(mg/g)	Cu(%)	Pb(%)	Zn(%)	As(%)	Sb(%)	Hg(mg/g)		Cd(%)
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 (in g)
		Pt(x10 ⁻⁶)	Pd(x10 ⁻⁶)	Ru(x10 ⁻⁹)	Rh(x10 ⁻⁹)	Ir(x10 ⁻⁹)	Os(x10 ⁻⁹)	Cu(x10 ⁻²)	Ni(x10 ⁻²)	
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 (in g)	
		TFe	SiO ₂	Al ₂ O ₃	Mn	P	S	Cu	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	Zn		
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(Si 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 (in g)								
		TFe	SiFe	SFe	MFe	OFe	CFe									
NCS DC 47010	State Of Iron Ore	44.67	(1.3)	0.9	10.0	(16.5)	15.6	100								
NCS DC 47011	State Of Iron Ore	52.96	(0.8)	0.7	46.9	(2.6)	2.0	100								
NCS DC 47012	State Of Iron Ore	43.73	(0.7)	6.4	30.0	(2.2)	4.5	100								
NCS DC 47013	State Of Iron Ore	48.76	(2.9)	(0.04)	0.8	(44.7)	0.3	100								
NCS DC 47014	State Of Iron Ore	26.90	(4.8)	(0.08)	18.5	(2.8)	0.8	100								
NCS DC 47015	State Of Iron Ore	35.85	(1.3)	(0.03)	33.8	(0.3)	0.3	100								
Number	Name	Chemical Composition(Percent)										Unit Size (in g)				
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	CaF ₂	L.O.I					
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 (in g)	
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	MnO	P ₂ O ₅	SO ₃	Cl	fSiO ₂		
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 (in g)	
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	MnO	P ₂ O ₅	SO ₃	H ₂ O*	L.O.I		
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 (in g)
		Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	MnO	FeO	P ₂ O ₅	S	SO ₃	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	
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 60113	Gypsum	0.63	7.21	1.92					32.55	0.10	0.38	0.021	4.92	28.50	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	Nephelinite	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	Nephelinite	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 ₂ O*	Cl	L.O.I	SrO	Cr ₂ O 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 60113	Gypsum					(8.63)	14.27	0.019	(23.55)	(0.071)					
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	Volatile	Co	fsio ₂ *	CO ₂	H ₂ O*	Cl	L.O.I	SrO	Cr ₂ O 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	Nephelinite						1.78							
NCS DC 60126	Nephelinite				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)		

*fsio₂ is free SiO₂ ; A. U. M is acid-unsolvable material.

Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Fe ₂ O ₃	SiO ₂	Al ₂ O ₃	SO ₃	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	L.O.I	B ₂ O ₃	F		
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 (in g)	
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	I.R	L.O.I		
NCS DC 62101b	Portland	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 (in g)
		L.O.I	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	water	water	material	
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 (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	K ₂ O	Na ₂ O	L.O.I	SO ₃	S	I.R		
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 blast-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)											Unit Size (in g)			
		P	S	D	D1	R5	Cl-									
NCS DC 62119	Contet of mixed materials of ordinary portland cement	4.5	5.8	1.2	0.98										20	
NCS DC 62120	Contlet 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)													Unit Size (in g)	
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	L.O.I	F	CaF ₂			
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)						Unit Size (in g)								
		Loss	TCaCO ₃	CaO	Fe ₂ O ₃	F										
NCS DC 62126	Black raw meal CaCo ₃ titrimetric value	37.46	70.9	38.89	2.74	0.15		20								
Number	Name	Chemical Composition(Percent)			Unit Size (in g)											
		Remain after through 80 ymsieve	Blaine	Density												
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)										Unit Size (in g)				
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	TiO ₂	CaO	MgO	SO ₃	K ₂ O	Na ₂ O	L.O.I					
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)													TFe (Fe ₂ O ₃)	Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Mg	CaO	TiO ₂	MnO	Na ₂ O	K ₂ O	S	Li	Rb	Ba			
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		Chemical Composition(µg/g)															
Name	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	Tungsten Ore	8.3			17.8	2.5			1.8		26.1	5.1	10.0	0.46	0.15		
NCS DC 70009	Tungsten 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	Tungsten 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	Tungsten 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	Tungsten Ore	4.1	110			4.2	8.7	0.39	0.66	5.0	2.2	(6.5)		(0.12)			
NCS DC 70009	Tungsten 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	Tungsten Ore	(36)															
NCS DC 70009	Tungsten Ore	(41)															

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Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		Sb	S	Cu	Pb	Ag	As	Ga	Li	Cd	Ce	Dy	Eu	Ni	
NCS DC 70013	Antimony Ore	1.81	1.02	0.012	0.037										50
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ag	As	Cu	Ga	Li	Cd	Ce	Dy	Eu	Bi	Ni	Co	Sn	
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 (in g)
		Ag	As	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	Cu	F	
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
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		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	
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		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	
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		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	
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		Ho	Er	Tm	Yb	Lu	Y	SiO ₂ *	Al ₂ O ₃ *	Fe ₂ O ₃ (T)*	MgO*	CaO*	Na ₂ O*	K ₂ O*	
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	
Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		TiO ₂ *	MnO*	P ₂ O ₅ *	SO ₃ *	H ₂ O*	FeO*	CO ₂ *	LOI*	C(org)*	H ₂ O*				
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 Composition(µg/g)													Unit Size (in g)
		Ag	As	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	Cu	F	
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 ₂ O ₃ *	Fe ₂ O ₃ (T)*	MgO*	CaO*	Na ₂ O*	K ₂ O*	
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 ₂ O ₅ *	SO ₃ *	H ₂ O*	FeO*	CO ₂ *	LOI*	C(org)*	H ₂ O*				
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 (in g)
		Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	
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	Tl(%)	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 ₂ O ₃ *	Fe ₂ O 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 ₂ O*	K ₂ O*	TO ₂ *	MnO*	P ₂ O 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 ₂ O ₃ *	Fe ₂ O 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 ₂ O*	K ₂ O*	TiO ₂ *	MnO*	P ₂ O 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 (in g)	
NCS DC 70321 Rock		Ag	As	Au*	B	Ba	Be	Bi	Br	Cd	Cl	Co	Cr	Cs	
NCS DC 70322 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	
NCS DC 70323 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	
NCS DC 70324 Rock		0.10	54.6	2.9	134	475	3.88	0.48	1.3	0.08	71	13.2	59.0	42.5	
NCS DC 70321 Rock		0.07	24.9	1.4	143	472	5.62	0.45	0.9	0.08	63	10.3	55.2	16.6	
NCS DC 70322 Rock		Ou	F	Ga	Ge	Hf	Hg	Li	Mn	Mo	Nb	Ni	P	Pb	
NCS DC 70323 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 70324 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 70321 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 70322 Rock		27.7	457	17.6	1.63	7.4	0.053	66.8	392	0.65	17.2	27.8	625	32.1	
NCS DC 70323 Rock		Pb	Sc	Sb	Se	Sn	Sr	Ta	Te	Tn	Ti(%)	Tl	U	V	
NCS DC 70324 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 70321 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 70322 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 70323 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	
NCS DC 70324 Rock		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	
NCS DC 70321 Rock		Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	La	Y	SiO ₂ *	Al ₂ O ₃ *	Fe ₂ O ₃ (T)*	
NCS DC 70322 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 70323 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 70324 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 70321 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	
NCS DC 70322 Rock		MgO*	CaO*	Na ₂ O*	K ₂ O*	TiO ₂ *	MnO*	P ₂ O ₅ *							
NCS DC 70323 Rock		0.49	1.53	2.69	4.33	0.290	0.034	0.105							
NCS DC 70324 Rock		0.62	1.38	2.50	3.87	0.421	0.056	0.104							
NCS DC 70321 Rock		0.78	7.77	1.09	2.01	0.558	0.078	0.124							
NCS DC 70322 Rock		0.62	2.29	1.48	2.67	0.616	0.051	0.142							
Value with * is in percent															
Number	Name	Chemical Composition (Percent)												Unit Size (in g)	
NCS DC 71301 Rock		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	CaO	TiO ₂	P ₂ O ₃	MnO	Na ₂ O	K ₂ O	H ₂ O	CO ₂	
NCS DC 71302 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	
NCS DC 71303 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	
NCS DC 71304 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	
NCS DC 71305 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	
NCS DC 71306 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	
NCS DC 71301 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	
NCS DC 71302 Rock		S	Cl	F	Q(T)										
NCS DC 71303 Rock		0.011	0.059	0.048	(0.093)										
NCS DC 71304 Rock		0.023	0.016	0.112	(0.29)										
NCS DC 71305 Rock		0.011	0.023	0.084	(0.057)										
NCS DC 71306 Rock		0.37	0.006	0.006	(0.039)										

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		S	Cl	F	C(T)											Unit Size
NCS DC 71305	Rock	0.009	(0.002)	0.13	(0.15)											
NCS DC 71306	Rock		0.012	0.014	(12.88)											
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										10
NCS DC 71309	Sulfied Mineral	0.97				13.30	0.43	0.11		84.26						10
NCS DC 71310	Sulfied Mineral		0.15	0.10	2.14	32.33			62.51	0.099						10
		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 (in g)
		Al ₂ O ₃	CaO	FeO	K ₂ O	Na ₂ O	MgO	Mn	P ₂ O ₅	SiO ₂	Fe ₂ O ₃	TiO ₂	LOI	
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 ₂ O ⁺	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)												
		Na ₂ O ₃	K ₂ O	SiO ₂	ZnO	PbO	B ₂ O ₃	Al ₂ O ₃	MgO	TiO ₂	Fe ₂ O 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 ₂ O	Cr ₂ O ₃	MnO	Fe ₂ O ₃	TFe ₂ O ₃	FeO	Fe	S	P ₂ O 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 ₂ O 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	Cerussite 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 ₂ O ₅	Sc ₂ O ₃	La ₂ O ₃	Ce ₂ O ₃	Pr ₂ O ₃	Nd ₂ O ₃	Sm ₂ O ₃	Gd ₂ O ₃	Ho ₂ O ₃	Yb ₂ O ₃		Lu ₂ O 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 (in g)
		TFe	SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	S	P	Ti	
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	0.098	(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 (in g)	
		Cr ₂ O ₃	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	CO ₂		
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 (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
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 ± 0.7	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	Tl(%)	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 ₂ O ₃	TFe ₂ O 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 ₂ O	K ₂ O	H ₂ O+	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

		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 ₂ O ₃	TFe ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O
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($\mu\text{g/g}$)									Unit Size (in g)
		Ag	As	B	Ba	Be	Bi	Br	Cd	Ce	
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($\mu\text{g/g}$)									
		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($\mu\text{g/g}$)									
		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($\mu\text{g/g}$)									
		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($\mu\text{g/g}$)									
		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($\mu\text{g/g}$)									
		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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		Chemical Composition($\mu\text{g/g}$)								
		Tm	U	V	W	Y	Yb	Zn	Zr	
NCS DC 73023	Soil	0.49 \pm 0.01	2.6 \pm 0.1	104 \pm 4	2.1 \pm 0.2	29 \pm 23	3.1 \pm 0.2	97 \pm 3	210 \pm 19	
NCS DC 73024	Soil	0.59 \pm 0.05	4.0 \pm 0.2	87 \pm 4	4.1 \pm 0.2	3 \pm 2	3.8 \pm 0.3	81 \pm 2	342 \pm 11	
NCS DC 73026	Soil	0.46 \pm 0.04	2.4 \pm 0.1	77 \pm 4	8.3 \pm 0.5	27 \pm 2	3.3 \pm 0.3	66 \pm 26	254 \pm 15	
NCS DC 73027	Soil	0.47 \pm 0.03	2.3 \pm 0.1	72 \pm 4	(9.2)	27 \pm 2	3.9 \pm 0.4	2 \pm 2	277 \pm 21	
NCS DC 73028	Soil	0.51 \pm 0.03	2.9 \pm 0.1	120 \pm 6	(45)	31 \pm 2	5.8 \pm 0.5	127 \pm 4	262 \pm 9	
		Chemical Composition(%)								
		SiO ₂	Al ₂ O ₃	TFe ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O+
NCS DC 73023	Soil	59.80 \pm 0.22	13.92 \pm 0.15	5.54 \pm 0.08	(1.5)	2.61 \pm 0.06	4.21 \pm 0.08	1.91 \pm 0.04	2.64 \pm 0.03	(4.2)
NCS DC 73024	Soil	69.11 \pm 0.34	13.58 \pm 0.19	4.97 \pm 0.08	(0.8)	1.16 \pm 0.04	0.34 \pm 0.02	0.83 \pm 0.03	2.48 \pm 0.04	(5.1)
NCS DC 73026	Soil	60.93 \pm 0.25	11.76 \pm 0.13	4.30 \pm 0.07	(1.3)	1.99 \pm 0.05	7.18 \pm 0.10	1.74 \pm 0.03	2.28 \pm 0.02	(3.2)
NCS DC 73027	Soil	66.15 \pm 0.40	11.73 \pm 0.19	4.00 \pm 0.08	1.20 \pm 0.16	1.87 \pm 0.06	4.59 \pm 0.07	1.90 \pm 0.03	2.18 \pm 0.04	(3.2)
NCS DC 73028	Soil	58.87 \pm 0.65	13.15 \pm 0.16	6.12 \pm 0.09	(1.7)	2.75 \pm 0.08	4.91 \pm 0.07	1.22 \pm 0.03	2.37 \pm 0.04	(4.2)
		Chemical Composition(%)								
		CO ₂	Corg	TC						
NCS DC 73023	Soil	(3)	(0.5)	1.28 \pm 0.13						
NCS DC 73024	Soil	(0.2)	(0.5)**	(0.6)						
NCS DC 73026	Soil	4.72 \pm 0.33	0.58 \pm 0.05	(1.9)						
NCS DC 73027	Soil	(2.9)	0.73 \pm 0.06	1.52 \pm 0.15						
NCS DC 73028	Soil	(4)	(0.9)	1.94 \pm 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(Percent)											Unit Size (in g)		
		SiO ₂	Al ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O*	CO ₂	TE (Fe ₂ O ₃)	F			
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 (in g)		
		SO ₂	Al ₂ O ₃	FeO	MgO	CaO	Mn	Na ₂ O	K ₂ O	H ₂ O ⁺	CO ₂	S	(Fe ₂ O ₃)			
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 (in g)		
		Ag	As	B	Ba	Cu	Li	Pb	Sr	Zn	Cd	Sb	Ce		Zr	
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 (in g)
		Ag	As	B	Ba	Cu	Li	Pb	Sr	Zn	Cd	Sb	Ce	Zr	
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 (in g)
		Ag	As	B	Ba	Cu	Ga	Li	Pb	Sr	Zn	Cd	Sb	Ce	
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															

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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)	Br(10 ⁻⁶)	Ca(10 ⁻²)	Cd(10 ⁻⁹)				
NCS DC 73347a	Human hair	(50)	(2)	(0.28)	2.9	11.4	110	21	(1.1)	0.145	0.07	6			
NCS DC 73347a	Human hair	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)				
		(0.35)	(0.018)	0.045	0.41	(0.003)	14.3	20	14	3.7	(11)				
NCS DC 73347a	Human hair	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)				
		36	20		(0.6)	670	4.6	0.8	(0.002)	0.16	(1.6)				
NCS DC 73347a	Human hair	Lu(10 ⁻⁹)	Mg(10 ⁻²)	Mn(10 ⁻⁶)	Mo(10 ⁻⁶)	N(10 ⁻²)	Na(10 ⁻⁶)	Nd(10 ⁻⁶)	Ni(10 ⁻⁶)	P(10 ⁻²)	Pb(10 ⁻⁶)				
		(2.8)	(0.014)	2	0.17	13.9	0.0089	0.093	0.43	0.014	5.7				
NCS DC 73347a	Human hair	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)				
		25	(0.06)	4.19	(0.065)	(0.018)	0.58	(0.06)	19	(0.2)	7.7				
NCS DC 73347a	Human hair	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)				
		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 (in g)				
		Al	Ca	Cl	K	Mg	N	S	Si	Na					
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)
NCS DC 73349	Branches and Leaves of Bush	Eu	F	Fe	Gd	Hf	Hg	Ho	La	Li	Lu	Mn	Mo	Nd	Ni
		0.39	23	1070	(0.19)	(0.15)		(0.033)	1.25	2.6	(0.011)	61	0.28	1.0	1.7
NCS DC 73349	Branches and Leaves of Bush	P	Pb	Pr	Rb	Sb	Sc	Se	Sm	Sn	Sr	Tb	Th	Ti	U
		100	47	(0.24)	4.5	0.095	0.32	0.12	0.19	(0.27)	246	0.025	0.36	95	(0.12)
NCS DC 73349	Branches and Leaves of Bush	V	W	Y	Yb	Zn									
		2.4	(0.06)	(0.68)	0.063	55									
Number	Name	Chemical Composition(µg/kg)						Unit Size (in g)							
		Pt	Pd	Ir	Os	Au	Rh								
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 ₂ O ₃	TFe ₂ O ₃	FeO	MgO	CaO	Na ₂ O	K ₂ O	H ₂ O ⁺	CO ₂	LOI		
NCS DC 73372	Lake Sediment	61.7	13.3	4.8	(1.4)	1.52	5.0	1.28	1.98	(4.7)	2.9	(9.5)	70	
NCS DC 73374	Stream Sediment	57.3	13.4	9.5	(2.4)	3.4	3.5	2.0	2.3	(4.4)	(0.26)	5.64	70	
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 Bomblende	49.6	13.8	14.8	10.8	7.2	9.6	2.07	0.48	(1.7)	(0.16)	1.06	70	
Number	Name	Chemical Composition(µg/g)												
		Ag	As	B	Ba	Be	Bi	Cd	Ce	Cl	Co	Cr	Cs	
NCS DC 73372	Lake Sediment	0.075	8.4	52	520	2.1	0.27	(0.10)	74	(40)	14	75	8.1	
NCS DC 73374	Stream Sediment	0.013	18	27	760	5.7	3.0	(0.20)	109	(50)	28	243	4.3	
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 Bomblende	(0.05)	25	12	62	0.34	(0.06)	0.14	7.8	(120)	52	137	1.9	
Number	Name	Cu	Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg	Hc	In	
NCS DC 73372	Lake Sediment	26	4.7	2.8	1.27	500	16.3	5.4	1.3	6.6	0.030	1.03	(0.12)	
NCS DC 73374	Stream Sediment	66	7.0	4.0	2.5	580	25	7.6	1.6	13.6	0.034	1.43	(0.18)	
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 Bomblende	84	3.5	2.3	0.92	206	17.3	2.7	1.46	1.5	0.0032	0.84		
Number	Name	La	Li	Lu	Mn	Mo	Nb	Nd	Ni	P	Pb	Pr	Rb	
NCS DC 73372	Lake Sediment	38	39	0.41	520	0.45	14.4	32	33	490	25	8.5	102	
NCS DC 73374	Stream Sediment	54	24	0.58	1230	2.7	72	45	87	1000	66	11.8	87	
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 Bomblende	2.9	11	0.38	1600	0.16	2.7	6.4	119	375	(9)	1.25	30	
Number	Name	S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Th	Ti	Tl	
NCS DC 73372	Lake Sediment	240	0.90	12	0.14	6.2	3.4	165	1.1	0.86	12.8	4240	(0.6)	
NCS DC 73374	Stream Sediment	(110)	2.7	18	(0.12)	8.5	(9)	216	5.0	1.23	12.4	1.44	*0.4	
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 Bomblende	(70)	(0.7)	43	0.083	2.1	(0.8)	142	(0.14)	0.57	(0.34)	5530	(0.11)	
Number	Name	Tm	U	V	W	Y	Yb	Zn	Zr					
NCS DC 73372	Lake Sediment	0.42	2.1	90	2.0	25	2.6	61	234					
NCS DC 73374	Stream Sediment	0.60	3.0	190	5.7	34	3.8	165	520					
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 Bomblende	0.36	(0.14)	300	0.34	20	2.4	100	57					

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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 ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	Ag*		
NCS DC 73507	Ore	0.264	0.43	0.83	4.68	2.67	0.090	63.0	14.1	1.55	1.52	0.68	3.85	18.3	50	
NCS DC 73508	Ore	1.05	2.17	4.26	8.4	6.74	0.38	47.9	11.2	1.39	4.7	0.24	3.1	220	50	
NCS DC 73509	Ore	2.80	0.056	0.143	11.40	5.95	0.24	40.6	7.8	2.33	17.2	0.54	1.79	1010	50	
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	
		Ce*	In*	Ti*	Se*	Te*	Re*	Mo*	W*	As	Sb*	Bi*	Hg*	Sn*		
NCS DC 73507	Ore	2.9	(1.5)	1.2	2.3	(0.3)		28	(10)	0.043	94	2.8	4.2			
NCS DC 73508	Ore	6.5	10	(1.1)	(5.8)	(1.3)		24	25	0.28	(610)	75	17	(20)		
NCS DC 73509	Ore	3.3	3.3	(1.0)	24	(1.8)	(0.24)	137	56	0.026	95	86		9.7		
NCS DC 73510	Ore	25	(7.5)	(0.3)				(1.9)	(1.9)	0.15	260	(5)	114			
		Ca*	Od*													
NCS DC 73507	Ore	23.4	32													
NCS DC 73508	Ore	26	172													
NCS DC 73509	Ore	15	7.4													
NCS DC 73510	Ore	62	400													

*Chemical Composition(10⁻⁶)

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Number	Name	Chemical Composition(mg/g)													Unit Size (in g)
		Ni(%)	Co	S(%)	Ag	As	Cd	Cr	Cu	Mn	P	Pb	Sc	Ti	
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 ₂ O ₃ (%)	Fe ₂ O ₃ (%)	MgO(%)	CaO(%)	Na ₂ O(%)	K ₂ O(%)	H ₂ O(%)				
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 (in g)
		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)	
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 ₂ O ₃ (%)	Fe ₂ O ₃ (%)	MgO(%)	CaO(%)	Na ₂ O(%)	K ₂ O(%)	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
Number	Name	Chemical Composition(Percent)													Unit Size (in g)
		SiO ₂	Al ₂ O ₃	MgO	CaO	P	Mn	Na ₂ O	K ₂ O	S	Fe ₂ O ₃	N	Ti	Zn	
NCS DC 77301	Soil	73.28	12.91	0.49	1.35	0.0318	0.0262	3.31	3.37	(0.097)	2.08	(0.052)	0.25	0.0342	50
NCS DC 77302	Soil	65.64	14.55	1.25	1.42	0.0439	0.0706	1.90	2.59	(0.0174)	4.60	(0.12)	0.46	0.0728	50
		Chemical Composition(µg/g)													
		Te	Ag	As	B	Ba	Cu	F	Ga	Ge	Hg	Li	Pb	Sc	
NCS DC 77301	Soil	(0.024)	0.067	2.9	13.8	693	4.9	215	14.6	1.2	0.015	14.3	16.3	4.8	
NCS DC 77302	Soil	(0.035)	0.11	10.5	38.3	623	23.2	438	18.8	(1.6)	0.066	33.2	29.2	11.4	
		Sr	Zn	Br	Cd	Sb	Ce	Dy	Eu	Th	Zr	Gd	Ho	La	
NCS DC 77301	Soil	270	34.2	(1.2)	0.068	0.21	58.9	3.2	0.97	8.4	330	3.9	(0.66)	31.3	
NCS DC 77302	Soil	188	72.8	(5.0)	0.090	0.93	76.6	(5.3)	1.2	12.0	337	5.6	(1.1)	37.6	
		Lu	Nd	Sm	Tb	Tm	Yb	Er	Pr	Y	Co	Cr	Cs	Mo	
NCS DC 77301	Soil	0.27	26.0	4.9	0.55	0.28	1.8	(1.8)	(7.1)	16.9	4.9	26.4	3.3	0.43	
NCS DC 77302	Soil	0.46	34.4	6.6	0.85	0.48	3.1	(2.9)	(8.8)	27.4	12.8	66.0	7.9	0.84	
		Nb	Ni	Rb	U	V	W	Sn	Ti	Cl	I	In			
NCS DC 77301	Soil	13.0	9.3	97.4	1.6	34.7	0.98	1.4	0.58	(57.4)	(0.44)	(0.032)			
NCS DC 77302	Soil	17.1	27.6	109	2.4	82.7	5.0	4.2	0.62	(45.6)	(2.6)	(0.07)			

**Chemical Composition: Percent

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Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		Al	Ca	Fe	K	Mg	N	Na	P	Si	Ti			
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	
Number	Name	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)
Number	Name	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)											Unit Size (in g)	
		P ₂ O ₅	SiO ₂	CaO*	MgO	TFe ₂ O ₃	Al ₂ O ₃	MnO	TiO ₂	F	CO ₂	K ₂ O		Na ₂ O
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														
Number	Name	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)	Available NaHCO ₃ Extraction	Phosphorus(mg/kg) NH ₄ F Extraction	Unit Size (in g)						
								500	500					
NCS DC 85101a	Available Nutrients in Soil	6.80	10.0	0.63	54	100								
NCS DC 85102a	Available Nutrients in Soil	8.15	13.2	0.77	76	23.3								
NCS DC 85103a	Available Nutrients in Soil	8.18	14.6	1.07	97	29								
NCS DC 85105a	Available Nutrients in Soil	4.71	7.3	0.54	44		(0.5)							
NCS DC 85113	Available Nutrients in Soil	6.14	34.5	1.62	157		32							
NCS DC 85114	Available Nutrients in Soil	8.61	12.7	0.71	53	15.7								
NCS DC 85115	Available Nutrients in Soil	8.50	10.3	0.65	45	24								
NCS DC 85116	Available Nutrients in Soil	8.18	17	1.09	86	11.2								
Number	Name	Effective Potassium(g/kg)	slowly available potassium (inexchangeable)(g/kg)	Available sulfure (mg/kg) Phosphate Extraction	Available sulfure (mg/kg) CaCl ₂ Extraction	Available Silicon(g/kg)	Cation Exchange Capacity cmol(+)/kg	Unit Size (in g)						
								500	500					
NCS DC 85101a	Available Nutrients in Soil	0.38	1.06	22		0.83	21.6							
NCS DC 85102a	Available Nutrients in Soil	0.29	0.95		42	0.46	12.8							
NCS DC 85103a	Available Nutrients in Soil	0.38	0.88		47	0.38	17							
NCS DC 85105a	Available Nutrients in Soil	0.18	0.16	104		0.44	10.0							
NCS DC 85113	Available Nutrients in Soil	0.36	0.98	33		0.63	31							
NCS DC 85114	Available Nutrients in Soil	0.39	1.04		38	0.34	13.8							
NCS DC 85115	Available Nutrients in Soil	0.33	1.2		27	0.31	9.6							
NCS DC 85116	Available Nutrients in Soil	0.34	1.02		31	0.35	20							
Number	Name	Exchangeable Calcium cmol(1/2Ca2+)/kg	Exchangeable Magnesium cmol(1/2Mg2+)/kg	Exchangeable Sodium cmol(Na+)/kg	Exchangeable Potassium cmol(K+)/kg	Exchangeable Manganese(mg/kg)	Available Molybdenum(mg/kg)	Unit Size (in g)						
								500	500					
NCS DC 85101a	Available Nutrients in Soil	17.8	4.3	0.31	0.99	47	0.24							
NCS DC 85102a	Available Nutrients in Soil		3.0	0.26	0.77	(36)	0.086							
NCS DC 85103a	Available Nutrients in Soil		2.4	0.31	1.02	(106)	0.080							
NCS DC 85105a	Available Nutrients in Soil	1.6	0.42	0.13	0.45	13	0.20							
NCS DC 85113	Available Nutrients in Soil	22.5	5.4	0.24	0.94	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 85101a	Available Nutrients in Soil	0.42	5.1								
NCS DC 85102a	Available Nutrients in Soil	0.55	14.6								
NCS DC 85103a	Available Nutrients in Soil	0.5	5.0								
NCS DC 85105a	Available Nutrients in Soil	0.17	(0.75)								
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)	S042-(g/kg)	Ca2+(g/kg)	Mg2+(mg/kg)	K+(mg/kg)	Na+(mg/kg)			
NCS DC 85101a	Available Nutrients in Soil	(0.52)	0.020	0.064	0.040	10	17	27			
NCS DC 85102a	Available Nutrients in Soil	(1.0)	0.022	0.125	0.17	22	31	29			
NCS DC 85103a	Available Nutrients in Soil	(1.05)	0.020	0.139	0.174	13	36	34			
NCS DC 85105a	Available Nutrients in Soil	(0.34)	(0.014)	0.070	0.022	3.8	26	5.8			
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 85101a	Available Nutrients in Soil	3.3	2.4	202	31	0.033	1.9	1.1		0.16	
NCS DC 85102a	Available Nutrients in Soil	1.17	1.08	55	17.3	0.040	1.7	0.27	(0.025)	0.13	
NCS DC 85103a	Available Nutrients in Soil	1.85	2.4	38	23	0.12	1.6	0.43	(0.02)	0.10	
NCS DC 85105a	Available Nutrients in Soil	0.24	0.53	23	5.7	0.016	1.5	0.072	(0.018)	0.083	
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 85101a	Available Nutrients in Soil	2.9	5.4	111	96	0.046	0.82	2.4	0.42	(0.070)	(3.4)
NCS DC 85105a	Available Nutrients in Soil	1.14	1.53	85	16	0.047	4.8	0.20	0.28		(5)
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 85101a	Available Nutrients in Soil	0.025	(0.06)		(0.028)	0.035					
NCS DC 85102a	Available Nutrients in Soil	0.047	(0.03)			(0.023)					
NCS DC 85103a	Available Nutrients in Soil	0.082	(0.048)		(0.023)	0.024					
NCS DC 85105a	Available Nutrients in Soil	0.023	0.24	14	(0.06)	0.055					
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 ₂ O ₃	TFe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	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 ₂ O 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 ₂ O	Rb ₂ O	Cs ₂ O	TA ₂ O ₅	Nb ₂ O ₅	ZrO ₂	HfO ₂	SiO ₂	Al ₂ O ₃	TFeO ₃	FeO	CaO	
NCS DC 86301	Beryllium Ore	0.060								73.80	14.85	0.515	(0.17)	0.577	100
NCS DC 86302	Beryllium Ore	0.359								73.77	14.83	0.591	(0.18)	0.578	100
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	100
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	100
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	100
NCS DC 86306	Tantalium Ore	0.033	0.777	0.239	0.065	0.069	0.043								100
NCS DC 86307	Zirconium Ore							0.187	42.9*	65.36	14.75	4.78	1.83	2.69	100
NCS DC 86308	Zirconium Ore							1.27	0.026	65.56	14.76	4.67	1.83	2.64	100
NCS DC 86309	Rare-Earth Ore			5.71*						67.31	19.08	3.49	(0.07)	0.03	100
NCS DC 86310	Rare-Earth Ore		0.015	0.069	17.9*					74.61	14.72	1.16	0.053	0.03	100
NCS DC 86311	Rare-Earth Ore		0.015	0.068	17.9*					74.28	14.6	1.13	(0.04)	0.03	100
NCS DC 86312	Rare-Earth Ore		40.0*	0.011	5.66*					66.77	19.02	3.45	(0.07)	0.029	100
*Chemical Composition(10 ⁻⁶)															
		RE ₂ O ₃	La ₂ O ₃	MgO	MnO	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅	F	H ₂ O*	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			
*Chemical Composition(10 ⁻⁶)															

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Number	Name	Chemical Composition(µg/g)													Unit Size (in g)
		CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	HO ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	Yb ₂ O ₃	La ₂ O ₃	
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 ₂ O ₃	Sc ₂ O 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 (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃ (T)	FeO	CaO	MgO	MnO	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅	F	H ₂ O ⁺	
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)	100
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)	100
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	100
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	100
		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 (in g)
		ΣRE ₂ O ₃	La ₂ O ₃	CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	
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 ₂ O ₃	Lu ₂ O ₃	Y ₂ O ₃	Sc ₂ O ₃	Mo	BeO	Lu ₂ O ₃	Y ₂ O ₃	Sc ₂ O ₃	W	Rb ₂ O	BeO	Li ₂ O	
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	2.14	2.14	244	12.5	106	
NCS DC 86316	Zirconium Ore	25.9													

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		Cs ₂ O	Nb ₂ O ₅	Ta ₂ O ₅	Sn	Lu ₂ O ₃	Y ₂ O ₃	Sc ₂ O 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 ₂ O ₃	Fe ₂ O ₃ (T)	FeO	CaO	MgO	MnO	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅	F	H ₂ O*	(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	100	
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	100	
		L.O.I	ΣRE ₂ O ₃	La ₂ O ₃	CeO ₂	Pr ₂ O ₃	Nd ₂ O ₃	Sm ₂ O ₃	Eu ₂ O ₃	Gd ₂ O ₃	Tb ₂ O ₃	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O 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 ₂ O ₃	Yb ₂ O ₃	Lu ₂ O ₃	Y ₂ O ₃	Sc ₂ O ₃	Cs ₂ O	Rb ₂ O	Th	Li ₂ O						
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 ₂ O ₃	TFe ₂ O ₃	Fe ₂ O ₃	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	H ₂ O*	(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				
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	Ni	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				

Section 4 Mineral & Geology(Powder)

Number	Name	Chemical Composition($\mu\text{g/g}$)									Unit Size (in g)			
NCS DC 90001	Ag in Silver ore	Certified value									50			
NCS DC 90002	Ag in Silver ore	46.9									50			
NCS DC 90003	Ag in Silver ore	112									50			
NCS DC 90004	Ag in Silver ore	298									50			
NCS DC 90005	Ag in Silver ore	446									50			
NCS DC 90006	Ag in Silver ore	559									50			
NCS DC 90006	Ag in Silver ore	732									50			
Number	Name	Chemical Composition(Percent)										Unit Size (in g)		
		F	Al	Na	SiO ₂	Fe ₂ O ₃	SO ₄ ²⁻	P ₂ O ₅	CaO	L.O.I				
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)									Unit Size (in g)			
		F	Al	Na	SiO ₂	FeO	SO	PO	L.O.I					
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			Unit Size (in g)									
		Au(ng/g)	Au(g/T)	Ag(g/T)										
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)								Unit Size (in g)				
		Mo	SiO ₂	P	Cu	Pb	As	Ca						
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)												Unit Size (in g)
		TFe	FeO	SiO ₂	Al ₂ O ₃	CaO	MgO	Mn	TiO ₂	P	S	Na ₂ O	K ₂ O	
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)								Unit Size (in g)				
		SiC	Fe ₂ O ₃	F.C.	F.Si	SiO ₂	Al ₂ O ₃	CaO	MgO					
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				

Section 5 Slag, Refractory(Powder)

Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	S	TiO ₂	MgO	CaO	TCa	P ₂ O ₅	F	CaF		
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	100	
NCS HC 13805	Open Hearth Slag	34.33	8.91	3.92	2.01	36.55		0.32	21.15			0.87			100	
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		100	
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		100	
NCS HC 13808	Blast Furnace Slag	0.71	36.10	7.73	0.100	0.63	0.606	0.37	13.92	39.33		0.026			100	
NCS HC 13810	Blast Furnace Slag	0.64	34.08	7.08	0.089	0.58	0.536	0.36	16.97	38.57		0.037			100	
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			100	
Number	Name	Chemical Composition(Percent)										Unit Size (in g)				
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P ₂ O ₅	S	FeO					
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				100	
Number	Name	Chemical Composition(Percent)									Unit Size (in g)					
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	TiO ₂	P						
NCS HC 14807	Mullite	51.43	43.62	1.14	0.23	0.21	1.62	0.46	0.65	0.062				80		
NCS HC 14808	Mullite	37.41	57.47	0.46	0.15	0.14	1.69	0.46	1.45	0.022				80		
NCS HC 14809	Mullite	21.81	72.39	0.93	0.19	0.42	0.24	0.16	3.64	0.043				80		
Number	Name	Chemical Composition(Percent)											Unit Size (in g)			
		TFe	SiO ₂	Al ₂ O ₃	MnO	FeO	S	TiO ₂	MgO	CaO	K ₂ O	Na ₂ O	P			
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 (in g)							
		C	SiO ₂	Mn	P	S	Fe									
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 (in g)		
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	P ₂ O ₅	S	TCa	P	V ₂ O ₅			
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 (in g)	
		TFe	SiO ₂	Al ₂ O ₃	MnO	P	S	Cu	TiO ₂	K ₂ O	Na ₂ O	MgO	CaO	V ₂ O ₅		
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	
Number	Name	Chemical Composition(Percent)														Unit Size (in g)
		TFe	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	S	V ₂ O ₅	F	P	Cr ₂ O ₃	Mfe		
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 (in g)				
		TFe	TiO ₂	SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	S							
NCS HC 19813	High-Titanium Slag	6.43	77.66	5.50	2.64	1.52	5.28	1.08	0.118					100		
NCS HC 19814	High-Titanium Slag	1.08	84.94	4.13	3.04	1.83	7.27	0.74	0.247					100		
NCS HC 19815	High-Titanium Slag	1.02	94.69	1.92	2.62	0.287	2.67	1.21	0.166					100		
Number	Name	Chemical Composition(Percent)										Unit Size (in g)				
		Mn	Fe	P	SiO ₂	Al ₂ O ₃	CaO	MgO	S							
NCS HC 25801	Rich Slag-Manganese	35.31	1.77	0.56	33.47	1.91	7.79	3.99	0.66					50		
Number	Name	Chemical Composition(Percent)											Unit Size (in g)			
		SiO ₂	Al ₂ O ₃	CaO	MgO	MnO	TiO ₂	TFe	S	P ₂ O ₅	Na ₂ O	K ₂ O				
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		80		
NCS HC 28802	Blast Furnace Slag	34.79	13.52	39.91	8.68	0.489	0.630	0.23	0.976	0.0082	0.35	0.50		80		
Number	Name	Chemical Composition(Percent)									Unit Size (in g)					
		TFe	CaO	SiO ₂	MgO	Al ₂ O ₃	MnO	TiO ₂	P ₂ O ₅	S						
NCS HC 28803	Blast Furnace Slag	0.92	36.26	31.82	9.92	16.85	0.78	0.52	0.018	0.75			80			
NCS HC 28804	Blast Furnace Slag	2.01	37.13	31.18	7.52	16.26	1.23	0.58	0.043	0.79			80			
NCS HC 28805	Blast Furnace Slag	0.76	39.20	34.91	9.27	12.80	0.090	0.42	0.012	0.90			80			

Section 5 Slag, Refractory(Powder)

Number	Name	Chemical Composition(Percent)					Unit Size (in g)							
		FeO	SiO ₂	Al ₂ O ₃	CaO	Sn								
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							
Number	Name	Chemical Composition(Percent)								Unit Size (in g)				
		SiO ₂	TCa	Na ₂ O	Al ₂ O ₃	MgO	FC	TC	F*					
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 26802	Continuous Casting mold powder	23.08	17.93	2.94	14.14	5.86	9.94	12.71	3.86	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 (in g)					
		S	SiO ₂	CaO	TCa	MgO	Al ₂ O ₃	TFe						
NCS HC 28806	Slag	1.15	30.36	37.53	-	10.8	16.92	0.211	100					
NCS HC 28807	Slag	0.134	14.54	-	32.32	7.27	3.67	13.54	100					
NCS HC 28808	Slag	0.885	29.62	35.71	-	10.92	18.05	0.48	100					
Number	Name	Chemical Composition(Percent)							Unit Size (in g)					
		K ₂ O	Na ₂ O	MnO	P ₂ O ₅	TiO ₂	FeO	F						
NCS HC 28806	Slag	0.46	0.39	0.414	0.013	0.762	0.35	-	100					
NCS HC 28807	Slag	0.033	0.057	4.06	1.72	1.13	10.44	0.76	100					
NCS HC 28808	Slag	0.42	0.36	0.542	0.027	0.753	0.55	-	100					
Number	Name	Chemical Composition(Percent)									Unit Size (in g)			
		TFe	TCa	SiO ₂	MgO	Al ₂ O ₃	MnO	TiO ₂	P ₂ O ₅	S				
NCS HC 28809	Converter Slag	13.50	32.65	15.40	7.75	4.38	2.30	1.02	1.67	0.195	80			
NCS HC 28810	Converter Slag	16.52	33.35	14.45	7.1	1.76	2.78	1.25	1.60	0.120	80			
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Al ₂ O ₃	CaO	MgO	P ₂ O ₅	Fe ₂ O ₃	TiO ₂	MnO	SiO ₂	K ₂ O	Na ₂ O	L.O.L	C	
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

Section 6 Gas in Metal

Number	Name	Chemical Composition(Percent)		Unit Size (in g or pellet)	Form			
		C	S					
NCS NS 11003	C&S in Steel	0.322	0.020	150	chip			
NCS NS 11006	C&S in Steel	0.097	0.021	100	ball			
NCS NS 11007	C&S in Steel	0.146	0.013	100	ball			
NCS NS 11010	C&S in Steel	0.703	0.010	100	ball			
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 11015a	Pure Iron	0.0030	0.0019	100	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)		Unit Size (in g)	Form			
		N	O					
NCS NS 11020	O, N, in steel	84	112	50	D4.0×5.0mm			
NCS NS 11022	O, N, in steel	826	39	50	D4.0×5.0mm			
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)					Unit Size (in g)	Form
		O(%)	N(%)	H(%)	Sample weight	Sample size (mm)		
NCS NS 11043	O, N in steel	0.0041	0.0381	0.00005	0.5g	6.35	50 pieces	
Number	Name	Chemical Composition(Percent)			Unit Size (in g)	Form		
		O	N	H	Sample Weight(g)	Sample Size(mm)		
NCS NS 11044	O, N, H in Stainless steel	0.0025	0.058	0.00020	1.0±0.1	D6.35		
NCS NS 11045	O, N, H in Stainless steel	0.0048	0.026	0.00020	1.0±0.1	D6.35		
NCS NS 11046	N in Stainless steel		0.0067		1.0±0.1	D6.35		
Number	Name	Chemical Composition(Percent)		Unit Size (in g)	Form			
		C	S					
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)		Unit Size (g or pellet)	Form			
		N						
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)			Unit Size (in g)	Form	
		C	S				
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		100	chip	
NCS NS 13028	S in Steel		0.017		100	chip	
NCS NS 13029	S in Steel		0.037		100	chip	
NCS NS 13032	S in Steel		0.096		100	chip	
Number	Name	Chemical Composition(Percent)			Unit Size (in g or)	Form	
		N					
NCS NS 13033	N in Steel	0.0043			150	chip	
NCS NS 13034	N in Steel	0.0044			150	chip	
NCS NS 13036	N in Steel	0.0064			150	chip	
NCS NS 13037	N in Steel	0.0067			150	chip	
Number	Name	Chemical Composition(Percent)			Unit Size (in g or)	Form	
		N					
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		Unit Size (in g)	Form		
		C(%)	S(%)				
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(Percent)			Unit Size (in g)	Form	
		O (%)	N (%)	Sample weight			
NCS NS 18001	O, N in steel	0.0038	0.0063	0.5g	50	ball	
Number	Name	Chemical Composition		Unit Size (in g)	Form		
		[H] ppm	Weight of ball (g)				
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		Unit Size (in g)	Form		
		O ppm	N ppm				
NCS NS 20035b	O, N in steel	22	61	50	ball		
Number	Name	Chemical Composition(Percent)				Unit Size (in g)	Form
		O(%)	N(%)	Mass of the ball (g)	Diameter of the ball(mm)		
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		Unit Size (in g)	Form		
		O ppm	N ppm				
NCS NS 20035b	O, N in steel	22	61	50	ball		

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Number	Name	Chemical Composition(Percent)		Unit Size (in g)	Form		
		C	S				
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		
Number	Name	Chemical Composition(Percent)		Unit Size (in g)	Form		
		O	N	Ball weight (g)	Ball diameter(mm)		
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
Number	Name	Chemical Composition(Percent)			Unit Size (in g)	Form	
		O	N	H			
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)		Unit Size (in g)	Form		
		N					
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		Unit Size (in g)	Form		
		[H] ppm					
NCS NS 20042	H in stainless steel	3.55		20	ball		
Number	Name	Chemical Composition(Percent)			Unit Size	Form	
		O	N	H			
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		
Number	Name	Chemical Composition(µg/g)		Unit Size (in g)	Form		
		O	N				
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)		Unit Size (in g)	Form		
		C	S				
NCS NS 21008	C S in Bearing Steel	0.977	0.018	50	ball		
Number	Name	Chemical Composition(Percent)		Unit Size (in g)	Form		
		C	S				
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		

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Number	Name	Chemical Composition(Percent)			Unit Size (in g)	Form
NCS NS 28021	C S in Steel	C	S		100	chip
		0.16	0.028			
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
Number	Name	Chemical Composition(Percent)			Unit Size (in g)	Form
		O(%)	N(%)			
NCS NS 41005a	O N in steel	0.00087	0.0084		20/50 pieces	
NCS NS 41005b	O N in steel	0.00080	0.0084		20/50 pieces	
NCS NS 41006	O N in steel	0.0108	0.0027		20 pieces	
NCS NS 41007	O N in steel	0.0029	0.0037		20 pieces	
Number	Name	Chemical Composition(Percent)			Unit Size (in g)	Form
		O	N	mass(g/p)		
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)			Unit Size (in g)	
		O	N			
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	
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		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 (in g)
		Cu	Sn	Zn	Mg	P	Ni	Cr	Mn	Fe	Ti	Si	
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	100
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	100
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 (in g)			
		Cu	Zn	Mg	Ni	As	Ti	Si					
NCS HC 41913	LD7	2.18	0.0094	1.58	1.15	1.22	0.12	0.094		100			
NCS HC 41915	AI-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 (in g)	
		Cu	Sn	Pb	Zn	Mg	Ni	Mn	Fe	Ti	Si	Be		Zr
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
NCS HC 50938	Aluminum Alloy	0.197			0.127	10.38		0.063	0.201	0.050	0.343			100
Number	Name	Chemical Composition(Percent)							Unit Size (in g)					
		Cu	Sn	Fe	As	Sb	Bi							
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 (in g)		
		Cu	Zn	Mg	Ni	Cr	Mn	Fe	Sb	Ti	Si			
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 (in g)					
		Si	Zr	Fe	Cu	Zn	Ti	Mg						
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	ZQA10-3-1.5		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 43915	Q Sn6-6-3			5.94	2.90	6.06								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	100
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
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									

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3)Lead Base Alloy

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

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4)Tin Base Alloy

Number	Name	Chemical Composition(Percent)						Unit Size (in g)			
		Cu	Sn	Pb	As	Sb	Bi				
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 (in g)		
		Cu	Sn	Pb	Zn	Fe	As	Sb		Bi	Ag
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 (in g)		
		Cu	Al	Zn	Mn	Fe	As	Sb		Bi	
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 (in g)			
		Cu	Sn	Pb	As	Sb	Bi				
NSC HC41921	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 (in g)		
		Cu	Pb	Zn	Fe	As	Sb	Bi			
NCS HC 50945	Z Ch Sn Sb D12-3-10	0.409	9.90		0.069						90
NCS HC 50947	Tin Alloy	7.11	0.323	0.0046	0.073	0.065	9.14	0.073			100
NCS HC 50949	Tin Alloy	4.09	9.90	0.0021	0.069	0.069	12.10	0.064			100

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5)Zinc Alloy

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

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6)Titanium Alloy & Other

Number	Name	Chemical Composition($\mu\text{g/g}$)										Unit Size (in g)				
		CeO ₂	Pr ₆ O ₁₁	Tb ₄ O ₇	Dy ₂ O ₃	SiO ₂ (Base)	CaO	Fe ₂ O 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($\mu\text{g/g}$)													Unit Size (in g)	
		La ₂ O ₃	CeO ₂	Pr ₆ O ₁₁	Nd ₂ O ₃	Sm ₂ O ₃	Gd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	Ho ₂ O ₃	Er ₂ O ₃	Tm ₂ O ₃	Yb ₂ O ₃	Lu ₂ O 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	
Number	Name	Chemical Composition(Percent)													Unit Size (in g)	
		Y ₂ O ₃	Na ₂ O	SiO ₂ (Acid)	SiO ₂ (Base)	CaO	Fe ₂ O 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					

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1) Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Pb	Sn	Sr	
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 (mm)	
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr		
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 (mm)		
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti			
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 (mm)		
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Pb			
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 (mm)			
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn				
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 (mm)	
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Na		
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

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1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Be	
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 (mm)		
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti			
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 (mm)
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Sn	Pb	
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 (mm)
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Ga		
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 (mm)
		Fe	Si	Mn	Mg	Cr	Ni	Cu	Ti	Zn	Zr	
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 (mm)
		Si	Mg	Mn	Fe	Cu	Zn	Ni	Cr	Ti	Zr	Ga	
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 (mm)
		Si	Mg	Mn	Fe	Cu	Zn	Sn	Pb	Ni	Ti	Sr	
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	Φ62x30
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	Φ62x30
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	Φ62x30
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	Φ62x30
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	Φ62x30
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	Φ62x30
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	V	Pb	Sn	
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)	Φ62x30
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	Φ62x30
NCS HS 49717-3	DL18	0.031	0.031	0.034	0.371	0.344	0.067	0.013	0.030		0.123		Φ62x30
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	Φ62x30
NCS HS 49717-5	DL18	0.076	(0.056)	0.108	0.612	0.634	1.05	0.081	0.075		0.066		Φ62x30
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	Φ62x30
NCS HS 49717-7	DL18	0.048	0.021	0.070	0.505	0.491	1.50	(0.138)	0.133		0.0052		Φ62x30
		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 (mm)
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Pb	Sn	Be	Zr	
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	Φ62x30
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	Φ62x30
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	Φ62x30
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	Φ62x30
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	Φ62x30
Number	Name	Chemical Composition(Percent)											Unit Size (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Ni			
NCS HS 49719-1	Aluminium Alloy	0.352	0.098	0.099	0.094	0.745	0.374	0.088	0.046	0.011			Φ62x30
NCS HS 49719-2	Aluminium Alloy	0.547	0.215	0.200	0.198	0.580	0.275	0.126	0.092	0.042			Φ62x30
NCS HS 49719-3	Aluminium Alloy	0.654	0.294	0.328	0.289	0.647	0.236	0.181	0.109	0.062			Φ62x30
NCS HS 49719-4	Aluminium Alloy	0.794	0.411	0.435	0.410	0.395	0.145	0.223	0.142	0.100			Φ62x30
NCS HS 49719-5	Aluminium Alloy	0.972	0.517	0.540	0.539	0.277	0.072	0.277	0.173	0.138			Φ62x30

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1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)										Unit Size (mm)	
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Cr	Zr		
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 (mm)	
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Cr	Zr		
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 (mm)
		Pb	Cd	As	Cu								
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 (mm)
		Si%	Fe%	Cu%	Mn%	Mg%	Ni%	Zn%	Ti%	Be 120m	Li 120m	Cd 120m	
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 (mm)	
		Si	Fe	Cu	Mn	Mg	Cr	Zn	Li	Ti	Zr		
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	0.126*	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	

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1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)						Unit Size (mm)								
		Ag	Cu	Mg	Li	Ti	Zr									
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 (mm)								
		Ga	Li	Cd	B	Co	Mg									
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 (mm)				
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Zr	V					
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 (mm)
		Si	Fe	Cu	Mn	Mg	Ni	Zn	Cr	Ti	Zr	B	Sc	Be		
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	Φ62×30	
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	Φ62×30	
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	Φ62×30	
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	Φ62×30	
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	Φ62×30	
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	Φ62×30	
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	Φ62×30	
Number	Name	Chemical Composition(Percent)			Unit Size (mm)											
		Hg	Pb	Cd												
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 (mm)
		Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Cd	V	Na	Ga	Pb		
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 (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Ti	Cd	Na	
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 (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Zr	Ca	Na	
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	Φ62x30
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	Φ62x30
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	0.00077*	Φ62x30
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	Φ62x30
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	Φ62x30
Number	Name	Chemical Composition(Percent)							Unit Size (mm)					
		Si	Fe	Cu	Mn	Mg	Zn	Ti						
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 (mm)		
		Si	Fe	Cu	Mn	Mg	Zn	Pb	Sn	Ti	Zr			
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 (mm)	
		Si	Fe	Cu	Mn	Mg	Zn	Pb	Sn	Ti	Zr	Be		
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 (mm)					
		Si	Fe	Cu	Mn	Mg	Zn	Ti						
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 (mm)					
		Si	Fe	Cu	Mn	Mg	Zn	Ti						
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

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1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)									Unit Size (mm)				
		Si	Fe	Cu	Mn	Mg	Zn	Ni	Pb	Sn					
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 (mm)
		Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Pb	Sn	Sr	Ca	
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 (mm)						
		Fe	Si	Mn	Ni	Cu	Al	Zn							
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 (mm)			
		Fe	Si	Mn	Mg	Ni	Cu	Al	Zn	Sn	Pb				
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 (mm)	
		Fe	Si	Mn	Mg	Ni	Cu	Al	Ti	Zn	Sn	Pb			
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 (mm)			
		Fe	Si	Mn	Mg	Ni	Cu	Al	Ti	Zn	Sn		Pb		
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

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1)Aluminum & Aluminum Alloy

Number	Name	Chemical Composition(Percent)							Unit Size (mm)		
		Cu	Mg	Mn	Fe	Si	Zn	Sn			
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 (mm)
		Fe	Si	Mn	Mg	Cu	Al	Zn	Sn	Pb	
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 (mm)		
		Fe	Si	Mn	Mg	Cu	Al	Zn			
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	11.01		30×35×50	
NCS HS 50711-3	ZLD401	1.01	7.00	0.28	0.20	0.24	margin	11.02		30×35×50	
NCS HS 50711-4	ZLD401	0.24	7.00	0.56	0.40	0.42	margin	11.03		30×35×50	
NCS HS 50711-5	ZLD401	0.15	7.00	0.95	0.65	0.15	margin	11.04		30×35×50	
Number	Name	Chemical Composition(Percent)						Unit Size (mm)			
		Fe	Si	Mn	Fe	Si	Zn				
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 (mm)		
		Si	Mg	Mn	Fe	Cu	Zn	Ni			
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 (mm)
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Sn	Pb	RE	
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 (mm)	
		Fe	Si	Mn	Mg	Ni	Cu	Ti	Zn	Cr	Be		
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 (mm)					
		Si	Mg	Mn	Fe	Cu	Zn						
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 (mm)
		Fe	Si	Zn	Cu	Mg	Mn	Ti	Ga	V	Cr	B	
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 (mm)			
		Fe	Si	Zn	Cu	Mg	Mn	Ti	Cr				
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 (mm)
		Si	Fe	Cu	Mg	Zn	Mn	Ti	Sn	Pb	Zr	Ni	
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 (mm)
		Fe	P	Zn	Sn	Sb	Pb	Bi	Cu	Ni	Si	Mn	Al	
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 (mm)	
		Fe	P	Zn	Sn	Sb	Pb	Bi	Cu	Ni	Si	As		
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 (mm)		
		Fe	Si	Mn	P	Mg	Cu	As	Sb	Pb	Bi			
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 (mm)		
		Fe	Si	Mn	P	Ni	Zn	Sn	As	Sb	Pb			
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 HS 43716a-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 HS 43720-3	Copper alloy	98.77	0.003	0.002	0.053	0.1	0.042				0.81	Φ35X25		
NCS HS 43720-4	Copper alloy	59.79		0.42	0.39		1.04	35.49				Φ35X25		
NCS HS 43720-5	Copper alloy	78.22		0.26	4.46	3.34	0.3	0.73				Φ35X25		
NCS HS 43720-6	Copper alloy	66.53		0.1	29.45	1.08	0.25	0.58	0.1			Φ35X25		
NCS HS 43720-7	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 (mm)	
		Zr	Mg	Co	Mn	Sb	Al	As	P	Se	Te	Bi		
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 (mm)	
		Sn	Zn	Pb	Fe	Ni	Bi	Sb	P	As	Mg	S		Co
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 (mm)	
		Sn	Pb	Fe	Ni	Bi	Sb	P	Cu	As	S			
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 (mm)	
		Cu	Pb	Fe	Ni	Mn	Al	Si	Sn	Bi	Sb	P		S
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 (mm)
		Cu	Ni	Zn	Pb	Fe	Si	Mn	P	Mg	Bi	Sb	As	
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 (mm)				
		Cu	Sn	Ni	Al	Fe	Pb	P	Zn					
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 (mm)
		Se	Te	Bi	Cr	Mn	Sb	Cd	As	P	Pb	S	Sn	
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
Number	Name	Chemical Composition(Percent)						Unit Size (mm)						
		Ni	Fe	Si	Zn	Co	Ag							
NCS HS 52704-1	Cathode Copper	0.00009	0.00016	0.00015	0.00004	0.00001	0.00007	Φ40X30						
NCS HS 52704-2	Cathode Copper	0.00021	0.00014	0.00009	0.00014	0.00013	0.0011	Φ40X30						
NCS HS 52704-3	Cathode Copper	0.00061	0.00066	0.00054	0.00093	0.00056	0.003	Φ40X30						
NCS HS 52704-4	Cathode Copper	0.0023	0.0024	0.0014	0.0026	0.0018	0.0053	Φ40X30						
NCS HS 52704-5	Cathode Copper	0.006	0.0054	0.0034	0.0052	0.0035	0.0072	Φ40X30						

Section 8 Nonferrous Metal(Disk)

3)Magnesium & Other Metal

Number	Name	Chemical Composition(Percent)					Unit Size (mm)				
		Fe	Si	Al	C	V					
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 (mm)	
		S1	Fe	Cu	Mn	Ni	Zn	Al	Be		
NCS HS 49722-1	Magnesium Alloy	0.026	0.0025	(0.0024)	0.016	0.0006	(0.0069)	5.81	0.00007	Φ45X25	
NCS HS 49722-2	Magnesium Alloy	0.024	0.0042	0.0036	0.077	0.0010	3.76	4.68	0.00009	Φ45X25	
NCS HS 49722-3	Magnesium Alloy	0.097	0.013	0.087	0.339	0.0045	2.99	7.18	0.00044	Φ45X25	
NCS HS 49722-4	Magnesium Alloy	0.28	0.023	0.164	0.231	(0.013)	1.94	6.96	0.0010	Φ45X25	
NCS HS4 9722-5	Magnesium Alloy	0.176	(0.020)	0.295	(0.68)	0.018	0.217	11.52	(0.0023)	Φ45X25	
NCS HS 49722-6	Magnesium 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 (mm)	
		Si	Fe	Cu	Mn	Ni	Zn	Al	Be		
NCS HS 49723-1	Magnesium Alloy	0.034	(0.039)	0.0029	0.92	0.0012	0.057	6.10	(0.0020)	Φ45X25	
NCS HS 49723-2	Magnesium Alloy	0.173	0.0089	0.0081	0.338	0.0008	0.237	2.55	0.0009	Φ45X25	
NCS HS 49723-3	Magnesium Alloy	0.27	0.015	0.020	0.182	(0.0015)	0.171	7.33	0.00015	Φ45X25	
NCS HS 49723-4	Magnesium Alloy	0.286	(0.016)	0.020	0.428	(0.0068)	0.271	6.29	(0.0010)	Φ45X25	
NCS HS 49723-5	Magnesium Alloy	0.239	0.025	0.013	(0.65)	0.0025	0.105	4.57	0.0009	Φ45X25	
NCS HS 49723-6	Magnesium 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 (mm)
		Si	Fe	Cu	Mn	Zn	Ti	Ni	Al	Pb	
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

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	Magnesium Alloy	3.04	1.21	0.082	0.0032	0.037	0.035	0.0096	0.0006	Φ40X25		
NCS HS 91711-2	Magnesium Alloy	5.06	0.954	0.256	0.0022	0.100	0.028	0.085	0.0047	Φ40X25		
NCS HS 91711-3	Magnesium Alloy	6.97	0.709	0.374	0.0017	0.183	0.018	0.151	0.0096	Φ40X25		
NCS HS 91711-4	Magnesium Alloy	9.00	0.463	0.567	0.0013	0.285	0.010	0.222	0.015	Φ40X25		
NCS HS 91711-5	Magnesium 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

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Number	Name	Chemical Composition(Percent)									Unit Size (in g)				
		Total Sulfur	Ash	Volatile matter	Calorific Value	Carbon	Hydrogen	Nitrogen	True Specific Gravity	Coal Type					
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 (in g)										
		Ts	Ash	Volatile											
NCS FC 59001	Coke	0.63	7.22	1.39	60										
NCS FC 59002	Coke	0.47	12.62	1.50	60										
Number	Name	Chemical Composition(Percent)										Unit Size (in g)			
		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)					
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 (mm)									
		As*	P	Cl	F*										
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 FC82004	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 (in g)			
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	SO ₃	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅				
NCS FC 82012	Coal ash	46.77	14.96	5.51	21.37	1.73	3.94	0.63	1.41	1.36	0.50	30			
NCS FC 82014	Coal ash	53.98	31.70	7.80	1.44	1.08	0.28	1.17	1.36	0.22	0.28	30			
NCS FC 82015	Coal ash	62.93	17.88	6.04	6.11	0.90	1.20	0.79	0.87	1.18	0.85	30			
NCS FC 82016	Coal ash	50.08	33.78	4.36	5.50	0.76	1.25	1.77	0.87	0.41	0.18	30			
NCS FC 82017	Coal ash	31.24	10.00	8.16	42.40	1.17	2.76	0.56	1.28	0.46	0.04	30			
Number	Name	Chemical Composition(Percent)												Unit Size (in g)	
		Q _{gr,d} (MJ/kg)	S _{t,d}	A _d	V _d	SiO ₂	Al ₂ O ₃	CaO	MgO	F ₂ O ₃	TiO ₂	Na ₂ O	K ₂ O		
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	
Number	Name	Chemical Composition(Percent)													
		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				

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Number	Name	St. d	Ad	Vd	Chemical Composition(Percent)		Unit Size (mm)				
					Qgr.d(MJ/kg)	P					
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	Ts	Ash	Volatile	Chemical Composition(Percent)		Unit Size (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 93003	Coke	0.87	15.99	1.71			60				
NCS FC 93004	Coke	1.05	15.06	2.60			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	Certified Value(HGI)		Chemical Composition						Unit Size (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°C)	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 FC28102	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 (in g)
NCS FC 28122	Inorganic elements in Coal	Si	Al	Fe	Ca	Mg	P	K	Na	Ti	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

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Number	Name	Chemical Composition(Percent)										Unit Size (in g)	
		V	Mn	Cu	Co	Ni	Zn	Cr	Cd	Pb			
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)										Unit Size (in g)	
		Si	Al	Fe	Ca	Mg	P	K	Na	Ti			
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	
Number	Name	V	Mn	Cu	Co	Ni	Zn	Cr	Cd	Pb	Unit Size (in g)		
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	<0.0000				
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 (%)	Volatiles (%)	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)											Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅	MnO	
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 (%)	Volatiles (%)	Calorific (MJ/kg)	Carbon (%)	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)											Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅	MnO	
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 ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O 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)					Coal Type	Unit Size (in g)						
		St.d	Ad	Vd	Qgr,d(MJ/kg)									
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 ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O 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(°C)		Deformation temperature	Softening temperature	Hemisphering temperature	Fluid temperature	Unit size						
		Atmosphere												
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(°C)		Deformation temperature	Softening temperature	Hemisphering temperature	Fluid temperature	Unit size						
		Atmosphere												
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(µg/g)														Unit Size (in g)
		Ag	AS	B	Ba	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	Cu	
NCS ZC 73003	Soil	0.078	12.2	55	492	2.04	0.30	2.1	0.15	57	(50)	12.6	59	7.2	29	70
NCS ZC 73005	Soil	0.084	6.5	46	608	2.44	0.35	1.7	0.20	80	50	14.6	70	7.0	27.4	70
		Dy	Er	Eu	F	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li	
NCS ZC 73003	Soil	4.9	2.9	1.22	592	16.8	5.1	1.3	5.5	0.021	1.01	1.4	0.058	29	36	
NCS ZC 73005	Soil	4.8	2.6	1.36	619	18.8	5.5	1.42	6.4	0.089	0.93	0.9	0.057	41	39	
		Lu	Mn	Mo	N*	Nb	Nd	Ni	P	Pb	Pr	Rb	S	Sb(DA)		
NCS ZC 73003	Soil	0.46	774	0.96	0.055	12	27.9	32	708	19	7.0	94	154	1.05		
NCS ZC 73005	Soil	0.42	688	0.65	0.081	14.4	36	33	730	31	9.2	108	173	0.73		
		Sb(T)	Sc	Se	Sm	Sn	Sr	Ta	Tb	Th	Ti*	Ti	Tm	U		
NCS ZC 73003	Soil	(0.17)	12.6	0.16	5.6	2.8	240	0.85	0.84	10	0.392	0.51	0.44	2.4		
NCS ZC 73005	Soil	(0.81)	11.7	0.16	6.4	3.1	152	1.08	0.87	12.7	0.406	0.63	0.41	2.45		
		V	W	Y	Yb	Zn	Zr	SiO ₂ *	Al ₂ O ₃ *	TFe ₂ O ₃ *	FeO*	MgO*	CaO*	Na ₂ O*	K ₂ O*	
NCS ZC 73003	Soil	86	1.64	26.4	2.9	78	195	60.0	13.27	4.71	1.39	2.43	5.83	2.00	2.62	
NCS ZC 73005	Soil	86	1.5	25	2.53	96	227	64.5	14.4	5.32	(0.8)	1.90	2.45	1.59	2.46	
		H ₂ O*	CO ₂ *	Corg*												
NCS ZC 73003	Soil	(3.6)	3.9	(0.47)												
NCS ZC 73005	Soil	(4.0)	(1.1)	0.79												

* Chemical Composition (%)

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Number	Name	Chemical Composition							Unit Size (in g)	
		Al(10^{-2})	As(10^{-5})	B(10^{-5})	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^{-5})	B(10^{-5})	Ba(10^{-6})	Be(10^{-5})	Bi(10^{-5})	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^{-5})	Cr(10^{-5})	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^{-6})	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 ⁻³)	Al(10 ⁻²)	As(10 ⁻⁶)	B(10 ⁻⁶)	Ba(10 ⁻⁶)	Be(10 ⁻³)	Bi(10 ⁻³)		
NCS ZC 73018	Citrus leaves	54	0.115	1.1	32	98	31	230		35
NCS ZC 73019	Fresh Kidney 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 Kidney 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 Kidney 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 Kidney 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 Kidney 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 Kidney 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 Kidney 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 ⁻³)	Al(10 ⁻²)	As(10 ⁻⁶)	B(10 ⁻⁶)	Ba(10 ⁻⁶)	Be(10 ⁻³)	Bi(10 ⁻³)			
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 73028	Rice		(0.059)	0.12±0.03	1.06±0.08	0.75±0.09	3.4±0.6	(1.6)	35	
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 73028	Rice	(0.4)	0.013±0.002	0.018±0.002	17±2	(0.028)	8.2±1.7	0.17±0.05	2.9±0.6	2.6±0.1
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 73028	Rice	1.15±0.11	0.70±0.10	0.42±0.12	14.4±2.0	1.5±0.2	(4.3)	2.2±0.5	0.21±0.04	
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 73028	Rice	0.14±0.01	10.3±1.1	0.068±0.016	(0.1)	0.53±0.002	1.15±0.6	0.61±0.03	(1.47)	1.10±2.5
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 73028	Rice	(5)	7.9±1.3	0.21±0.06	0.16±0.01	0.09±0.03	2.0±0.3	0.29±0.06	(0.13)	(5.8)
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 73028	Rice	(5)	(0.03)	(0.033)	1.6±0.3	(9)	0.29±0.05	(0.25)	4.0±1.2	(2.7)
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 73028	Rice	0.30±0.04	0.12±0.04	(2.6)	(0.05)	0.22±0.05	0.61±0.14	14.6±0.6		
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($\mu\text{g/g}$)													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 ₂ O 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 ₂ O ₃	CaO	MgO	K ₂ O	Na ₂ O	P ₂ O 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($\mu\text{g/g}$)													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 ₂ O ₃ (T)						
NCS ZC 75002	Yellow Croaker	(0.43)	(1.75)	(0.016)	(0.015)	(52)	(0.568)	(10.3)	23.9						
Number	Name	Chemical composition(percent)							Unit Size (in g)						
		CaO	MgO	K ₂ O	Na ₂ O	P ₂ O ₅	Al ₂ O 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($\mu\text{g/g}$)							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($\mu\text{g/g}$)			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($\mu\text{g/g}$)		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 Substance($\mu\text{mol/L}$)	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($\mu\text{mol/L}$)	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($\mu\text{mol/L}$)	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)	
NCS ZC 78001	Coal Fly Ash	As	Be	Cd	Co	Cu	Mn	Pb	Se	Y	Zn	Fe*	30or50	
		11.4	10.7	0.16	33.2	53	1178	33.8	1.13	95	61	7.65		
		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)
NCS ZC 81002b	Human Hair	Zn	Se	Cr	Mg	Mn	As	Ca	Fe	Cu	Sr	Hg	Na	7
		191	0.59	8.74	248	3.83	0.198	1537	160	33.6	8.17	1.06	445	
		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 Certified Value of the element is µg/kg														
** Unit of Certified Value of the element 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	

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(percent)														Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	W	Mb			
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	0.912	Φ38×30		
NCS AH 11309	Carbsn Steel	0.411	0.274	0.575	0.018	0.015	0.009	0.022	0.135						Φ38×45		
NCS AH 11311	60Si ₂ Mn	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							
NCS AH 11304	Low Alloy Steel	0.397	0.050	0.0025	0.0007	0.0041	0.019	0.0023	0.0007	0.0043							
NCS AH 11309	Carbsn Steel	0.012					0.018										
NCS AH 11311	60Si ₂ Mn	0.011					0.016										
Number	Name	Chemical Composition(percent)														Unit Size (in g)	
		C	Si	Mn	p	S	Cr	Ni	Cu	V	Ti	Co	Al	B			
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 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 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 11321	Carbon Steel						0.0050	0.012									
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 (in g)			
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Mo	W				
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 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		
Number	Name	Chemical Composition(percent)														Unit Size (mm)	
		C	Si	Mn	P	S	Cr	Mo	Ni	Al	Co	Cu	Nb	Ti	V		W
NCS AH 11345	Cast iron	2.06	2.94	1.20	0.041	0.041	0.159	0.097	0.151	0.017	0.006	0.322	0.147	0.032	0.058	0.279	Φ28×20

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	W	Mo	Co	Ti		
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	
			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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	V	Ti	Mo	W		
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	
			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 (mm)
		C	Si	Mn	P	S	Cr	Ni	Cu	V	Ti	Mo	Alt	Co		
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 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 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	
			W	Als												
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 (mm)
		C	Si	Mn	P	S	Ni	Cr	Cu	V	Ca	Als	Alt	Sn		
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(W6M65Cr4V2)	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 steel 321(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(0Cr17Ni4CuNb)			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					
Chemical Composition(Percent)																
Number	Name	C	Si	Mn	P	S	Cr	Ni	Cu	V	Mo	Ti	Nb	Al	Unit Size (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	

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(Percent)										Unit Size (mm)				
		C	Si	Mn	P	S	Ni	Cr	Cu	Mo						
NCSAH 18301	Carbon Steel	0.48	0.322	0.613	0.028	0.018	0.177	0.456	0.097	0.129						Φ37×30
NCSAH 18302	Carbon Steel	0.442	0.376	0.577	0.023	0.023										Φ37×30
NCSAH 18303	Carbon Steel	0.072	0.022	0.507	0.016	0.02	0.013	0.017	0.048							Φ37×30
NCSAH 18304	Carbon Steel	0.669	0.273	0.571	0.012	0.015										Φ37×30
NCSAH 18305	Carbon Steel	0.094	0.229	0.55	0.015	0.018										Φ37×30
NCSAH 18306	Carbon Steel	0.196	0.223	0.465	0.014	0.012										Φ37×30
NCSAH 18307	Carbon Steel	0.455	0.22	0.582	0.021	0.01										Φ37×30
NCSAH 18308	Carbon Steel	0.442	0.23	0.6	0.011	0.014										Φ37×30
NCSAH 18309	Carbon Steel	0.742	0.219	0.553	0.008	0.011										Φ37×30
NCSAH 18310	Carbon Steel	0.689	0.279	0.581	0.008	0.015										Φ37×30
NCSAH 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 (mm)	
		C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Al	B			
NCSAH 20304	60SiMnA	0.588	0.012	0.699	0.015	1.72	0.258	0.042		0.102		0.010				Φ42×40
NCSAH 20305	50CrVA	0.497	0.018	0.629	0.011	0.253	0.944	0.062		0.122	0.143	0.020				Φ42×40
NCSAH 20306	35CrMo	0.376	0.018	0.534	0.026	0.283	1.00	0.110	0.197	0.096		0.037				Φ42×40
NCSAH 20307	12CrMoV	0.109	0.014	0.527	0.011	0.247	1.04	0.064		0.095	0.203	0.032				Φ42×40
NCSAH 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
NCSAH 20309	40Cr	0.406	0.020	0.629	0.019	0.302	1.01	0.068		0.105		0.030				Φ42×40
NCSAH 20310	42CrMo	0.407	0.018	0.628	0.017	0.243	0.953	0.057	0.163	0.096		0.022				Φ42×40
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Cu	V	Ti	Al	Ni	Nb		
NCSAH 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
NCSAH 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
NCSAH 20313	Steel			10.34			8.52			0.44	0.91	0.83	6.51			Φ35×40
NCSAH 20314	Steel	0.262	2.65	2.27	0.007	0.041	0.973	2.9	0.396		0.019		25.14			Φ35×40
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		B	W	N	Pb	Bi	Sb	As	Sn	Ca	Ce					
NCSAH 20311	Steel	<0.001	(<0.001)	0.0039	(<0.00015)	(<0.0001)	0.0002	0.0006	0.0005	(<0.0003)						
NCSAH 20312	Steel	0.0083	0.25		0.0042		0.008	0.0031	0.0019							
NCSAH 20313	Steel			0.044				0.007	0.018	(<0.0015)						
NCSAH 20314	Steel	0.001	0.028													
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		C	Si	Mn	P	S	Cr	Mo	Cu	V	Ti	Al	Ni	Nb		
NCSAH 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
NCSAH 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
Number	Name	Chemical Composition(Percent)														Unit Size (mm)
		B	W	Bi	Pb	Zn	Sb	As	Sn	Ca						
NCSAH 20315	Carbon Steel	0.0009	0.076	(<0.0005)	(<0.0006)	(<0.004)	0.0005	0.011	0.0018	(<0.001)						
NCSAH 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 (mm)	
		C	Si	Mn	P	S	Ni	Cr	Mo	V	Cu	Alt				
NCSAH 20317	SL9N590	0.072	0.30	1.13	0.006	0.021	8.84	0.21	0.056		0.048	0.026				Φ40×45
NCSAH 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 (mm)	
		C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Sb	B			
NCSAH 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
NCSAH 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
NCSAH 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
NCSAH 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
NCSAH 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
NCSAH 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

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

Number	Name	Chemical Composition(percent)												Unit Size (mm)	
		C	S	Mn	P	Si	Cr	Ni	Mo	Cu	V	Sb	B		
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	Al ^t	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		
Number	Name	Chemical Composition(Percent)													Unit Size (mm)
		C	Si	Mn	P	S	Cr	Ni	Mo	V	Als	Al ^t	Cu	Co	
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 ₂ W	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 ₂ W	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

Section 11 Set-up Sample

1) Iron, Steel & Alloy (Disk)

		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 ₂ W	1.37	0.0037											
NCS AH 28323	60Si ₂ W	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											
		Chemical Composition(Percent)												Unit Size
Number	Name	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

2) Nonferrous Metal

Number	Name	Chemical Composition(percent)											Unit Size (mm)			
		Cu	Mg	Mn	Fe	Si	Zn	Ti	Ni	Zr	B	V				
NCSAH 49301	Aluminum Alloy	0.096	0.252	0.076	0.188	7.30	0.078	0.146								Φ62×30
NCSAH 49302	Aluminum Alloy	0.495	0.029	0.487	0.769	11.30	0.253									Φ62×30
NCSAH 49303	Aluminum Alloy	3.42	0.169	0.314	0.872	8.27	0.906									Φ62×30
NCSAH 49304	Aluminum Alloy	0.227	1.45	0.066	0.678	10.24	0.170									Φ62×30
NCSAH 49305	Aluminum Alloy	3.87	1.77	0.680	0.419	0.314	0.272	0.078	0.036							Φ62×30
NCSAH 49306	Aluminum Alloy	4.81	0.036	0.718	0.237	0.233	0.161	0.230								Φ62×30
NCSAH 49307	Aluminum Alloy	3.99			0.204	7.18				0.149						Φ62×30
NCSAH 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($\mu\text{g/mL}$)	Medium	Unit Size (mL)
NCSAH 11401	Lithium	1000	HCl(10%)	50
NCSAH 11402	Beryllium	1000	HNO ₃ (10%)	50
NCSAH 11403	Boron	1000	H ₂ O	50
NCSAH 11404	Sodium	1000	H ₂ O	50
NCSAH 11405	Magnesium	1000	HCl(5%)	50
NCSAH 11406	Aluminum	1000	HCl(10%)	50
NCSAH 11407	Silicon	1000	Na ₂ CO ₃	50
NCSAH 11408	Phosphorus(NH ₄)	1000	H ₂ O	50
NCSAH 11409	Phosphorus(K)	1000	H ₂ O	50
NCSAH 11410	Sulfur	1000	H ₂ O	50
NCSAH 11411	Potassium	1000	H ₂ O	50
NCSAH 11412	Calcium	1000	HCl(5%)	50
NCSAH 11413	Scandium	1000	HNO ₃ (20%)	50
NCSAH 11414	Titanium	1000	H ₂ SO ₄ (10%)	50
NCSAH 11415	Vanadium	1000	H ₂ SO ₄ (10%)	50
NCSAH 11416	Vanadium	1000	HCl(10%)	50
NCSAH 11417	Chromium	1000	HCl(10%)	50
NCSAH 11418	Manganese	1000	H ₂ SO ₄ (5%)	50
NCSAH 11419	Manganese	1000	HNO ₃ (10%)	50
NCSAH 11420	Iron	1000	HCl(10%)	50
NCSAH 11421	Cobalt	1000	HNO ₃ (5%)	50
NCSAH 11422	Nickel	1000	HNO ₃ (5%)	50
NCSAH 11423	Copper	1000	H ₂ SO ₄ (5%)	50
NCSAH 11424	Copper	1000	HCl(10%)	50
NCSAH 11425	Zinc	1000	HCl(10%)	50
NCSAH 11426	Gallium	1000	HCl(10%)	50
NCSAH 11427	Arsenic	1000	H ₂ SO ₄ (5%)	50
NCSAH 11428	Arsenic	1000	HCl(10%)	50
NCSAH 11429	Selenium	1000	HCl(10%)	50
NCSAH 11430	Rubidium	1000	HNO ₃ (5%)	50
NCSAH 11431	Strontium	1000	H ₂ O	50
NCSAH 11432	Yttrium	1000	HCl(10%)	50
NCSAH 11433	Zirconium	1000	HCl(10%)	50
NCSAH 11434	Niobium	1000	HF(5%)	50
NCSAH 11435	Molybdenum	1000	H ₂ SO ₄ (5%)	50
NCSAH 11436	Ruthenium	1000	HCl(10%)	50
NCSAH 11437	Rhodium	1000	HNO ₃ (10%)	50
NCSAH 11438	Palladium	1000	HCl(10%)	50
NCSAH 11439	Silver	1000	HNO ₃ (5%)	50
NCSAH 11440	Cadmium	1000	HCl(10%)	50
NCSAH 11441	Indium	1000	HCl(10%)	50
NCSAH 11442	Tin	1000	HCl(20%)	50
NCSAH 11443	Antimony	1000	H ₂ SO ₄ (25%)	50
NCSAH 11444	Tellurium	1000	HCl(10%)	50
NCSAH 11445	Cesium	1000	HNO ₃ (5%)	50
NCSAH 11446	Beryllium	1000	HCl(10%)	50
NCSAH 11447	Lanthanum	1000	HCl(10%)	50
NCSAH 11448	Cerium	1000	HNO ₃ (10%)	50
NCSAH 11449	Praseodymium	1000	HCl(10%)	50
NCSAH 11450	Neodymium	1000	HCl(10%)	50

Section 12 Solution Standard

Number	Name	Nomonal Composition($\mu\text{g}/\text{mL}$)	Medium	Unit Size (mL)
NCSAH 11401	Lithium	1000	HCl(10%)	50
NCSAH 11402	Beryllium	1000	HNO ₃ (10%)	50
NCSAH 11403	Boron	1000	H ₂ O	50
NCSAH 11404	Sodium	1000	H ₂ O	50
NCSAH 11405	Magnesium	1000	HCl(5%)	50
NCSAH 11406	Aluminum	1000	HCl(10%)	50
NCSAH 11407	Silicon	1000	Na ₂ CO ₃	50
NCSAH 11408	Phosphorus(NH ₄)	1000	H ₂ O	50
NCSAH 11409	Phosphorus(K)	1000	H ₂ O	50
NCSAH 11410	Sulfur	1000	H ₂ O	50
NCSAH 11411	Potassium	1000	H ₂ O	50
NCSAH 11412	Calcium	1000	HCl(5%)	50
NCSAH 11413	Scandium	1000	HNO ₃ (20%)	50
NCSAH 11414	Titanium	1000	H ₂ SO ₄ (10%)	50
NCSAH 11415	Vanadium	1000	H ₂ SO ₄ (10%)	50
NCSAH 11416	Vanadium	1000	HCl(10%)	50
NCSAH 11417	Chromium	1000	HCl(10%)	50
NCSAH 11418	Manganese	1000	H ₂ SO ₄ (5%)	50
NCSAH 11419	Manganese	1000	HNO ₃ (10%)	50
NCSAH 11420	Iron	1000	HCl(10%)	50
NCSAH 11421	Cobalt	1000	HNO ₃ (5%)	50
NCSAH 11422	Nickel	1000	HNO ₃ (5%)	50
NCSAH 11423	Copper	1000	H ₂ SO ₄ (5%)	50
NCSAH 11424	Copper	1000	HCl(10%)	50
NCSAH 11425	Zinc	1000	HCl(10%)	50
NCSAH 11426	Gallium	1000	HCl(10%)	50
NCSAH 11427	Arsenic	1000	H ₂ SO ₄ (5%)	50
NCSAH 11428	Arsenic	1000	HCl(10%)	50
NCSAH 11429	Selenium	1000	HCl(10%)	50
NCSAH 11430	Rubidium	1000	HNO ₃ (5%)	50
NCSAH 11431	Strontium	1000	H ₂ O	50
NCSAH 11432	Yttrium	1000	HCl(10%)	50
NCSAH 11433	Zirconium	1000	HCl(10%)	50
NCSAH 11434	Niobium	1000	HF(5%)	50
NCSAH 11435	Molybdenum	1000	H ₂ SO ₄ (5%)	50
NCSAH 11436	Ruthenium	1000	HCl(10%)	50
NCSAH 11437	Rhodium	1000	HNO ₃ (10%)	50
NCSAH 11438	Palladium	1000	HCl(10%)	50
NCSAH 11439	Silver	1000	HNO ₃ (5%)	50
NCSAH 11440	Cadmium	1000	HCl(10%)	50
NCSAH 11441	Indium	1000	HCl(10%)	50
NCSAH 11442	Tin	1000	HCl(20%)	50
NCSAH 11443	Antimony	1000	H ₂ SO ₄ (25%)	50
NCSAH 11444	Tellurium	1000	HCl(10%)	50
NCSAH 11445	Cesium	1000	HNO ₃ (5%)	50
NCSAH 11446	Beryllium	1000	HCl(10%)	50
NCSAH 11447	Lanthanum	1000	HCl(10%)	50
NCSAH 11448	Cerium	1000	HNO ₃ (10%)	50
NCSAH 11449	Praseodymium	1000	HCl(10%)	50
NCSAH 11450	Neodymium	1000	HCl(10%)	50

Section 12 Solution Standard

Number	Name	Nominal Consistence($\mu\text{g/mL}$)	Medium	Unit Size (mL)					
NCSAH 11451	Samarium	1000	HCl(10%)	50					
NCSAH 11452	Europium	1000	HCl(10%)	50					
NCSAH 11453	Gadolinium	1000	HCl(10%)	50					
NCSAH 11454	Terbium	1000	HCl(10%)	50					
NCSAH 11455	Dysprosium	1000	HCl(10%)	50					
NCSAH 11456	Holmium	1000	HCl(10%)	50					
NCSAH 11457	Erbium	1000	HCl(10%)	50					
NCSAH 11458	Thulium	1000	HCl(10%)	50					
NCSAH 11459	Yttrium	1000	HCl(10%)	50					
NCSAH 11460	Latetium	1000	HCl(10%)	50					
NCSAH 11461	Hafnium	1000	H ₂ SO ₄ (10%)	50					
NCSAH 11462	Tantalum	1000	HF(20%)	50					
NCSAH 11463	Tungsten	1000	NaOH(2%)	50					
NCSAH 11464	Rhenium	1000	HCl(10%)	50					
NCSAH 11465	Osmium	1000	HCl(20%)	50					
NCSAH 11466	Iridium	1000	HCl(10%)	50					
NCSAH 11467	Platinum	1000	HCl(10%)	50					
NCSAH 11468	Gold	1000	HCl(10%)	50					
NCSAH 11469	Mercury	1000	HNO ₃ (5%)	50					
NCSAH 11470	Thallium	1000	HNO ₃ (20%)	50					
NCSAH 11471	Lead	1000	HNO ₃ (10%)	50					
NCSAH 11472	Bismuth	1000	HNO ₃ (10%)	50					
NCSAH 11473	Germanium	1000	H ₂ O	50					
Number	Name	Nominal Consistence($\mu\text{g/g}$)	Unit Size (in mL)						
NCSAH 76401	Lead in Water	1.00	20or100						
NCSAH 76402	Cadmium in Water	0.100	20or100						
NCSAH 76403	Mercury in Water	0.010	20or50						
NCSAH 76404	Fluoride in Water	1.00	100						
NCSAH 76404	Arsenic in Water	0.50	20or100						
Number	Name	Cl ⁻	NO ₃ ⁻	SO ₄ ²⁻	Nominal Consistence($\mu\text{g/g}$)	Unit Size (in mL)			
NCSAH 76406	Anions in Water	22.0	4.50	38.0	1000	20or100			
Number	Name	Cd	Pb	Cu	Cr	Zn	Ni	Nominal Consistence($\mu\text{g/g}$)	Unit Size (in mL)
NCSAH 76407	Matal in Water	0.100	1.00	1.00	0.500	5.00	0.500	1000	20or100
NCSAH 76408	Matal in Water	10.0*	50*	30*	50*	90*	60*	1000	20or100

* Unit Certified Value of the element is ng/g.

Number	Name	Concentration($\mu\text{g/g}$)	Unit Size (in mL)
NCSAH 76409	Silver in Water	1000	20
NCSAH 76410	Arsenic in Water	1000	20
NCSAH 76411	Cadmium in Water	1000	20
NCSAH 76412	Cobalt in Water	1000	20
NCSAH 76413	Chromium in Water	1000	20
NCSAH 76414	Copper in Water	1000	20
NCSAH 76415	Iron in Water	1000	20
NCSAH 76416	Mercury in Water	1000	20
NCSAH 76417	Nicked in Water	1000	20
NCSAH 76418	Lead in Water	1000	20
NCSAH 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⁻	F0.2~5,Cl0.5~100,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(μ g/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(μ g/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	Type	Grain Size(mesh)	Chemical Composition(Percent)			Net Weighn(g)
				Tap Density	C, %	S, %	
NCS NC 1111	Tungsten Accelerator	T1	12~18,18~45	9.3~9.5	≤0.0008	≤0.0005	3000
NCS NC 1112	Tungsten Accelerator	T2	12~18,18~45	6.0~6.5	≤0.0008	≤0.0003	2000
NCS NC 1113	Tungsten Accelerator	T3	12~20	6.0~6.5	≤0.0008	≤0.0003	2000
NCS NC 1114	Tungsten Accelerator	T4	20~40	6.0~6.5	≤0.0008	≤0.0003	2000

Number	Name	F=1, Δ T=0	Melting Point (°C)			Unit Size (in g)
			0.20°C /min	1.0°C /min		
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 (°C)			Unit Size (in g)
		0.2°C /min	0.5°C /min	1.0°C /min	
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



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