

**CRM C, S, O, N IN IRON BASE MATERIALS**

analysis in mass %						* sale item					
Number	Carbon	Sulfur	Oxygen	Nitrogen	Units						
JSS 202-1	1.386	.	.	.	150 g	chips					
JSS 208-2	1.056	.	.	.	150 g	chips					
SKF C-S500-1	1.01	0.0212	.	.	250	0.25 g balls *					
SKF C-S600-1	0.995	0.0212	.	.	250	0.50 g balls *					
CZ 2008A	0.977	0.0091	.	0.0066	250 g	chips					
TH 1006-4	0.952	0.0111	.	0.0046	100 g	chips					
TH 1038	0.823	0.247	.	.	100 g	chips					
TH 1007-3	0.787	0.0137	.	0.0031	100 g	chips					
TH 1027-2	0.726	0.0092	.	0.003	100 g	chips					
IPT 60A	0.715	0.012	.	.	100 g	chips					
CZ 2007A	0.684	0.0106	.	0.0128	250 g	chips					
ECRM 079-2	0.596	0.192	.	0.0074	100 g	chips					
TH 1018-2	0.573	0.0019	.	0.0065	100 g	chips					
IPT 59A	0.495	0.018	.	.	100 g	chips					
IARM 259A	0.479	0.0007	0.0014	0.0077	100 g	chips					
TH 1002-3	0.4757	0.0526	.	0.0088	100 g	chips					
CZ 2006A	0.461	0.0172	.	0.0066	250 g	chips					
IARM 199B	0.45	0.29	(0.0048)	0.0059	100 g	chips					
ECRM 058-2C	0.424	0.1712	.	0.0107	100 g	chips					
TH 1013-2	0.384	0.0344	.	0.0142	100 g	chips					
CZ 2005A	0.358	0.0250	.	0.0081	250 g	chips					
IARM 154B	0.35	0.0004	0.0016	0.020	100 g	chips					
IPT 58A	0.316	0.021	.	.	120 g	chips					
JSS 252-1	0.304	0.0408	.	.	150 g	chips					
IARM 242A	0.24	0.0004	0.0006	0.0003	100 g	chips					
IARM 205B	0.220	0.001	0.0016	0.049	100 g	chips					
TH 1010-2	0.145	0.0136	.	0.0034	100 g	chips					
IARM 10C	0.128	0.29	0.008	0.015	100 g	chips					
BAM 039-2	0.107	0.310	.	0.0113	100 g	chips					
ECRM 286-1	0.100	0.280	.	0.043	100 g	chips					
TH 1041	0.0925	0.0100	.	.	100 g	chips					
TH 1036	0.0830	0.327	.	.	100 g	chips					
TH 1036-2	0.0791	0.321	.	0.0034	100 g	chips					
CZ 2004A	0.079	0.0464	.	0.0038	250 g	chips					
TH 1042-2	0.0778	0.0227	.	0.0087	100 g	chips					
IARM 1C	0.068	0.378	0.0049	0.0344	100 g	chips					
IARM 206A	0.068	0.26	(0.019)	0.0119	100 g	chips					
TH 1031	0.0674	0.403	.	.	100 g	chips					
ECRM 294-1C	0.0657	0.00031	.	0.566	100 g	chips					
IARM 8C	0.060	0.027	0.0054	0.054	100 g	chips					
TH 1040	0.0504	0.0051	.	0.0011	100 g	chips					
TH 1040-3	0.0500	0.0041	.	0.0017	100 g	chips					
JSS 201-14	0.0416	.	.	.	150 g	chips					

Number	Carbon	Sulfur	Oxygen	Nitrogen	Units
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**CRM ELEMENTS IN STEEL**

analysis listed in mass % chips 150 g

Number	Al	B	P	Si
JSS 280-1	.	.	.	0.023
JSS 230-5	.	.	0.0113	.
JSS 362-1	.	0.0018	.	.
JSS 363-1	.	0.0027	.	.
JSS 364-1	.	0.0045	.	.
JSS 332-3	0.049	.	.	.

**CRM C, S, O, N IN IRON BASE MATERIALS**

analysis in mass %						* sale item					
Number	Carbon	Sulfur	Oxygen	Nitrogen	Units						
CZ 2003A	0.0402	0.0316	.	0.0046	250 g	chips					
NCS NS21011	0.038	0.0021	.	.	100 g	chips					
TH 1039-2	0.0352	0.0222	.	0.0027	100 g	chips					
ECRM 273-1C	0.0336	0.0004	.	0.0444	100 g	chips					
IARM 17B	0.032	0.003	0.0042	0.33	100 g	chips					
TH 1019-4	0.0200	0.0133	.	0.0046	100 g	chips					
IARM 214A	0.018	0.002	0.0026	0.27	100 g	chips					
JSS 204-1	0.0174	.	.	.	150 g	chips					
ECRM 295-1C	0.0166	0.0004	.	0.0615	100 g	chips					
CT ES0088A	0.0151	0.00045	.	.	200 g	pins					
IARM 162A	0.015	0.024	0.0039	0.077	100 g	chips					
TH 1069	0.0148	0.0129	.	0.0043	100 g	chips					
ECRM 298-1C	0.0146	0.0006	.	0.263	100 g	chips					
TH 1017-2	0.0146	0.0004	.	0.0031	100 g	chips					
JK 36	0.0125	0.0126	.	0.0337	150 g	chips					
NCS NS28035	0.012	0.0069	.	.	100 g	chips					
NCS NS20040	0.0085	0.0051	.	.	100 g	chips					
IARM 99B	0.005	0.0005	0.0015	0.0011	100 g	chips					
JSS 1202-3	0.0049	.	.	.	150 g	chips					
SRM 131g	0.00353	0.0004255	.	.	150 g	chips					
TH 1012-5	0.0026	0.0044	.	0.0025	100 g	chips					
JSS 1207-1	0.00245	.	.	.	150 g	chips					
TH 1045-3	0.0024	0.0043	.	0.0047	100 g	chips					
TH 1045D	0.0023	0.0043	.	0.0046	40 mm Ø x 40 mm disc						
NCS NS11014	0.0019	0.005	.	.	100 g	chips					
TH 1043-3	0.0019	0.0008	.	0.0017	100 g	chips					
NCS NS11012	0.0016	0.0063	.	.	100 g	chips					
NCS NS28034	0.0016	0.0058	.	.	100 g	chips					
NCS NS28033	0.00065	0.00045	.	.	100 g	chips					
JSS 1201-3	0.00047	.	.	.	150 g	chips					
JSS 003-6	0.00032	0.00013	.	(0.0006)	150 g	chips					
JSS 001-6	0.00024	0.00015	.	0.00021	100 g	chips					
JSS 245-5	.	0.0551	.	.	150 g	chips					
JSS 242-12	.	0.0273	.	.	150 g	chips					
JSS 240-14	.	0.0042	.	.	150 g	chips					

Number	Carbon	Sulfur	Oxygen	Nitrogen	Units
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**CRM GASES IN TOOL STEEL POWDER**

certified analysis in mass % 100 g powder informational mass %

Number	C	S	N	O	Cr	Mo	Si	V	W
18X D7	2.32	0.0111	0.0124	0.072	12	1	.	4	.
18X HCX	1.555	0.0103	0.0111	0.141	22	3	1	2	3
18X M3/2	0.994	0.0166	0.0269	0.105	4	6	.	3	6
18X M3/2-D	0.992	0.0178	0.042	0.41	4	6	.	3	6
18X H13	0.344	0.0080	0.0115	0.063	5	1	1	1	.

## RM C, S, O, N IN IRON BASE MATERIALS

analysis listed in mass %

Number	C	S	O	N	Size	Form
KMS HCS-001	1.161	0.1318	.	.	100 g	chips
BS CSN 3	0.892	0.0035	.	0.0047	500 g	1 g rods
501-506-1239	0.834	0.0111	.	.	454 g	1 g rings
501-679-0603	0.817	0.0057	.	.	454 g	1 g pins
502-364-1319	0.812	.	.	.	454 g	1 g rings
501-678-0637	0.705	0.0144	.	.	454 g	1 g pins
501-505-1261	0.627	0.0130	.	.	454 g	1 g rings
501-505-1259	0.626	0.0129	.	.	454 g	1 g rings
DH E2182	0.559	0.0234	.	.	50 g	chips
BS CSN 2-2	0.548	0.028	.	0.076	500 g	1 g rods
BS CSN 2-1	0.476	0.034	.	0.064	500 g	1 g rods
DH E2184	0.4433	0.0152	.	.	50 g	chips
DH E2202	0.4017	0.0457	.	.	50 g	chips
501-677-0662	0.390	0.0071	.	.	454 g	1 g pins
DH E2331	0.196	0.0098	.	.	50 g	chips
DH E2161	0.1843	0.0043	.	0.0186	50 g	chips
501-676-0537	0.179	0.0036	.	.	454 g	1 g pins
501-503-1308	0.175	0.0152	.	.	454 g	1 g rings
DH E2137	0.1714	0.0013	.	0.0121	50 g	chips
DH E2172	0.1611	0.0147	.	.	50 g	chips
501-510-1237-3	0.163	0.091	.	.	454 g	1 g rings
DH E2122	0.1599	0.0016	.	0.0078	50 g	chips
DH E2201	0.1492	0.0048	.	.	50 g	chips
DH E2106	0.1406	0.0277	.	0.0063	50 g	chips
DH E2334	0.135	0.0010	.	0.0147	50 g	chips
DH E2175	0.1290	0.0181	.	.	50 g	chips
DH E2127	0.1087	0.00072	.	0.0103	50 g	chips
DH E2116	0.0961	0.0102	.	0.0086	50 g	chips
DH E2317	0.0795	0.0014	.	.	50 g	chips
DH E2318	0.0793	.	.	.	50 g	chips
DH E2320	0.0777	0.0028	.	.	50 g	chips
BS CSN A	0.068	0.305	.	0.0081	100 g	chips
501-675-0546	0.068	0.0185	.	.	454 g	1 g pins
DH E2326	0.0637	0.0013	.	.	50 g	chips
502-459-J0416-2	0.0634	0.0155	.	0.0046	100 g	1 g pins
DH E2322	0.0609	0.0009	.	.	50 g	chips
501-502-1252	0.058	0.0111	.	.	454 g	1 g rings
501-935-1000	0.0531	0.0034	.	0.0063	100 g	chips
502-449-0655	0.053	0.282	.	.	454 g	1 g pins
DH E2135	0.0502	0.0083	.	0.0019	50 g	chips
DH E2204	0.0449	0.0279	.	0.0037	50 g	chips
501-933-1000	0.0421	0.0029	.	0.0020	100 g	chips
502-271-1309-10	0.041	0.250	.	.	454 g	1 g rings
DH E2165	0.0399	0.0195	.	0.0059	50 g	chips
DH E2162	0.0369	0.0007	.	0.0032	50 g	chips
501-501-1341	0.0353	0.0074	.	.	454 g	1 g rings
502-455-J0429-2	0.035	0.0024	.	.	100 g	1 g pins
501-674-0658	0.0312	0.0109	.	.	454 g	1 g pins
501-992-1197	0.027	0.0009	.	.	454 g	1 g rings
HRT 530-192	0.0234	0.0032	.	0.1743	100 g	chips
DH E2179	0.0232	.	.	.	50 g	chips
502-809-0578	0.023	0.030	.	0.074	50 g	0.5 g pins
KMS HOCs-001	0.0112	0.0049	0.0314	.	100 g	1 g pins
BS CSN 4	0.011	0.0008	.	0.026	500 g	1 g rods
KMS HNCs-001	0.01017	0.00377	.	0.0436	100 g	1 g pins
DH E2156	0.00483	0.01515	.	.	50 g	chips
502-402-1002	0.00391	0.00894	.	0.00245	50 g	chips
KMS LCSO-001	0.00185	0.00117	0.00231	0.00048	100 g	1 g pins
KMS LCSN-001	0.00169	0.00135	.	0.00045	100 g	chips
502-348-1028	0.0014	0.0008	.	.	100 g	1 g pins
501-952-1000	0.0007	0.0010	.	.	100 g	powder
DH SE26-10	0.00038	<0.0004	0.0120	0.00026	50 g	chips
502-401-1001-1	0.00027	<0.00010	.	0.00035	50 g	chips
502-280-0210	.	0.120	.	.	454 g	1 g rings
DH E2154	.	0.0472	.	.	50 g	chips

Number	C	S	O	N	Size	Form
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## OXYGEN AND NITROGEN IN IRON BASE MATERIALS

# = class, where 1 = CRM and 2 = RM analysis listed in mass %

#	Number	O	N	Size	Form
2	SMO-12-3	0.1000	.	50 g	0.5 g pins
2	SS-10	(0.0525)	0.0015	50 g	0.5 g pins
1	JSS 389-1	0.052	.	8 rods	5 mm Ø x 230 mm
2	501-646-0585	0.0363	0.0022	100 g	1 g pins
1	BAM 029-1	0.0312	0.0083	100 g	3 rods, 8 mm Ø x 80 mm
1	CMSI 3031	0.0214	.	13 g	0.64 g balls
1	JK 35	0.0198	.	1 rod	10 mm Ø x 500 mm
1	NCS NS11019	0.0197	0.0055	25 g	0.5 g pins
1	JSS 387-1	0.0179	.	8 rods	5 mm Ø x 230 mm
2	JSM M402-1	0.0177	0.0132	100 g	1 g pins
2	SS-3	0.0175	0.0063	100 g	1 g pins
1	JSS 386-1	0.0142	.	8 rods	5 mm Ø x 230 mm
1	NCS NS22007	0.0133	0.0118	50 g	1 g balls
1	NCS NS22010	0.0115	0.0025	50 g	1 g balls
1	BAM 028-1	0.0113	0.0029	100 g	3 rods, 8 mm Ø x 80 mm
2	SS-2	0.0110	0.0015	100 g	1 g pins
2	JSM M401-4	0.0007	0.0055	50 g	0.5 g pins
1	BCS 318B *	0.0103	.	100 g	1 rod, 12.7 mm Ø x 127 mm
1	BCS 318A *	0.0096	.	100 g	2 rods, 6.35 mm Ø x 95 mm
1	NCS NS22009	0.0088	0.0032	50 g	1 g balls
1	BAM 027-1	0.0084	0.0157	100 g	3 rods, 8 mm Ø x 80 mm
1	NCS NS22005	0.0074	0.0351	50 g	1 g balls
2	HRT 500-644	0.0069	0.0064	100 g	1 g pins, RM
1	JK 34	0.0068	.	1 rod	8 mm Ø x 500 mm each
2	501-644-0483-40	0.0067	0.0075	100 g	1 g pins
2	502-198-0340-2	0.0066	.	100 g	1 g pins
1	NCS NS11037	0.0066	0.109	50 g	0.5 g pins
1	CMSI 3033 *	0.0064	0.0184	20 g	1 g balls
1	NCS NS22006	0.0048	0.0454	50 g	1 g balls
2	502-257-0629	0.0040	0.0751	100 g	1 g pins
2	502-197-0332-4	0.0039	.	100 g	1g pins
1	NCS NS11029	0.0038	0.0106	25 g	0.5 g pins
2	501-550-0611	0.0034	0.0045	50 g	0.5 g pins
1	JK 32	0.0028	.	1 rod	10 mm Ø x 500 mm each
2	502-102-0588-1	0.0026	0.041	50 g	0.5 g pins
1	BAM 026-2	0.0025	0.0042	100 g	3 rods, 8 mm Ø x 80 mm
1	NCS NS20035	0.00229	0.01012	65 g	5.5 mm Ø x 300 mm stick
1	NCS NS11018	0.0022	0.0110	25 g	0.5 g pins
1	JSS 384-1	0.0021	.	8 rods	5 mm Ø x 230 mm
1	JK 31	0.0015	.	1 rod	8 mm Ø x 500 mm each
2	SS-4	0.0013	0.0140	100 g	1 g pins
2	501-991-1006	0.0011	0.0033	100 g	1 g pins
1	JSS 383-1	0.0011	.	8 rods	5 mm Ø x 230 mm
1	NCS NS93016	0.00086	0.0097	70 g	100 balls 5.56 mm Ø
1	NCS NS11027	0.00084	0.0076	50 g	1 g pins
1	ECRM 099-1	0.0008	0.0078	100 g	1 g balls, Gold Plated
1	NCS NS11021	0.00065	0.0087	25 g	0.5 g pins
1	NCS NS11028	0.00051	0.0032	50 g	1 g pins
1	JK 49C	.	1.89	35 g	chips
1	JK 49D	.	1.89	47 mm Ø	x 15 mm disc
2	502-072-0066-9	.	0.535	50 g	0.5 g pins
1	JSS 370-1	.	0.417	150 g	chips
1	JSS 371-1	.	0.202	150 g	chips
2	502-016-0232-3	.	0.170	50 g	0.5 g pins
2	502-494-0560-1	.	0.0482	50 g	0.5 g pins
2	502-328-0476-3	.	0.0434	100 g	1 g pins
2	502-328-0474-16	.	0.0351	100 g	1 g pins
2	502-195-0567-5	.	0.0238	100 g	1 g pins
2	DH E2126	.	0.0153	50 g	chips
1	NCS NS14001	.	0.0081	100 g	chips
2	502-194-0478-38	.	0.0078	100 g	1 g pins
1	NCS NS14003	.	0.0048	100 g	chips
2	502-193-0526-10	.	0.0048	100 g	1 g pins
2	501-993-0228-8	.	0.0048	50 g	0.5 g pins
2	502-193-J0520-9	.	0.0044	100 g	1 g pins
1	NCS NS14002	.	0.0040	100 g	chips

#	Number	O	N	Size	Form
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## HYDROGEN IN STEEL

analysis listed in mass % except \* which is mg/kg (ppm)

#	Number	H*	C	S	O	N	Size	Form
1	NCS NS20041	8.8	.	.	.	.	20 g	1 g balls
2	SS-5	7.1	.	.	.	.	100 g	10 g rods
1	CMSI 3012-3	6.5	.	.	.	.	40 g	2 g balls
2	502-060-0670	5.72	.	.	.	.	125 g	5 g pins
2	502-416-0663	5.4	.	.	0.0028	0.0365	100 g	1 g pins
2	501-529-0661-6	4.9	.	.	.	.	100 g	1 g pins
1	GBW 02607-2A	4.7	.	.	.	.	40 g	2 g balls
1	NCS NS20042	3.55	.	.	.	.	20 g	1 g balls
1	BS HON-T	2.7	0.050	0.0040	0.0044	0.0365	100 g	1 g pins
2	502-061-0480-41	2.100	.	.	.	.	125 g	5 g pins
2	762-747-0643	1.2	.	.	.	.	100 g	1 g pins

## CAST IRON CHIPS AND POWDER

# = class, where 1 = CRM and 2 = RM analysis listed in mass %

#	Number	C	S	N	Cr	Mn	P	Si	As	Ti	Units	Comment
1	TH 1049-2	4.823	0.0022	.	.	.	.	.	.	.	100 g chips	low supply
2	DH E2512	4.738	0.103	.	.	0.758	0.081	1.865	0.012	.	50 g chips	
1	JSS 102-8	4.71	0.0353	0.0030	.	0.326	0.103	0.257	.	0.0255	150 g chips	
1	VS CH11/3	4.49	0.032	.	.	.	.	.	.	.	100 g chips	
2	DH E2502	4.230	0.0498	.	.	.	.	.	.	.	50 g chips	
1	NCS HC18007	4.17	0.0233	.	.	0.348	0.078	1.03	0.017	.	100 g chips	
1	NCS HC18017	4.14	0.046	.	.	0.567	0.153	0.751	0.065	.	100 g chips	
1	NCS HC18008	4.13	0.023	.	.	0.348	0.078	1.02	0.016	.	100 g chips	
1	GBW 01113C	4.11	0.054	.	.	.	.	.	.	.	150 g chips	low supply
1	NCS HC28055	4.04	0.0095	.	.	0.128	0.055	1.40	.	.	100 g chips	
1	NCS HC18018	4.02	0.036	.	.	0.856	0.056	1.73	0.027	.	100 g chips	
1	NCS HC93001	4.01	0.069	.	.	1.15	0.097	1.49	.	.	100 g chips	
1	NCS HC18015	4.01	0.046	.	.	0.908	0.136	1.09	0.039	.	100 g chips	
1	NCS HC18004	4.00	0.023	.	.	0.26	0.11	0.796	0.095	.	100 g chips	
1	NCS NS56003	3.87	0.044	.	.	.	.	.	.	.	150 g chips	low supply
1	CTIF FB20-2	3.557	0.0614	.	(0.10)	(0.39)	(0.07)	(0.935)	.	.	100 g chips	
1	CTIF FB20-1	3.552	0.059	.	(0.10)	(0.39)	(0.07)	(0.935)	.	.	100 g chips	
1	ECRM 485-3	3.5	0.15	0.008	.	.	.	.	.	.	100 g chips	
1	TH 1050	3.424	0.143	.	.	.	.	.	.	.	100 g chips	
2	501-024-1026	3.41	0.029	.	.	.	.	.	.	.	250 g powder	
2	HRT 530-033	3.33	0.011	.	.	.	.	.	.	.	150 g powder	
2	HRT 530-033A	3.33	0.011	.	.	.	.	.	.	.	1 kg powder	
1	ECRM 492-1	3.258	0.0854	0.0048	.	.	.	.	.	.	100 g chips	
1	CTIF FB 11/2	3.15	0.0842	.	.	.	.	.	.	.	100 g chips	
1	BS CE 204 *	3.10	0.040	.	.	.	.	.	.	.	150 g chips	* Clearance Sale
2	501-105-1006	2.32	0.011	.	.	.	.	.	.	.	250 g powder	
1	CTIF FB20	2.114	0.128	.	0.035	0.464	0.039	1.012	.	.	100 g chips	
1	BS CE 216 *	.	0.043	.	.	.	.	.	.	.	150 g chips	* Clearance Sale
1	BS CE 219 *	.	0.038	.	.	.	.	.	.	.	150 g chips	* Clearance Sale
1	BS CE 217 *	.	0.029	.	.	.	.	.	.	.	150 g chips	* Clearance Sale

## S, O, N, H, C IN NON-FERROUS METALS

# = class, where 1 = CRM and 2 = RM

analysis listed in mg/kg

#	Number	Material	Carbon	Sulfur	Oxygen	Nitrogen	Hydrogen	Size & Form
1	VS 3263-91P	Aluminum	.	.	.	.	0.37	rod, 12 mm Ø x 250 mm
1	VS 7804-2010	Aluminum	.	.	.	.	0.28	rod, 12 mm Ø x 250 mm
1	VS 7219-96	Aluminum	.	.	.	.	0.21	rod, 12 mm Ø x 250 mm
1	VS 6007-91	Aluminum	.	.	.	.	0.18	rod, 12 mm Ø x 250 mm
1	VS 5060-89	Aluminum	.	.	.	.	0.16	rod, 12 mm Ø x 250 mm
1	VS 8844-2006	Aluminum	.	.	.	.	0.09	rod, 12 mm Ø x 250 mm
1	IMN Cu 90-1	Copper	.	83.7	.	.	.	250 g chips
1	IMN Cu 50-1	Copper	.	49.6	.	.	.	250 g chips
1	IMN Cu S-20	Copper	.	23.1	.	.	.	250 g chips
2	502-403-0646	Copper	.	8.9	.	.	.	100 g of 1g pins
1	IMN Cu S-10	Copper	.	7.5	.	.	.	250 g chips
1	IMN Cu 600/1	Copper	.	.	581	.	.	150 g of rod 5 mm Ø x 11.5 mm
2	501-149-0574	Copper	.	.	539	.	.	100 g of 1g pins
1	BCR 058	Copper	.	.	390	.	.	rod, 7 mm Ø x 50 mm
2	BAM 379/3	Copper	.	.	378	.	.	disc, 40 mm Ø x 30 mm
1	NCS NS11038	Copper	.	.	376	.	.	25 g of 1g pins
2	501-148-0503-4	Copper	.	.	346	.	.	100 g of 1g pins
2	501-990-1002	Copper	.	.	341	.	.	100 g of 1g pins
2	501-148-0504-1	Copper	.	.	338	.	.	100 g of 1g pins
2	501-990-1001	Copper	.	.	336	.	.	100 g of 1g pins
1	IMN Cu 300	Copper	.	.	258	.	.	150 g of rod 5 mm Ø x 11.5 mm
2	501-147-0518-6	Copper	.	.	235	.	.	100 g of 1g pins
2	BAM 379/2	Copper	.	.	212	.	.	disc, 40 mm Ø x 30 mm
1	IMN Cu 100/5	Copper	.	.	163.7	.	.	200 g of rod 20 mm Ø x 11.5 mm
1	BCR 022A	Copper	.	.	138	.	.	disc, 26 mm Ø x 9 mm
1	BCR 022B	Copper	.	.	138	.	.	rod, 9 mm Ø x 50 mm
1	IMN Cu 100	Copper	.	.	123	.	.	150 g of rod 5 mm Ø x 11.5 mm
2	BAM 379/1	Copper	.	.	38	.	.	disc, 40 mm Ø x 30 mm
1	NCS NS11031	Copper	.	.	10	.	.	25 g of 1 g pins
1	IMN Cu 10/1	Copper	.	.	3.8	.	.	150 g of rod 5 mm Ø x 11.5 mm
1	NCS NS11030	Copper	.	.	2.8	.	.	rod, 6 mm Ø x 110 mm
1	BCR 054R	Copper	.	.	0.47	.	.	rod, 7 mm Ø x 50 mm
1	BCR 055	Lead	.	.	1.0	.	.	disc, 30 mm Ø x 9 mm
1	BCR 099	Nickel	.	.	8.4	1.1	.	50 g of 2 g cubes
1	IMN Ni-1	Nickel	1260	31	.	.	.	100 g chips
1	IMN Ni-2	Nickel	128	149	.	.	.	100 g chips
2	502-411-0604-2	Nickel	.	.	3.3	.	.	100 g of 1g pins
1	IMN Ag150N	Silver	.	.	.	155.4	.	Cubes 100 g of 5.5 mm Ø x 5 mm
1	IMN Ag2N	Silver	.	.	.	2.3	.	195 g of rod 3.9 mm Ø x 100 m
1	IMN Ag10/1	Silver	.	.	11	.	.	2 rods, 6 mm Ø x 100 mm
1	BCR 275	Zircaloy-4	113	.	1670	39.0	.	10 pcs 13 mm Ø x 1 mm each
1	BCR 276	Zircaloy-4	108	.	1540	41	.	100 pcs 4.5 mm Ø x 2 mm each
#	Number	Material	Carbon	Sulfur	Oxygen	Nitrogen	Hydrogen	Size & Form

## CRM COPPER PINS

analysis listed in mg/kg

50g of 0.31g pins

Number	Ag	As	Bi	Cd	Co	Cr	Fe	Mn	Ni	Pb	S	Sb	Se	Sn	Te	Zn
IMN 001	27.1	3.13	1.39	(0.11)	2.09	3.53	13.9	5.16	3.64	4.02	5.99	2.4	1.34	3.39	1.23	4.57

**TITANIUM**

analysis in mass %      50x, 762 series = RM, others = CRM      \* Provisional Analysis

Number	H	C	N	O	S	Units
SRM 2454	0.0211	.	.	.	.	10 g chips
SRM 2453	0.0114	.	.	.	.	10 g chips
IARM 271A	0.013	0.026	0.012	0.16	(0.002)	65 g chips
SRM 2452	0.00625	.	.	.	.	10 g chips
IARM 269A	0.0059	0.015	0.0039	0.104	(0.002)	65 g chips
IARM 312A	0.0049	0.004	0.0023	0.066	(0.001)	65 g chips
IARM 297A	0.0045	0.014	0.008	0.109	(0.001)	65 g chips
IARM 314A	0.004	0.008	0.0034	0.155	.	65 g chips
IARM 286A	0.0039	0.010	0.010	0.089	(0.001)	65 g chips
IARM 285A	0.0038	0.007	0.0043	0.076	(0.0004)	65 g chips
IARM 178B	0.0028	0.030	0.008	0.157	(0.001)	65 g chips
IARM 174C	0.0027	0.0057	0.004	0.34	(0.0005)	65 g chips
IARM 261A	0.0023	0.007	0.007	0.10	(0.001)	65 g chips
IARM 311A	0.0021	0.009	0.012	0.083	.	65 g chips
762-741-0625	0.00213	.	.	.	.	15 g of 0.15 g pins
501-996-0592-19	0.00205	.	0.036	0.193	.	12 g of 0.12 g pins
502-135-0592-24	0.00205	.	.	.	.	25 g of 0.25 g pins
IARM 300A *	0.0019	0.006	0.004	0.16	.	65 g chips
IARM 174B	0.0018	0.007	0.013	0.335	.	65 g chips
IARM 315A	0.0016	0.011	0.0052	0.099	.	65 g chips
502-024-0594	0.00160	.	.	.	.	10 g of 0.1 g pins
IARM 280A	0.0015	0.005	0.0014	0.19	(0.001)	65 g chips
IARM 177C	0.0014	0.005	0.0022	0.107	.	65 g chips
BCR 318	0.00122	.	.	.	.	100 discs, 7 mm Ø x 1 mm
IARM 303A	0.0011	0.011	0.0069	0.134	.	65 g chips
501-995-0579-1	.	0.0236	.	.	.	50 g of 0.5 g pins
GBW 02601	.	.	0.0170	.	.	35 g chips
BCR 024B	.	.	0.0117	0.0608	.	25 0.4 g cubes
BCR 024C	.	.	0.0117	0.0608	.	25 0.2 g cubes
501-320-0598-11	.	.	0.035	0.192	.	10g of 0.1 g pins
501-657-0567-1	.	.	0.014	0.097	.	10g of 0.1 g pins
501-657-0567-7	.	.	0.013	0.091	.	10g of 0.1 g pins
501-653-0297	.	.	0.003	0.053	.	10g of 0.1 g pins
501-664-0277-1	.	.	0.009	0.141	.	10g of 0.1 g pins
501-653-J0322-9	.	.	0.008	0.049	.	10g of 0.1 g pins
501-653-J0322-1	.	.	0.008	0.047	.	10g of 0.1 g pins
501-664-0477-52	.	.	0.0074	0.0066	.	10g of 0.1 g pins
502-201-0299-1	.	.	0.006	0.306	.	10g of 0.1 g pins
BCR 059B	.	.	.	0.1750	.	25 0.2 g cubes
BCR 059A	.	.	.	0.0750	.	disc, 26 mm Ø x 9 mm

Number	H	C	N	O	S	Units
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**INORGANIC MATERIALS**

# = class, where 1 = CRM and 2 = RM      analysis listed in mass % except \* which is mg/kg (ppm)

#	Number	Material and Units	C	S	O	N	Hg*	BTU
2	774-208-150-1026	Benzoic Acid 50g of 1g tablets	.	.	.	.	.	11,374
2	501-123-1025	Tungsten Carbide powder 100g	6.21	.	.	.	.	.
1	NCS NS51001	Tungsten Carbide 100 g powder	6.10	.	.	.	.	.
1	CKD 240	Ferromanganese (75%/15%) 400g	3.86	0.0013	.	.	.	.
2	502-813-1001	Fly Ash 20g	1.18	1.19	.	.	0.42	.
2	502-813-1000	Fly Ash 20g	0.636	1.44	.	.	0.27	.
2	502-139-1006	Silicon Dioxide powder 10g	.	.	53.2	.	.	.
2	502-138-1002	Iron III Oxide powder 10g	.	.	30.1	.	.	.
2	502-141-1030	Tungsten Oxide powder 10g	.	.	20.5	.	.	.
2	502-140-1001	Zirconium Dioxide powder 10g	.	.	25.8	.	.	.
1	JK 47	Iron Ore 35 g	.	.	1.09	0.0067	.	.
2	502-047-0538-1	Zirconium pins 10g of 0.1g pins	.	.	0.137	.	.	.
1	BCR 102	Tungsten Carbide 2 to 3 grams	.	.	0.0185	.	.	.

**RM LECO CALCIUM OXALATE 50 g units**

Part Number	Temp	% Loss	Temp	% Loss	Temp	% Loss
502-091	200° C	12.3 H <sub>2</sub> O	450° C	19.2 CO	850° C	30.1 CO <sub>2</sub>

**RM LECO COAL and COKE**

certified analysis listed in mass %		50 g units						informational analysis					
Number	Type	S	Volatile	ASH	C	H	N	Heat in BTU			Fixed C%		
502-684-09300	Coke	5.67	13.4	0.27	87.8	3.66	1.48	15,368			86.8		
502-452-24100b	Coke	1.30	12.5	0.36	91.7	3.95	3.04	15,437			87.2		
502-674-09254	Coal	4.18	.	10.8	.	.	.	.			.		
502-673-09191	Coal	3.00	.	6.40	.	.	.	.			.		
502-672-09159	Coal	2.16	.	7.63	.	.	.	.			.		
502-681-09147	Coal	1.30	32.6	9.09	78.4	4.98	1.46	13,892			58.3		
502-671-09082	Coal	1.06	.	9.43	.	.	.	.			.		
502-670-09090	Coal	0.56	.	8.42	.	.	.	.			.		
502-682-09357	Coal	0.54	41.3	5.08	74.9	4.92	1.53	13,044			53.6		
502-680-09176	Coal	0.34	17.1	11.0	81.4	4.06	1.10	13,893			71.9		

**RM PURITY NICKEL POWDER**

certified analysis listed in mg/kg											informational values														100 g units										
Number	Al	C	Cr	Cu	Fe	Mn	Mo	P	Pb	S	Si	Ag	As	B	Ba	Be	Bi	Ca	Cd	Co	Ga	H	In	Mg	N	Na	O	Sb	Se	Sn	Te	Ti	Tl	V	Zn
BS HPN-1	70	268	22	2	202	2	3	5	0.2	4	6	<0.1	<0.5	<2	<1	<1	<0.2	3	<0.1	<2	<0.5	(70)	<0.2	1	17	4	1400	<0.1	<0.2	<1	<0.2	<1	<0.1	<1	<1

## RM ORGANIC COMBUSTION SAMPLES

analysis listed in mass %

Part Number	Material and Units	C	S	O	N	H
502-101	DURENE 10g	89.49	.	.	.	10.51
502-203	STEARIC ACID 5g	75.99	.	11.25	.	12.76
501-053	ACETANILIDE 10g	71.09	.	0.12	10.36	6.71
502-641	PHENYLALANINE 5g	65.43	.	.	8.48	6.71
502-642	PHENYLALANINE 50g	65.43	.	.	8.48	6.71
508-150	NICOTONIC ACID	~58	nominal values shown		~11	~4
502-272-1005	CORN GLUTEN 50g	52.29	0.933	.	11.35	7.13
502-272-1006	CORN GLUTEN 50g	51.87	0.907	.	11.18	7.09
502-209	SULFAMETHAZINE 5g	51.78	11.52	11.50	20.13	5.07
502-298	SULFAMETHAZINE 25g	51.78	11.52	11.50	20.13	5.07
502-055-1031	ORCHARD LEAVES 20g	50.7	0.168	.	2.39	6.16
502-205	CAFFEINE 5g	49.48	.	16.48	28.85	5.19
501-048	POTASSIUM BIPHTHALATE 20g	47.05	.	0.31	.	2.47
502-082-1012	TOBACCO LEAVES 20g	46.67	0.61	.	2.54	6.28
502-276-1003	OAT MEAL 50g	45.85	0.253	.	2.77	6.67
502-274-1010	WHEAT FLOUR 50g	45.26	0.205	.	2.69	6.47
502-277-1007	BARLEY 50g	45.20	0.139	.	1.69	6.42
502-275-1005	RYE FLOUR 50g	44.52	0.165	.	2.05	6.30
502-273-1017	ALFALFA 50g	44.3	0.301	.	3.53	5.83
502-278-1009	RICE FLOUR 50g	44.21	0.089	.	1.09	6.41
501-441	SUCROSE 50g	42.10	.	51.42	.	6.48
502-092-1055	EDTA 50g	41.06	.	.	9.56	5.55
502-092-250-1055	EDTA 250g	41.06	.	.	9.56	5.55
502-092-1053	EDTA 50g - last of stock	41.04	.	.	9.57	5.56
502-204	DINITROBENZOIC ACID 5g	39.63	.	45.26	13.21	1.90
502-211	GLYCINE 50g	32.00	.	42.63	18.66	6.71
502-207	CYSTINE 5g	29.99	26.69	26.63	11.66	5.03
502-814-1001	SOIL 25g	22.8	0.326	.	1.97	.
501-034	CALCIUM CARBONATE 50g	12.00	.	.	.	.
502-309-1008	SOIL 65g	12.76	0.221	.	1.08	.
502-491-1000	ORE TAILINGS 25g	11.3	11.0	.	.	.
502-372-1000	ORE TAILINGS 25g	7.26	3.56	.	.	.
502-320-1005	ORE TAILINGS 25g	5.85	3.60	.	.	.
502-030-1055	SYNTHETIC CARBON 50g	5.03	.	.	.	.
502-030-1054	SYNTHETIC CARBON 50g	5.01	.	.	.	.
JSM M454-1	GRAIN 150g	3.73	0.0298	.	.	.
JSM M453-1	GRAIN 150g	3.20	0.0136	.	.	.
JSM M452-1	GRAIN 150g	2.78	0.0110	.	.	.
502-308-1010	SOIL 65g	2.77	0.031	.	0.233	.
502-062-1013	SOIL 65g	2.01	0.028	.	0.192	0.40
502-319-1012	ORE TAILINGS 25g	1.89	1.18	.	.	.
502-029-1095	SYNTHETIC CARBON 50g	1.01	.	.	.	.
JSM M451-1	GRAIN 150g	0.93	0.0096	.	.	.
502-630-1004	SYNTHETIC CARBON 50g	0.54	.	.	.	.
502-318-1007	ORE TAILINGS 25g	0.36	3.38	.	.	.
502-632-1004	SYNTHETIC CARBON 50g	0.12	.	.	.	.
501-561-1046	SOY FLOUR 250 g	.	.	.	9.74	.
501-561-1045	SOY FLOUR 250 g	.	.	.	9.35	.
501-561-1044	SOY FLOUR 250g	.	.	.	8.94	.
501-563-1012	CORN FLOUR 250g	.	.	.	1.93	.
502-085	ZINC SULFIDE 50g	.	32.91	.	.	.
Part Number	Material and Units	C	S	O	N	H