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**CRM BISMUTH ALLOY**

Number	Bi	Ag	As	Au	Cd	Cu	In	Ni	Pb	Sb	Sn	Unit
IMN LD 33	Rem	0.00552	0.0234	0.0226	0.00145	0.0264	0.00633	0.00167	0.0461	0.00708	42.81	40mm Ø x 25 mm

**RM BISMUTH BASE and FUSIBLE SOLDER ALLOYS**

95X: ~40 mm Ø x ~15 mm NF: 37 mm Ø x 12 mm

Number	Bi	Cd	In	Pb	Sn	Ag	Al	As	Au	Co	Cu	Fe	Hg	Ni	Sb	Zn	Other
95X BIS40P1A	57.4	0.0050	0.0164	0.043	42.3	0.035	.	0.0101	.	.	0.0670	(0.001)	.	.	0.092	0.011	
95X 174A	57.1	0.0089	26.08	0.082	16.70	0.0075	.	.	.	.	0.0030	.	.	.	0.086	0.037	Melt 'C: 79
95X 255A	55.7	0.0065	0.010	43.7	0.24	0.0019	.	.	.	.	0.045	.	.	.	0.32	0.035	Melt 'C: 124
95X BIS40P2A	55.25	0.0008	0.0049	0.020	44.66	0.005	0.0021	0.0019	0.0006	0.0012	0.0026	0.0013	(0.0016)	0.0020	0.005	0.0016	Ge: (0.0005)
NF 64-7	Rem	.	0.003	0.076	45.0	1.25	.	0.006	0.011	0.026	0.004	.	.	0.005	0.26	.	
NF 64-6	Rem	.	0.007	0.26	43.1	0.70	.	0.018	0.035	0.039	0.11	.	.	0.042	0.11	.	
NF 64-5	Rem	.	0.098	0.006	42.6	0.99	.	.	.	.	0.076	.	.	.	0.078	.	
NF 64-4	Rem	.	0.075	0.052	42.0	0.40	.	0.010	<0.001	<0.001	0.006	.	.	0.025	0.053	.	
NF 64-3	Rem	.	0.049	0.025	41.4	0.20	.	0.005	.	.	0.049	.	.	0.072	0.026	.	
NF 64-1	Rem	.	0.010	0.098	41.0	0.006	.	0.0006	.	.	0.026	.	.	0.093	0.001	.	
NF 64-2	Rem	.	0.024	0.012	40.5	0.052	.	0.001	.	.	0.15	.	.	0.011	0.013	.	
95X 158	50.2	9.6	0.0074	27.0	13.5	0.002	.	.	.	.	0.048	.	.	.	0.057	0.044	Melt 'C: 70
95X BIS50P3A	49.8	0.015	.	.	48.6	1.50	.	0.073	0.0025	.	.	0.003	.	.	.	0.002	
95X BIS50P2B	49.55	.	.	.	50.3	0.090	(0.001)	0.005	0.015	.	.	0.012	.	.	.	.	
95X 136A	48.8	0.0092	21.49	18.0	12.05	0.0056	.	.	.	.	0.0028	.	.	.	0.022	0.031	Melt 'C: 58
95X BIS70P1A	29.6	.	0.040	.	69.1	1.10	<0.001	0.025	0.0004	.	.	0.010	.	.	.	.	
95X BIS70P2A	32.8	.	0.049	.	65.0	2.01	<0.001	.	.	.	.	.	.	0.029	.	0.001	
95X PBS40P1A	13.8	0.0043	0.005	(43.6)	42.6	0.011	(0.0006)	0.005	.	.	0.025	(0.0006)	.	.	0.016	0.0010	

**CRM BISMUTH ALLOY SET**

available in set/6 only

40mm Ø x 25 mm

Number	Ag	Al	As	Au	Bi	Cd	Cu	Fe	In	Ni	Pb	Sb	Sn	Zn
IMN LD 1	0.00083	(0.0005)	0.00063	0.00661	Rem	0.0044	0.00277	0.00523	0.00144	0.00152	0.0113	0.00220	43.65	0.00019
IMN LD 2	0.121	.	0.00704	0.0166	Rem	0.00154	0.0333	0.00624	0.120	0.0157	0.0150	0.123	43.39	0.00063
IMN LD 3	0.00587	.	0.0210	0.0272	Rem	0.00114	0.0212	0.00664	0.00554	0.00624	0.0453	0.00738	41.76	0.00143
IMN LD 4	0.00560	(0.0018)	0.0202	0.0406	Rem	0.00235	0.0440	0.0262	0.00983	0.00140	0.0711	0.0111	43.16	0.00067
IMN LD 5	0.0136	(0.0015)	0.0275	0.0510	Rem	0.00232	0.0535	0.0318	0.0151	0.00232	0.0821	0.0170	43.07	0.00055
IMN LD 6	0.0539	(0.0004)	0.0169	.	Rem	0.00313	.	.	0.0736	.	.	0.0757	40.81	0.00086

**RM CADMIUM ALLOY**

Number	Cd	Sn	Units
95X SC34A	(65.99)	34.05	40 mm Ø x 15 mm
95X SC36A	(63.98)	36.09	40 mm Ø x 15 mm

**CRM CADMIUM SET**

SET ONLY 40 mm Ø x 25 mm discs

Number	As	Ni	Sb	Sn
IMN K1	(0.00030)	0.0086	0.0064	0.0061
IMN K2	0.0012	0.018	0.0038	0.0032
IMN K3	0.0010	0.063	0.0010	0.00065
IMN K4	0.0056	0.11	0.0011	0.00091
IMN K5	0.0014	0.0054	0.00017	.

**CRM CHROMIUM ALLOY**

~40 mm Ø x ~15 mm

Number	Cr	C	Co	Cu	Fe	Mn	Mo	N	Nb	Ni	P	S	Si	W
219X 20500C	51.0	0.0212	0.0110	0.0101	1.515	0.299	0.0103	0.199	0.0117	45.46	0.0048	0.0137	1.288	0.0086

**COBALT BASE ALLOYS**

# = class, where 1 = CRM and 2 = rm analysis listed in mass % \* Provisiona Analysis

#	Number	Cr	Fe	Mn	Mo	Nb	Ni	W	Al	C	Cu	P	S	Si	Ti	Co
1	IARM Co6B-18	30.7	2.68	1.48	0.020	(0.014)	2.59	3.92	(0.07)	1.02	(0.015)	.	( $<0.0010$ )	0.61	(0.007)	57.0
1	ECRM 378-1D	28.22	0.606	0.0579	0.053	.	0.617	4.43	.	1.181	.	(0.0023)	0.0055	1.172	.	63.52
2	BS 173	27.5	0.19	0.76	5.62	(0.002)	0.14	.	(0.04)	0.046	(0.008)	(0.003)	0.001	0.61	(0.004)	65.0
2	CT ISO074A	27.12	(0.93)	0.78	5.47	.	0.150	$<0.01$	.	0.089	0.005	0.002	0.002	0.59	.	64.87
1	IMZ 188	26.44	1.14	0.68	0.42	0.045	10.76	7.46	(0.005)	0.526	0.025	0.011	(0.0002)	0.69	(0.007)	51.64
1	IMZ 186	23.14	0.10	.	.	.	10.22	7.17	0.28	0.59	.	.	.	.	0.19	Rem
1	<b>BS 172B</b>	22.8	2.46	0.97	0.28	0.042	22.5	15.2	0.21	0.055	(0.02)	(0.008)	(0.0009)	0.33	0.079	34.8
2	BS 172A	21.85	1.76	0.77	0.30	0.09	23.7	14.0	0.08	0.098	0.027	(0.011)	( $<0.0005$ )	0.37	.	.
2	BS 171B	20.5	1.82	1.90	0.65	0.046	10.68	15.1	0.08	0.087	0.035	0.008	$<0.001$	0.29	.	.
1	IARM CoElgiloy-18	20.4	12.6	2.36	8.6	(0.006)	15.9	(0.008)	(0.011)	0.008	(0.005)	0.0019	(0.0018)	0.05	(0.004)	40.4
1	BS 171C	20.3	1.07	1.47	(0.08)	(0.006)	10.1	15.3	(0.04)	0.119	(0.02)	(0.008)	(0.0008)	(0.1)	(0.07)	51.2
1	BS 171D	20.2	1.07	1.47	(0.08)	(0.006)	10.1	15.3	(0.05)	0.120	(0.02)	(0.01)	(0.0009)	(0.1)	(0.05)	51.2
1	SRM 1242	20.0	1.80	1.58	.	( $<0.005$ )	9.78	15.1	( $<0.01$ )	0.126	0.0010	0.002	0.0007	0.016	.	51.5
1	IARM 326A	(0.002)	49.6	0.003	(0.002)	0.038	0.037	(0.001)	(0.003)	(0.002)	(0.002)	0.0013	0.0011	0.029	(0.002)	48.4

#	Number	Cr	Fe	Mn	Mo	Nb	Ni	W	Al	C	Cu	P	S	Si	Ti	Co
	Number	B	La	Mg	N	O	Pb	Sn	Ta	V	Zr	Units				
	IARM Co6B-18	.	.	.	0.017	.	.	.	.	0.011	.	.	.	31 mm Ø x 2 or 18 mm		
	ECRM 378-1D	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm		
	BS 173	(0.001)	.	.	0.190	(0.002)	.	.	.	(0.01)	.	.	.	35 mm Ø x ~7 or 19+ mm		
	CT ISO074A	( $<0.0010$ )	.	.	0.17	.	.	.	.	0.005	.	.	.	30-35 mm Ø x ~16 mm		
	IMZ 188	0.0009	.	.	.	.	.	.	(0.011)	(0.011)	(0.0004)	.	.	1/4 of 75 mm Ø cylinder x 20 mm		
	IMZ 186	(0.007)	.	.	.	.	.	.	3.78	.	0.40	.	.	1/4 of 78 mm Ø cylinder x 30 mm		
	<b>BS 172B</b>	(0.004)	0.059	(0.001)	0.033	0.0011	As:(0.05)	.	(0.01)	0.0081	(0.008)	.	.	38 mm Ø x 19+ mm <b>17025</b>		
	BS 172A	(0.003)	0.045	(0.001)	.	.	.	.	(0.024)	0.007	last	.	.	38 mm Ø x ~10, ~14 or 19 mm		
	BS 171B	.	.	.	.	.	.	.	.	(0.02)	.	.	.	38 mm Ø x ~7 or 19+ mm		
	IARM CoElgiloy-18	(0.002)	.	.	0.0034	0.009	.	.	(0.01)	(0.009)	.	.	.	31 mm Ø x 2 or 18 mm		
	BS 171C	(0.004)	(0.03)	(0.001)	0.0045	(0.002)	.	.	(0.02)	(0.009)	(0.01)	.	.	38 mm Ø x 19 mm		
	BS 171D	(0.004)	(0.02)	(0.0008)	0.0046	(0.0008)	.	.	(0.02)	(0.01)	(0.01)	.	.	38 mm Ø x 19 mm		
	SRM 1242	( $<0.0001$ )	.	( $<0.001$ )	0.026	.	( $<0.0001$ )	( $<0.001$ )	( $<0.01$ )	0.005	( $<0.01$ )	.	.	43 mm Ø x 20 mm		
	IARM 326A	(0.001)	.	(0.001)	0.0004	0.0082	.	$<0.001$	(0.01)	1.94	0.002	.	.	31 mm Ø x 2 mm		

**Need a larger size?**  
**Most BS items are**  
**available in any height.**

**LEAD**

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

#	Number	Ag	As	Bi	Cd	Cu	Ni	Sb	Se	Sn	Te	Zn
1	83X PR7C	0.287	0.050	0.497	0.450	0.148	0.0027	0.78	0.0069	0.218	0.0094	.
1	83X PR1K	0.1029	0.0338	0.0508	0.074	0.0465	(0.0004)	0.0100	0.0008	0.016	0.0058	(0.002)
1	83X PR4H	0.0114	0.0003	0.0150	0.0081	0.0454	0.0029	0.0050	(0.004)	.	0.0229	.
1	SRM C2417	0.010	0.011	0.010	(<0.0002)	0.010	(<0.0005)	0.010	.	(<0.010)	(<0.0005)	(<0.0005)
1	BAM M109	0.0045	0.0113	0.0193	0.00352	0.00196	0.00035	0.0098	.	0.115	0.0030	0.0031
1	83X PR11A	0.0030	0.0095	0.0117	0.0008	0.0551	0.0011	0.497	(0.0001)	0.119	.	.
1	83X PR3G	0.0029	0.0011	0.144	0.0462	0.0694	0.0116	0.0888	0.0166	0.0417	0.0039	(0.0007)
1	83X CU06A	0.0019	(0.0001)	0.0134	(0.00006)	0.0554	0.0003	(0.0008)	(0.0005)	(0.0004)	(0.0002)	(0.0003)
1	BCR 287A	0.00152	<0.0000003	0.00673	0.000036	0.000098	0.0000024	0.0000040	<0.000005	<0.000005	<0.00002	<0.00001
1	83X PR5J	0.0008	0.00038	0.0087	0.00052	0.00095	(0.0005)	0.0009	0.00048	<0.001	0.0006	<0.001
1	SRM C2418	0.0007	(<0.0001)	(<0.0005)	0.0003	(<0.0001)	(<0.0005)	(<0.0001)	.	(<0.0005)	(<0.0005)	(<0.0005)
1	83X PR5H	0.00045	(0.0001)	0.0081	0.00078	0.00061	0.00016	0.00067	(0.0002)	(0.0006)	0.00059	(0.00015)
2	BCS 210e *	0.0001	.	0.0008	.	0.0006	<0.001	<0.002	.	<0.002	.	<0.005
1	BCR 286A	0.0000015	<0.0000002	0.00215	0.0000125	0.000149	0.0000041	0.000010	<0.000005	<0.000005	<0.00001	<0.00001
1	ERM-EB107	.	.	.	0.00261	.	.	.	.	.	.	.
1	ERM-EB108	.	.	.	0.00260	.	.	.	.	.	.	.

Number	Al	Au	Ca	Fe	Hg	In	Mn	Na	Pt	S	Ti	Tl	Units
83X PR7C	.	.	.	.	.	0.55	.	.	0.0047	.	.	.	~40 mm Ø x ~15 mm
83X PR1K	(0.0003)	0.0019	.	.	.	0.0080	.	.	.	.	.	.	~40 mm Ø x ~15 mm
83X PR4H	.	0.0021	.	.	0.019	.	.	.	.	.	0.0021	.	~40 mm Ø x ~15 mm
SRM C2417	(<0.0001)	.	(<0.001)	(<0.0003)	.	.	(<0.0003)	.	.	.	.	.	50 mm Ø x 16 mm
BAM M109	(<0.00021)	.	.	.	.	(<0.00005)	.	.	.	.	.	0.00030	40 mm Ø x 40 mm
83X PR11A	.	.	.	(0.0003)	.	.	.	.	.	0.009	.	0.0042	~40 mm Ø x ~15 mm
83X PR3G	.	0.0036	.	.	0.0008	0.0093	.	(0.0038)	.	.	.	0.0033	~40 mm Ø x ~15 mm
83X CU06A	.	.	.	.	.	.	.	.	.	0.0011	.	.	~40 mm Ø x ~15 mm
BCR 287A	.	.	.	.	.	.	.	.	.	.	.	0.000073	60 mm x 60 mm x 12 mm
83X PR5J	.	.	.	.	0.00045	0.00034	.	.	.	.	.	0.0008	~40 mm Ø x ~15 mm
SRM C2418	(<0.0001)	.	(<0.0005)	(<0.0005)	.	.	(<0.0005)	.	.	.	.	.	50 mm Ø x 16 mm
83X PR5H	.	.	.	.	(<0.0005)	(0.00014)	.	.	.	.	.	(0.0002)	~40 mm Ø x ~15 mm
BCS 210e *	<0.001	.	.	0.0005	.	.	<0.001	.	.	.	0.001	.	500 g (10.5 x 2 x 2 cms)
BCR 286A	.	.	.	.	.	.	.	.	.	.	.	0.00025	60 mm x 60 mm x 12 mm
ERM-EB107	.	.	.	.	0.00113	.	.	.	.	.	.	.	40 mm Ø x 40 mm
ERM-EB108	.	.	.	.	0.00083	.	.	.	.	.	.	.	40 mm Ø x 40 mm

\*\* BCS 210e has a certified melting point of 327.3 °C and Pb: 99.996

**CRM REFINED LEAD SET**

available in SET/7 ONLY

analysis listed in mg/kg

40 mm Ø x 27 mm

Number	Ag	As	Bi	Ca	Cd	Cu	Fe	In	Mn	Ni	Sb	Se	Sn	Te	Tl	Zn
IMN PL 1	193	3.6	729	.	.	7.3	4.5	(64.3)	(0.20)	136	15.4	.	3.0	145	569	6.0
IMN PL 2	97.0	2.6	460	.	218	14.9	4.4	(6.4)	(0.17)	159	7.2	33.3	2.6	349	228	(1.7)
IMN PL 3	17.0	2.5	101	(3.4)	15.7	105	(2.4)	5.9	(0.60)	39.4	8.0	2.7	2.1	235	26.4	1.8
IMN PL 4	10.3	345	59.9	.	5.1	197	.	.	.	8.5	3.4	2.7	.	23.6	21.5	.
IMN PL 5	27.3	159	296	.	.	9.1	.	287	.	6.7	572	.	13.7	13.6	135	.
IMN PL 6	64.3	318	48.3	(81.1)	623	4.7	(2.0)	104	(0.50)	5.5	310	.	7.6	8.2	494	.
IMN PL 7	151	(74.3)	61.7	.	53.2	6.8	.	.	.	.	77.7	.	26.3	270	99.2	3.5

**LEAD BINARY**

available individually

typical analysis

cast typical analysis

40 mm Ø x 15 mm

Class	Number	Sn	As	Pb	Sb	Units	Class	Number	Sb	Ag	As	Bi	Mg
CRM	91X S63P	63.30	.	SOLD OUT	.	40 mm Ø x 15 mm	CRM	81X PA12.5D	12.72	.	.	.	.
RM	91X S50PE	50.0	.	Rem	.	40 mm Ø x 15 mm	CRM	81X PA10.0C	9.60	.	.	.	.
RM	91X S40PD	40.0	.	Rem	.	40 mm Ø x 15 mm	<del>CRM</del>	<del>81X PA7.0D</del>	<del>7.02</del>	.	SOLD OUT	.	.
RM	91X S30P	30.0	.	SOLD OUT	.	40 mm Ø x 15 mm	CRM	81X PA3.5E	3.49	.	.	.	.
RM	NF 23	30.0	.	SOLD OUT	.	37 mm Ø x 12 mm	<del>CRM</del>	<del>81X PA2.0D</del>	<del>1.996</del>	.	SOLD OUT	.	.
RM	NF 22	25.0	.	Rem	.	37 mm Ø x 12 mm	CRM	81X PA1.0C	0.989	.	.	.	.
RM	NF 20	15.2	.	Rem	.	37 mm Ø x 12 mm	CRM	81X PA0.5C	0.481	.	.	.	.
RM	NF 19	12.0	.	Rem	.	37 mm Ø x 12 mm	RM	81X PAs1A	(0.02)	.	1.25	(0.03)	last
CRM	91X S10PD	10.07	.	Rem	.	40 mm Ø x 15 mm	RM	81X PMg1A	.	.	.	.	1.15
RM	NF 18	9.80	.	Rem	.	37 mm Ø x 12 mm	RM	81X PMg2A	.	.	.	.	0.173
RM	NF 17	6.80	.	Rem	.	37 mm Ø x 12 mm	RM	81X PMg3A	.	.	.	.	0.023
RM	NF 16	3.00	.	Rem	.	37 mm Ø x 12 mm	RM	82X PAG0.9A	.	0.903	.	.	.
RM	NF 35	0.97	0.94	Rem	14.0	37 mm Ø x 12 mm	RM	82X PAG0.7A	.	0.733	.	.	.





## LEAD ALLOYS

## CONTINUED FROM THE PREVIOUS PAGE

\* Provisional Analysis

Number	Al	Au	Hg	In	Mg	Mn	Na	Pd	S	Se	Tl	Units
91X S63PJ	(0.0003)	(0.0005)	.	0.0064	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
91X S63PR2K	0.0005	0.082	.	0.0157	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
91X S63Bi1A	(0.0015)	0.074	.	0.0067	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
91X S62AG2A	(0.0011)	0.0020	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
91X S63PR1G	.	0.0348	(0.015)	0.0308	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
91X S63PR0C	.	(0.0004)	0.0082	0.0098	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
91X S40PR2D	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
SRM 1131	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
91X S40PR1B	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm last
93X S30APR3C	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
91X S30PR3C	.	0.0063	.	0.0085	.	.	.	.	.	.	.	Disc 40 mm Ø x ~10 mm
91X S30PR2C	<0.0005	0.0017	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
93X S30APR1C	.	.	.	0.0094	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
86X PSS4C	.	.	.	0.0194	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
86X PSS4B	.	.	.	0.0174	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
85X SSBKA	.	0.0079	.	0.209	.	.	.	.	(0.0008)	(0.0029)	0.0196	Disc 40 mm Ø x 15 mm
86X PSS3B	.	.	.	0.0111	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
91X S10PR1C	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
86X PSS2B	.	.	.	0.0059	.	.	.	0.0049	.	.	.	Disc 40 mm Ø x 15 mm last
86X PSS2C	.	.	.	0.0144	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
SRM 1132	.	.	.	.	.	.	.	.	.	.	.	Disc 32 mm Ø x 19 mm
86X PSS1B	.	.	.	0.0074	.	.	.	0.0023	.	.	.	Disc 40 mm Ø x 15 mm
84X BA9C	0.0207	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
85X SSCHA	.	.	.	.	.	.	.	.	0.0035	(0.015)	last	Disc 40 mm Ø x ~11-13 mm
BAM EBI06	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
84X BA13B	0.0363	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BAM EBI05	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
84X BA12D	0.024	.	.	.	0.00081	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
84X BA11B	0.0207	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm
BAM EBI04	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 40 mm
BAM EBI02a	0.0124	.	.	(<0.0002)	(<0.0001)	.	(0.0004)	.	(<0.0003)	.	0.00302	Disc 40 mm Ø x 40 mm
84X BA1L	0.0317	.	.	.	0.0009	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
84X BA14A	0.0188	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
84X BA15A	0.0161	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm
85X HRHJ	.	.	.	.	.	.	.	.	0.0013	0.038	.	Disc ~40 mm Ø x ~15 mm
83X PR8D	.	0.0106	0.086	0.293	.	.	.	.	.	(0.0003)	.	Disc ~40 mm Ø x ~15 mm
84X BA7B	0.0085	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
84X BA2D	0.0183	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
L21.04-2	<0.001	.	.	.	.	.	.	.	.	.	.	Block 50 mm x 50 mm x 20 mm
85X MS2XA	.	.	.	.	.	.	.	.	(0.0002)	0.0334	.	Disc ~38 mm Ø x ~15 mm
L21.03-2	0.011	.	.	.	.	.	.	.	.	.	.	Block 50 mm x 50 mm x 20 mm
84X BA20B	0.065	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm
84X BA3D	0.0043	.	.	.	0.00038	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
84X BA8E	0.035	.	.	.	0.0005	<0.0005	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
SRM C2415a	Pb: (96)	.	.	.	.	.	.	.	(0.0061)	0.01005	.	Disc 40 mm Ø x 18 mm
Number	Al	Au	Hg	In	Mg	Mn	Na	Pd	S	Se	Tl	Units
BAM EBI01a	0.0227	.	.	.	(0.0009)	.	(0.0004)	.	(<0.0003)	.	0.00102	Disc 40 mm Ø x 40 mm
85X Psb5G	.	.	.	.	.	.	.	.	(0.010)	0.013	.	Disc ~40 mm Ø x ~15 mm
L21.02-2	(0.004)	.	.	.	.	.	.	.	.	.	.	Block 50 mm x 50 mm x 20 mm
85X Psb12B	.	.	.	.	.	.	.	.	<0.001	0.0004	.	Disc 40 mm Ø x 15 mm
L21.02-1	.	.	.	.	.	.	.	.	.	.	last of batch	Block 50 mm x 50 mm x 20 mm
82X PAG3.5RD	0.0015	.	.	0.037	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
85X S744A	.	.	.	.	.	.	.	.	0.0028	0.0253	.	Disc ~40 mm Ø x ~15 mm
85X Psb24A	.	.	.	.	.	.	.	.	0.0007	0.029	.	Disc ~40 mm Ø x ~15 mm
85X 0494 Pb3D	.	.	.	.	.	.	.	.	0.0185	0.049	.	Disc ~40 mm Ø x ~15 mm
85X Psb33A	.	.	.	.	.	.	.	.	0.0009	0.020	.	Disc ~40 mm Ø x ~15 mm
84X BA23C	0.042	.	.	.	0.0034	<0.0005	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
BAM EBI03	.	.	.	.	.	.	.	.	.	0.0180	0.00152	Disc 40 mm Ø x 30 mm
84X BA21B	0.0125	.	.	.	.	.	.	.	.	.	.	Disc ~39 mm Ø x ~15 mm
85X Psb3K	.	.	.	.	.	.	.	.	0.0084	0.036	.	Disc ~40 mm Ø x ~15 mm
BAM M110	.	.	.	.	.	.	.	.	.	0.010	.	Disc 40 mm Ø x 30 mm
84X BA22B	0.074	.	.	.	.	.	.	.	.	.	.	Disc ~38 mm Ø x ~15 mm
85X 0494 Pb2C	.	.	.	.	.	.	.	.	0.0052	0.0272	.	Disc ~40 mm Ø x ~15 mm
85X CADHC	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
L21.01-2	0.012	.	.	.	.	.	.	.	.	.	.	Block 50 mm x 50 mm x 20 mm
83X PR2G	.	0.0005	0.003	0.0010	.	.	0.0013	.	(0.0006)	0.0005	(0.0017)	Disc ~40 mm Ø x ~15 mm
SRM C2416	(<0.0001)	.	.	.	.	(<0.0005)	.	.	0.0015	.	.	Disc 50 mm Ø x 16 mm
82X PAG2.5RD	.	.	.	.	.	.	.	.	.	.	.	Disc 40 mm Ø x 15 mm
85X M2A	.	.	.	.	.	.	.	.	(0.0008)	0.0247	.	Disc ~38 mm Ø x ~15 mm
85X 2.5LAA	.	.	.	.	.	.	.	.	.	0.0006	.	Disc ~40 mm Ø x ~15 mm
85X Psb6A	.	.	.	.	.	.	.	.	.	0.0018	.	Disc ~40 mm Ø x ~15 mm
85X Psb28A	.	.	.	.	.	.	.	.	0.0014	0.009	.	Disc ~40 mm Ø x ~15 mm
85X 0494 Pb1A	.	.	.	.	.	.	.	.	.	0.004	.	Disc 40 mm Ø x 15 mm last
85X SB28A	.	.	.	.	.	.	.	.	0.0010	0.0223	.	Disc ~38 mm Ø x ~15 mm
85X N35A	.	.	.	.	.	.	.	.	0.007	0.0004	.	Disc ~38 mm Ø x ~15 mm
85X Psb8B	.	.	.	.	.	.	.	.	0.005	0.0022	.	Disc 40 mm Ø x 15 mm
85X A16A	.	.	.	.	.	.	.	.	(0.0003)	0.0218	.	Disc ~38 mm Ø x ~15 mm
85X SM31A	.	.	.	.	.	.	.	.	0.0003	0.0183	.	Disc ~38 mm Ø x ~15 mm
85X Psb60A	.	.	.	.	.	.	.	.	0.0054	0.009	.	Disc ~40 mm Ø x ~15 mm
85X CADLB	.	.	.	.	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
85X SASHA	.	.	.	.	.	.	.	.	(0.0005)	.	.	Disc 40 mm Ø x ~15 mm
85X CADLA	.	.	.	.	.	.	.	.	.	(0.0011)	.	Disc 40 mm Ø x ~15 mm
84X BA4D	.	.	.	0.0031	.	.	.	.	.	.	.	Disc ~40 mm Ø x ~15 mm
85X YUMA	.	.	.	.	.	.	.	.	0.0062	0.0008	.	Disc ~40 mm Ø x ~15 mm
85X 0616 Pb1C	.	.	0.0010	.	.	.	.	.	.	0.0087	.	Disc ~40 mm Ø x ~15 mm last
85X 0616 Pb1D	.	.	(0.001)	.	.	.	.	.	.	0.0047	.	Disc ~40 mm Ø x ~15 mm
Number	Al	Au	Hg	In	Mg	Mn	Na	Pd	S	Se	Tl	Units

## MAGNESIUM

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

61X: not for Glow Discharge

#	Number	Al	Cu	Fe	Mn	Ni	Pb	Si	Zn	Ag	Be
1	NCS HS49725-2* (0.531)		0.0077	0.027	0.085	0.011	0.037	0.062	0.047	.	.
1	NCS HS49725-4*	0.262	0.014	0.0069	0.023	0.0044	0.012	0.034	0.019	.	.
1	61X MgP3A	0.096	0.0296	0.014	0.0135	0.0049	0.0148	0.046	0.0196	0.0125	<0.0001
1	63X MgE1E	(0.088)	0.0503	0.0014	0.860	0.0162	0.011	0.052	0.083	0.0195	(0.0002)
1	61X MgP2A	0.065	0.0109	0.0061	0.0118	0.0029	0.0061	0.031	0.0122	0.003	<0.0001
2	58A ZH1130	0.055	0.017	0.015	0.039	0.007	0.0035	0.055	0.02	.	.
1	61X MgP4A	0.0247	0.0108	(0.0044)	0.0100	0.0028	0.0066	0.037	0.0158	0.0203	<0.0001
1	NCS HS49725-3*	0.017	0.0087	0.0083	0.019	0.0021	0.0067	0.023	0.012	.	.
2	58A ZH1140	0.017	0.0054	0.0044	0.011	0.0007	0.0013	0.0027	0.0058	.	.
2	58A ZH1160	0.011	0.0016	0.0071	0.016	0.0004	0.0025	0.019	0.004	.	.
1	NCS HS49725-1*	0.011	0.0012	0.0028	0.017	0.00035	0.0052	0.011	0.011	.	.
1	NCS HS49725-7*	0.0082	0.0039	0.0055	0.017	0.0013	0.0067	0.030	0.013	.	.
2	58A ZH1150	0.0062	0.0003	0.0015	0.0054	(0.0001)	(0.0005)	0.0024	0.0046	.	.
1	NCS HS49725-5*	0.0059	0.00063	0.0022	0.0060	(0.00033)	0.0020	0.0063	0.0079	.	.
2	58A ZH1110	0.0052	0.062	0.0054	0.092	0.0041	0.012	0.015	0.058	.	.

Number	Ca	Cd	Ce	Cl	La	Na	Sn	Ti	Zr	~mm Ø x ~mm H
NCS HS49725-2*	.	.	.	.	.	.	.	(0.00018)	.	45 x 25
NCS HS49725-4*	.	.	.	.	.	.	.	0.0012	.	45 x 25
61X MgP3A	0.053	0.0154	0.0055	.	0.0038	.	0.0154	.	(0.0014)	40 x 20
63X MgE1E	.	0.0017	.	.	.	.	0.0053	.	.	50x20 or 40x15
61X MgP2A	0.0138	0.0063	0.0019	.	0.0014	.	0.0073	.	(0.0007)	40 x 20
58A ZH1130	.	.	.	(0.0027)	.	(0.0003)	.	.	.	~49 x ~34
61X MgP4A	0.028	0.0071	0.0041	.	0.0030	.	0.0067	.	0.030	40 x 20
NCS HS49725-3*	.	.	.	.	.	.	.	0.000062	.	45 x 25
58A ZH1140	.	.	.	(0.0015)	.	(0.0003)	.	.	.	~49 x ~34
58A ZH1160	.	.	.	(0.0018)	.	(0.0001)	.	.	.	~49 x ~34
NCS HS49725-1*	.	.	.	.	.	.	.	0.00027	.	45 x 25
NCS HS49725-7*	.	.	.	.	.	.	.	(0.00010)	.	45 x 25
58A ZH1150	.	.	.	(0.0011)	.	(0.0001)	.	.	.	~49 x ~34
NCS HS49725-5*	.	.	.	.	.	.	.	0.000072	.	45 x 25
58A ZH1110	.	.	.	(0.0018)	.	(0.0004)	.	.	.	~49 x ~34

\* available in set only NCS HS49725 1-7

## MAGNESIUM with RARE EARTHS

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

#	Number	Ag	Al	Be*	Ca	Cd*	Ce	Cu	Fe	Gd	La	Mn	Nd	Ni
1	67X MgK3A	.	<b>4.56</b>	7	.	.	0.83	0.0017	0.0024	0.038	0.374	0.516	0.175	0.0016
1	67X MgK2A	.	<b>3.84</b>	25	.	.	0.70	0.0041	0.0016	0.053	0.34	0.534	0.125	0.0033
1	64X MgQ9A	.	<b>2.14</b>	15	.	.	0.111	0.0104	0.0069	.	0.083	0.068	0.114	0.0020
1	66X MgD1B	.	<b>0.147</b>	.	.	.	0.065	0.066	0.0029	.	0.031	0.125	0.064	0.0162
1	61X MgP5A	0.0342	<b>0.119</b>	18	.	292	0.049	0.092	0.0048	.	0.0382	0.201	0.0446	0.0176
1	61X MgP6A	0.0043	<b>0.0449</b>	.	(0.0008)	25	0.0209	0.0067	0.0041	.	0.0137	0.0125	0.0238	0.0025
2	AA C7548	.	<b>0.004</b>	.	.	.	2.66	0.022	.	.	.	0.035	.	0.001
2	AA C7514	.	<b>0.002</b>	.	.	.	2.47	0.12	.	.	.	0.012	.	0.002
2	AA C7489	.	<b>0.001</b>	.	.	.	2.57	0.004	.	.	.	0.012	.	0.015
2	AA E1273	.	<b>0</b>	.	.	.	1.86	0.022	.	.	.	0.041	.	0.002
2	AA E1272	.	<b>0</b>	.	.	.	1.79	0.026	.	.	.	0.045	.	0.003
1	58A ST5280	.	.	.	.	.	<b>4.16</b>	.	.	.	.	.	.	.
1	58A ST5290	.	.	.	.	.	<b>3.37</b>	.	.	.	.	.	.	.
1	58A ST5260	.	.	.	.	.	<b>2.79</b>	.	.	.	.	.	.	.
1	58A ST5250	.	.	.	.	.	<b>1.54</b>	0.133	.	.	.	0.214	.	0.005
1	58A ST5240	.	.	.	.	.	<b>1.47</b>	0.051	.	.	.	0.062	.	0.084
1	58A ST5230	.	.	.	.	.	<b>1.28</b>	0.068	0.0041	.	.	0.067	.	0.0011
1	58A ST5220	.	.	.	.	.	<b>0.826</b>	0.054	0.0033	.	.	0.093	.	0.0009
1	58A ST5210	.	.	.	.	.	<b>0.149</b>	0.0092	0.0027	.	.	0.15	.	0.001
1	58A ST10350	.	.	.	.	.	.	.	.	.	.	.	<b>3.55</b>	.
2	AA D1075	.	.	.	.	.	.	.	.	.	.	.	.	.
2	AA D1073	.	.	.	.	.	.	.	.	.	.	.	.	.
2	AA D1072	.	.	.	.	.	.	.	.	.	.	.	.	.
2	AA D1074	.	.	.	.	.	.	.	.	.	.	.	.	.
1	58A ST9460	.	.	.	.	.	.	.	.	.	.	.	.	Ni
1	58A ST9450	.	.	.	.	.	.	.	.	.	.	.	.	.
1	58A ST9440	.	.	.	.	.	.	.	.	.	.	.	.	.

#	Number	Ag	Al	Be*	Ca	Cd*	Ce	Cu	Fe	Gd	La	Mn	Nd	Ni
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Number	Pb	Pr	R.E.	Si	Sn	Y	Zn	Zr	~mm Ø x ~mm H
67X MgK3A	.	0.069	.	0.068	.	.	0.050	.	50x20 or 40x15
67X MgK2A	.	0.053	.	0.057	.	.	0.132	.	50x20 or 40x15
64X MgQ9A	0.0096	.	.	(0.37)	0.0076	.	0.243	.	40 x 15
66X MgD1B	0.026	.	.	(0.073)	0.026	.	1.19	.	40 x 15
61X MgP5A	0.0357	.	.	0.094	0.0352	0.0132	0.099	.	40 x 15
61X MgP6A	0.0120	.	.	0.044	0.0091	0.0375	0.010	.	50x20 or 40x15
AA C7548	.	.	(4.8)	0.002	.	.	0.16	.	62 x 6
AA C7514	.	.	(4.7)	0.002	.	.	0.42	.	62 x 6
AA C7489	.	.	(5.0)	0.002	.	.	0.46	.	62 x 6
AA E1273	.	.	(3.6)	0.0	.	.	2.87	0.54	62 x 6
AA E1272	.	.	(3.3)	0.0	.	.	2.58	0.54	62 x 6
58A ST5280	.	.	.	.	.	.	3.52	0.63	45 x 25
58A ST5290	.	.	.	.	.	.	4.37	0.81	45 x 25
58A ST5260	.	.	.	.	.	.	4.36	(1.03)	45 x 25
58A ST5250	.	.	.	.	.	.	1.46	.	45 x 25
58A ST5240	.	.	.	.	.	.	2.69	.	45 x 25
58A ST5230	.	.	.	(0.0047)	.	.	3.63	.	45 x 25
58A ST5220	.	.	.	(0.0056)	.	.	4.58	.	45 x 25
58A ST5210	.	.	.	.	.	.	5.59	.	45 x 25
58A ST10350	.	.	.	.	.	.	.	.	45 x 25
AA D1075	.	.	(3.7)	.	.	.	(2.7)	0.64	62 x 6 last of stock
AA D1073	.	.	(3.7)	.	.	.	3.23	(0.6)	62 x 6
AA D1072	.	.	(3.4)	.	.	.	2.02	(0.5)	62 x 6
AA D1074	.	.	(3.4)	.	.	.	(2.7)	0.42	62 x 6
58A ST9460	.	.	.	.	.	<b>6.69</b>	.	.	45 x 25
58A ST9450	.	.	.	.	.	<b>4.3</b>	.	.	45 x 25
58A ST9440	.	.	.	.	.	<b>3.52</b>	.	.	45 x 25

Number	Pb	Pr	R.E.	Si	Sn	Y	Zn	Zr	~mm Ø x ~mm H
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## MAGNESIUM with ALUMINUM

#	Number	Al	Be	Ca	Cd	Cu	Fe	Mn	Ni	Pb	Si	Sn	Zn
1	58A ST2150	11.52	(0.0023)	.	.	0.295	(0.020)	(0.68)	0.018	.	0.176	.	0.217
1	65X MgAl5A	10.67	0.0062	(0.0014)	0.0034	0.0273	0.010	0.067	0.0026	0.0051	0.034	0.0021	0.348
2	58A ZH2050M	10.4	0.0007	.	.	0.307	0.0081	(0.71)	0.019	.	0.41	.	0.201
1	64X MgQ3A	8.66	0.0041	.	.	0.0349	0.0090	0.206	0.0032	0.0022	(0.083)	0.0019	0.0039
1	58A ST1240	7.33	0.00015	.	.	0.02	0.015	0.182	(0.0015)	.	0.27	.	0.171
1	64X MgQ4A	6.50	0.00029	.	.	0.310	0.0040	0.183	0.0068	0.0322	(0.067)	0.0282	0.188
1	58A ST2000a	5.96	(0.00024)	.	.	0.0035	0.007	0.02	0.00094	.	0.097	.	0.0068
1	58A ST3320	5.82	0.00018	.	.	0.0016	0.0077	0.095	0.0012	.	1.54	.	0.128
1	NCS HS49724-2*	5.82	0.00018	.	.	0.0016	0.0077	0.095	0.0012	.	1.54	.	0.128
1	58A ST1260	4.56	0.0009	.	.	0.013	0.025	(0.65)	0.0025	.	0.241	.	0.106
1	64X MgQ2A	4.53	0.0013	.	.	0.0151	0.0041	0.378	0.0061	0.0107	0.051	0.0107	0.107
1	58A ST3340	4.37	0.0009	.	.	0.103	0.022	0.33	0.0038	.	1.22	.	0.25
1	NCS HS49724-4*	4.37	0.0009	.	.	0.103	0.022	0.33	0.0038	.	1.22	.	0.25
1	65X MgAl7A	4.20	.	0.021	0.0049	0.0215	0.0069	0.203	0.0141	0.009	0.33	0.0050	0.128
1	64X MgQ7A	4.02	0.00042	.	.	0.0167	0.0028	(0.434)	0.0053	0.0126	(1.05)	0.0096	0.0607
1	65X MgB4C	3.86	0.0033	0.0010	0.00016	0.0183	(0.009)	0.031	0.0003	0.0037	0.037	0.0050	0.333
1	58A ST3310	3.69	0.00011	.	.	0.0084	0.007	0.59	0.0012	.	0.54	.	0.102
1	NCS HS49724-1*	3.69	0.00011	.	.	0.0084	0.0070	0.59	0.0012	.	0.54	.	0.102
1	58A ST3350	2.58	0.0012	.	.	0.039	0.033	0.23	0.014	.	1.83	.	0.152
1	NCS HS49724-5	2.58	0.0012	.	.	0.039	0.033	0.23	0.014	.	1.83	.	0.152
1	58A ST1220	2.55	0.0009	.	.	0.0081	0.0089	0.338	0.0008	.	0.173	.	0.237
2	AA C8209	2.55	.	.	.	0.012	(0.02)	0.15	0.001	.	0.058	.	0.18
1	64X MgQ6A	2.31	0.0007	.	.	0.0045	(0.004)	(0.260)	0.0026	0.0060	(0.97)	0.0055	0.072
1	58A ST3330	1.09	(0.0005)	.	.	0.016	(0.0034)	(0.50)	(0.0013)	.	0.68	.	0.339
1	NCS HS49724-3*	1.09	(0.0005)	.	.	0.016	(0.0034)	(0.50)	(0.0013)	.	0.68	.	0.339
1	64X MgQ1A	1.083	0.00036	.	.	0.084	0.0034	0.377	0.0041	0.020	0.062	0.0195	0.235
1	NCS HS49725-6*	(1.06)	.	.	.	0.025	0.020	0.148	0.0052	0.018	0.020	.	0.025
1	64X MgQ8A	1.03	0.00015	.	.	0.0019	0.0018	0.700	0.0004	0.0008	0.045	0.0022	0.044

#	Number	Al	Be	Ca	Cd	Cu	Fe	Mn	Ni	Pb	Si	Sn	Zn
	Number	Ag	Ce	Hg	La	Sr	Ti	Zr	~mm Ø x ~mm H				
	65X MgAl5A	0.030	0.0069	0.011	0.0048	.	.	.	50x20 or 40x15				
	58A ZH2050M	.	.	.	.	.	.	.	~49 x ~34				
	64X MgQ3A	.	.	.	.	.	.	.	50x20 or 40x15				
	58A ST1240	.	.	.	.	.	.	.	45 x 25				
	64X MgQ4A	.	.	.	.	.	.	.	50x20 or 40x15				
	58A ST1210	.	.	.	.	.	.	.	45 x 25				
	58A ST2000a	.	.	.	.	.	.	.	45 x 25				
	58A ST3320	.	.	.	.	.	.	.	45 x 25				
	NCS HS49724-2*	.	.	.	.	.	.	.	45 x 25				
	58A ST1260	.	.	.	.	.	.	.	45 x 25				
	64X MgQ2A	.	.	.	.	.	.	.	50x20 or 40x15				
	58A ST3340	.	.	.	.	.	.	.	45 x 25				
	NCS HS49724-4*	.	.	.	.	.	.	.	45 x 25				
	65X MgAl7A	0.0064	.	.	.	.	.	.	50x20 or 40x15				
	64X MgQ7A	.	.	.	.	.	.	.	40 x 15				
	65X MgB4C	0.0046	0.0003	.	(0.0001)	.	(0.0008)	<0.001	40 x 18				
	58A ST3310	.	.	.	.	.	.	.	45 x 25				
	NCS HS49724-1*	.	.	.	.	.	.	.	45 x 25				
	58A ST3350	.	.	.	.	.	.	.	45 x 25				
	NCS HS49724-5	.	.	.	.	.	.	.	45 x 25				
	58A ST1220	.	.	.	.	.	.	.	45 x 25				
	AA C8209	.	.	.	.	.	.	.	62 x 6				
	64X MgQ6A	.	.	.	.	.	.	.	50x20 or 40x15				
	58A ST3330	.	.	.	.	.	.	.	45 x 25				
	NCS HS49724-3*	.	.	.	.	.	.	.	45 x 25				
	64X MgQ1A	.	.	.	.	.	.	.	50x20 or 40x15				
	NCS HS49725-6*	.	.	.	.	.	0.0025	.	45 x 25				
	64X MgQ8A	.	.	.	.	.	.	.	50x20 or 40x15				
	Number	Ag	Ce	Hg	La	Sr	Ti	Zr	~mm Ø x ~mm H				

\* available in their respective sets only, NCS HS49724 1-5 and NCS HS49725 1-7

## MAGNESIUM with ALUMINUM and ZINC

# = class, where 1 = CRM and 2 = RM    ##: not for Glow Discharge

#	Number	Al	Zn	Be	Ca	Cd	Cu	Fe	Mn	Ni	Pb	Si	Sn
1	65X MgA21A	12.37	5.11	0.0006	.	.	0.0020	0.0140	0.0777	0.0010	0.0048	0.028	0.0063
1	65X MgA23B	9.72	0.543	0.0030	.	.	0.0153	0.0083	(0.13)	0.0011	0.0020	0.028	0.0026
1	65X MgA23A	9.72	0.543	0.0026	.	.	0.0153	0.0083	0.130	0.0011	0.0020	0.0270	0.0026
1	58A ST2160	9.07	0.98	0.0029	.	.	0.0098	0.039	0.61	0.0036	.	0.43	.
2	58A ZH2040M	9.0	0.46	0.0013	.	.	0.222	0.01	0.57	0.015	.	0.285	.
1	65X MgA19A	8.97	2.17	0.00025	.	.	0.0426	0.0085	0.322	0.0065	0.049	0.196	0.049
1	65X MgA22A	8.60	0.882	0.0005	.	.	0.0783	0.0054	0.40	0.0057	0.0039	(0.086)	0.0032
2	AA SM183-B	(8.0)	(3.0)	.	.	.	.	.	(0.2)	0.005	.	.	.
2	AA SM183-C	(8.0)	(3.0)	.	.	.	.	.	(0.2)	0.005	.	.	.
1	65X MgA13A	7.45	0.925	(0.010)	0.0064	0.0055	0.125	(0.008)	0.092	0.0039	0.0085	0.022	0.043
2	58A ZH2030M	6.97	0.71	0.0017	.	.	0.151	0.018	0.374	0.0096	.	0.183	.
1	65X MgA16A	6.78	4.03	0.0011	0.0024	0.0066	0.099	0.0073	0.271	0.0057	0.050	0.023	0.028
1	65X MgA18A	6.75	0.502	0.00051	.	.	0.052	0.0081	0.192	0.0074	0.0244	0.043	0.0114
1	58A ST2120a	6.40	2.50	0.0004	.	.	0.080	0.008	0.35	0.0060	.	0.12	.
1	65X MgA20A	5.87	1.32	0.0018	.	.	0.013	0.008	0.067	0.0025	0.0075	0.052	0.032
1	65X MgA12A	5.68	3.18	(0.0036)	0.037	0.0121	0.266	0.0053	0.198	0.0148	0.010	0.0142	0.0021
1	65X MgAlJ ##	5.45	1.26	0.006	0.029	0.013	0.221	0.021	0.060	0.021	0.012	0.20	0.072
2	58A ZH2020M	5.06	0.95	0.0022	.	.	0.085	0.028	0.256	0.0047	.	0.10	.
1	58A ST2110a	4.45	4.1	(0.00015)	.	.	0.00072	0.0029	0.077	0.00042	.	0.019	.
1	65X MgAl1B	3.63	1.59	0.0022	(0.09)	0.0014	0.0496	0.0048	0.047	0.0134	0.0183	(0.024)	0.093
1	65X MgB3C	3.38	0.711	0.0019	(0.0033)	0.0025	0.022	0.0028	0.277	0.0027	0.0023	0.042	0.0017
2	58A ZH2010M	3.04	1.21	0.0032	.	.	0.0096	0.035	0.082	0.0006	.	0.037	.
2	AA C7641	(3.0)	1.36	.	.	.	.	.	.	.	.	.	.
1	65X MgB2D	2.81	1.047	0.0014	(0.010)	0.0103	0.065	0.0032	0.526	0.0043	0.0053	(0.088)	0.0052
1	65X MgB2C	2.67	0.95	0.0008	0.011	0.0114	0.113	(0.010)	0.333	0.0027	0.0036	0.069	0.0047
2	AA C7639	2.39	(1.0)	.	.	.	.	.	(0.4)	.	.	.	.
1	65X MgB1E	1.90	1.60	0.0008	(0.067)	0.076	0.051	0.0027	0.770	0.0020	0.0095	0.069	0.0098
1	58A ST1270	1.36	0.492	0.0033	.	.	0.01	0.0049	0.13	0.01	.	0.065	.

#	Number	Al	Zn	Be	Ca	Cd	Cu	Fe	Mn	Ni	Pb	Si	Sn
1	65X MgB3C	3.38	0.711	0.0019	(0.0033)	0.0025	0.022	0.0028	0.277	0.0027	0.0023	0.042	0.0017
2	58A ZH2010M	3.04	1.21	0.0032	.	.	0.0096	0.035	0.082	0.0006	.	0.037	.
2	AA C7641	(3.0)	1.36	.	.	.	.	.	.	.	.	.	.
1	65X MgB2D	2.81	1.047	0.0014	(0.010)	0.0103	0.065	0.0032	0.526	0.0043	0.0053	(0.088)	0.0052
1	65X MgB2C	2.67	0.95	0.0008	0.011	0.0114	0.113	(0.010)	0.333	0.0027	0.0036	0.069	0.0047
2	AA C7639	2.39	(1.0)	.	.	.	.	.	(0.4)	.	.	.	.
1	65X MgB1E	1.90	1.60	0.0008	(0.067)	0.076	0.051	0.0027	0.770	0.0020	0.0095	0.069	0.0098
1	58A ST1270	1.36	0.492	0.0033	.	.	0.01	0.0049	0.13	0.01	.	0.065	.

Number	Ag	Ce	Hg	La	Ti	Zr	~mm Ø x ~mm H
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65X MgA21A	.	.	.	.	.	.	50x20 or 40x15
65X MgA23B	.	.	.	.	.	.	50x20 or 40x15
65X MgA23A	.	.	.	.	.	.	40 x 15 last
58A ST2160	.	.	.	.	.	.	45 x 25
58A ZH2040M	.	.	.	.	.	.	~49 x ~34
65X MgA19A	.	.	.	.	.	.	50x20 or 40x15
65X MgA22A	.	.	.	.	.	.	40 x 15
AA SM183-B	.	.	.	.	.	.	62 x 6
AA SM183-C	.	.	.	.	.	.	62 x 6
65X MgA13A	0.0074	0.0024	(0.033)	0.0021	.	.	50x20 or 40x15
58A ZH2030M	.	.	.	.	.	.	~49 x ~34
65X MgA16A	0.0035	0.0017	0.005	0.0012	.	.	50x20 or 40x15
65X MgA18A	.	.	.	.	.	.	50x20 or 40x15
58A ST2120a	.	.	.	.	.	.	45 x 40
65X MgA20A	.	.	.	.	.	.	50x20 or 40x15
65X MgA12A	0.0128	0.0009	(0.016)	0.0007	.	.	50x20 or 40x15
65X MgAlJ ##	0.012	0.009	.	0.007	(0.005)	(0.0015)	45 x 20
58A ZH2020M	.	.	.	.	.	.	~49 x ~34
58A ST2110a	.	.	.	.	.	.	45 x 25
65X MgAl1B	(0.0002)	(0.0005)	0.006	(0.0005)	.	.	50x20 or 40x15
65X MgB3C	0.0028	.	.	.	.	.	50x20 or 40x15
58A ZH2010M	.	.	.	.	.	.	~49 x ~34
AA C7641	.	.	.	.	.	.	62 x 6
65X MgB2D	0.0099	.	.	.	.	.	50x20 or 40x15
65X MgB2C	0.0098	0.0009	.	0.0007	0.0003	<0.001	40 x 15
AA C7639	.	.	.	.	.	.	62 x 6
65X MgB1E	0.0300	.	.	.	.	.	50x20 or 40x15
58A ST1270	.	.	.	.	.	.	45 x 25

Number	Ag	Ce	Hg	La	Ti	Zr	~mm Ø x ~mm H
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**MAGNESIUM with MANGANESE**

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

#	Number	Mn	Al	Cu	Fe	Ni	Pb	Si	Sn	Zn	Ag	Ca	Cd	~mm Ø x ~mm H
2	AA C8096	1.88	(0.1)	(0.04)	.	(0.003)	.	(0.05)	.	(0.1)	.	.	.	62 x 6
1	63X MgE2B	1.76	0.045	0.0203	0.0019	0.0035	0.0020	0.019	0.0026	0.0243	0.0089	(0.0016)	0.0009	40 x 15
2	AA SMD3A	1.69	0.08	0.032	.	0.002	.	0.034	.	0.058	.	.	.	62 x 6
1	63X MgE3C	1.62	(0.056)	0.0072	0.0005	0.0028	0.0046	0.014	0.006	0.0101	0.0041	.	0.0046	40 x 15
2	AA C8095	(1.6)	0.17	0.012	.	0.005	.	0.052	.	0.029	.	.	.	62 x 6
2	AA C8016	(1.3)	0.03	0.070	.	0.011	.	0.064	.	0.11	.	.	.	62 x 6
2	AA C7857	1.07	(0.1)	(0.03)	.	(0.001)	.	(0.05)	.	(0.1)	.	.	.	62 x 6

**MAGNESIUM with ZINC**

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

#	Number	Zn	Ag	Al	Be	Ca	Cu	Fe	Mn	Ni	Pb	Si	Sn	Sr	Zr	~mm Ø x ~mm H
1	58A ST5310	7.20	.	0.0040	.	.	1.64	0.0110	0.967	0.0020	.	0.025	.	.	.	45 x 35
1	66X MgC4C	6.81	0.0074	0.039	(0.0001)	(<0.001)	0.0024	0.006	0.166	0.0009	0.0030	0.06	0.021	(0.00014)	<0.001	50x20 or 40x15
1	58A ST7320	6.68	.	(0.036)	.	.	3.45	0.0069	0.361	0.00024	.	0.066	.	.	.	45 x 25
1	66X MgC5A	6.61	.	0.072	.	.	0.0286	0.0008	1.17	0.0111	0.0281	0.026	0.0051	.	.	50x20 or 40x15
1	66X MgD5A	6.25	0.044	0.040	<0.0005	(0.030)	2.88	0.008	0.307	0.0120	0.097	0.134	0.104	.	.	50x20 or 40x15
1	58A ST7330	6.01	.	0.205	.	.	2.76	0.019	0.57	0.055	.	0.144	.	.	.	45 x 25
1	58A ST7340	5.52	.	0.148	.	.	3.71	(0.019)	0.25	0.018	.	0.332	.	.	.	45 x 25
1	58A ST7350	4.76	.	0.106	.	.	4.17	0.016	0.133	0.0022	.	0.215	.	.	.	45 x 25
2	AA C7510	3.04	.	.	0.11	.	0.019	.	.	0.001	.	.	.	.	.	62 x 6
2	AA SML76	(3.0)	.	0.19	.	.	(0.03)	.	(0.2)	.	.	(0.1)	.	.	.	62 x 6
2	AA SML75	(2.0)	.	0.21	.	.	(0.03)	.	(0.2)	.	.	(0.1)	.	.	.	62 x 6

## RM JEWELRY INDIVIDUAL XRF SAMPLES

analysis listed in mass % FLX 0740: 2mm Ø mounted in 36mm Ø x 10mm others: 3mm Ø mounted in 36mm Ø x 10mm

Number	Ag	Au	Cu	Fe	Ir	Ni	Pd	Pt	Rh	Ru	W	Zn
FLX 0720	.	<b>99.99</b>	0.002	.	0.002	.	0.002	0.002	0.002	.	.	.
FLX 1404	.	<b>99.69</b>	.	.	.	.	.	.	.	.	.	Co: 0.310
FLX 0701	4.59	<b>91.76</b>	3.65	.	.	.	.	.	.	.	.	.
FLX 0702	4.60	<b>90.12</b>	5.28	.	.	.	.	.	.	.	.	.
FLX 1405	.	<b>81.89</b>	.	.	.	18.11	.	.	.	.	.	.
FLX 0743	.	<b>80.07</b>	1.12	.	.	14.35	.	.	.	.	.	4.46
FLX 1402	5.16	<b>76.37</b>	10.29	.	.	.	.	.	.	.	.	8.18
FLX 0703	4.18	<b>75.14</b>	4.93	.	.	.	15.75	.	.	.	.	.
FLX 0708	.	<b>75.12</b>	17.47	.	.	5.81	.	.	.	.	.	1.60
FLX 0726	10.16	<b>75.11</b>	14.73	.	.	.	.	.	.	.	.	.
FLX 0728	4.79	<b>75.1</b>	20.11	.	.	.	.	.	.	.	.	.
FLX 0727	8.98	<b>75.07</b>	15.95	.	.	.	.	.	.	.	.	.
FLX 0724	15.07	<b>75.05</b>	9.88	.	.	.	.	.	.	.	.	.
FLX 0725	12.54	<b>75.03</b>	12.43	.	.	.	.	.	.	.	.	.
FLX 0705	10.09	<b>75.03</b>	4.83	.	.	.	10.05	.	.	.	.	.
FLX 0704	2.75	<b>75.03</b>	9.74	.	.	.	12.48	.	.	.	.	.
FLX 0707	2.75	<b>75.02</b>	15.13	.	.	5.04	.	.	.	.	.	2.06
FLX 0706	13.13	<b>75.0</b>	5.42	.	.	.	6.45	.	.	.	.	.
FLX 1302	15.16	<b>59.13</b>	17.31	.	.	.	.	.	.	.	.	8.40
FLX 0710	30.94	<b>59.06</b>	3.48	.	.	.	6.52	.	.	.	.	.
FLX 0709	21.93	<b>59.02</b>	4.05	.	.	.	15.0	.	.	.	.	.
FLX 0903	4.32	<b>58.69</b>	36.99	.	.	.	.	.	.	.	.	.
FLX 0738	19.7	<b>58.65</b>	19.22	.	.	.	.	.	.	.	.	2.43
FLX 0904	13.77	<b>58.65</b>	27.58	.	.	.	.	.	.	.	.	.
FLX 0905	25.06	<b>58.64</b>	14.92	.	.	.	.	.	.	.	.	1.38
FLX 0715	.	<b>58.64</b>	26.18	.	.	6.09	.	.	.	.	.	9.09
FLX 0736	33.01	<b>58.61</b>	7.89	.	.	.	.	.	.	.	.	0.49
FLX 0712	27.36	<b>58.59</b>	4.05	.	.	.	10.0	.	.	.	.	.
FLX 0735	6.65	<b>58.58</b>	31.08	.	.	.	.	.	.	.	.	3.69
FLX 0739	33.39	<b>58.53</b>	8.08	.	.	.	.	.	.	.	.	.
FLX 0729	29.42	<b>58.52</b>	12.06	.	.	.	.	.	.	.	.	.
FLX 0711	10.72	<b>58.49</b>	26.47	.	.	.	.	.	.	.	.	4.32
FLX 0713	4.84	<b>58.47</b>	24.91	.	.	8.39	.	.	.	.	.	3.39
FLX 0714	.	<b>58.44</b>	41.31	.	.	.	.	.	.	.	.	0.25
FLX 0744	26.84	<b>55.37</b>	10.09	.	.	.	6.49	.	.	.	.	1.21
FLX 0737	6.15	<b>38.35</b>	46.89	.	.	.	.	.	.	.	.	8.61
FLX 1301	45.83	<b>37.63</b>	12.67	.	.	.	.	.	.	.	.	3.87
FLX 0716	15.09	<b>37.63</b>	37.97	.	.	.	.	.	.	.	.	9.31
FLX 0731	54.31	<b>37.52</b>	8.17	.	.	.	.	.	.	.	.	.
FLX 0732	58.75	<b>33.71</b>	7.54	.	.	.	.	.	.	.	.	.
FLX 0734	6.3	<b>33.65</b>	50.28	.	.	.	.	.	.	.	.	9.77
FLX 1401	33.00	<b>33.61</b>	33.36	.	.	.	.	.	.	.	.	0.030
FLX 0718	6.21	<b>33.56</b>	49.69	.	.	.	.	.	.	.	.	10.54
FLX 0717	11.92	<b>33.52</b>	41.04	.	.	.	.	.	.	.	.	13.52
FLX 1403	5.90	<b>29.36</b>	53.80	0.010	.	0.200	0.030	0.010	.	.	.	10.68 Cd: 0.010
FLX 0721	<b>99.97</b>	.	0.008	.	0.005	.	0.005	0.007	0.005	.	.	.
FLX 0719	<b>99.94</b>	.	0.06	.	.	.	.	.	.	.	.	.
FLX 0730	<b>93.56</b>	.	6.44	.	.	.	.	.	.	.	.	.
FLX 1303	<b>92.76</b>	.	4.92	.	.	.	.	.	.	.	.	2.32
FLX 0733	<b>83.75</b>	.	16.25	.	.	.	.	.	.	.	.	.
FLX 1406	<b>34.98</b>	.	6.50	.	.	.	58.52	.	.	.	.	.
FLX 0742	0.005	.	<b>99.99</b>	0.005	.	.	.	.	.	.	.	.
FLX 0740	.	.	0.005	.	0.09	.	.	.	<b>99.90</b>	0.005	.	.
FLX 0723	.	.	0.01	0.01	.	.	<b>99.96</b>	0.01	0.01	.	.	.
FLX 0722	.	.	.	.	0.02	.	0.02	<b>99.95</b>	0.01	.	.	.
FLX 0741	.	.	4.16	.	.	.	.	<b>95.84</b>	.	.	4.63	.
FLX 0902	.	.	.	.	.	.	.	<b>95.37</b>	.	.	.	.
FLX 0901	.	.	.	.	.	.	.	<b>95.23</b>	.	4.77	.	.
FLX 1202	.	.	.	.	10.0	.	.	<b>90.0</b>	.	.	.	.
FLX 1201	.	.	.	.	25.0	.	.	<b>75.0</b>	.	.	.	.
Number	Ag	Au	Cu	Fe	Ir	Ni	Pd	Pt	Rh	Ru	W	Zn

## RM LARGER JEWELRY SAMPLES

16 mm Ø mounted in 36mm Ø x 10mm

Number	Ag	Au	Cu	Ni	Pd	Zn
FLX 0720-16	.	99.99	0.002	.	.	.
FLX 0720-16a	.	99.99	.	.	.	.
FLX 0704-16d	2.99	75.22	9.19	.	12.6	.
FLX 0704-16c	3.05	75.08	9.37	.	12.5	.
FLX 0715-16a	9.05	59.10	25.74	6.11	.	.
FLX 0738-16	19.8	58.58	21.1	.	.	0.52
FLX 0744-16	26.8	55.68	9.43	.	6.57	1.52
FLX 0732-16	57.1	33.46	9.44	.	.	.
FLX 0734-16a	7.09	33.41	48.82	.	.	10.68

**CRM GOLD ALLOYS**

analysis listed in mass % ~16 mm disc mounted in acrylic 40 mm Ø x 5 mm

Number	Alloy	Ag	Au	Cu	Ni	Zn
ERM-EB508	Yellow Gold	24.90	75.12	.	.	.
ERM-EB507	White Gold	3.02	75.10	14.69	4.99	2.107
ERM-EB506	Rose Gold	3.90	58.56	35.65	.	1.891

**SILVER**

analysis listed in mg/kg 131X PAG: RM, 34 Ø x 12mm 131X PAG: RM, 25 Ø x 3mm IMN SH: CRM 40 Ø x ~15-20mm IMN SJ: 40 mm Ø x ~15-20 mm

Number	Cu	Al	As	Au	Bi	Cd	Fe	Ga	In	Ir	Mn	Ni	P	Pb	Pd	Pt	Rh	Sb	Se	Si	Sn	Te	Tl	Zn
131X PAG2A	400	2	8	20	12	5	7	15	.	0.02	10	9	2	12	180	10	2	12	10	4	14	15	.	40
IMN SJ2	306.0	.	41.3	35.4	47.4	21.2	26.4	.	49.2	.	46.1	49.7	.	82.5	41.5	44.4	.	81.2	45.7	.	.	43.0	40.5	135.1
131X AGP2B	193	.	29	114	96	56	(20)	.	.	.	49	57	.	75	105	112	.	107	65	.	95	90	.	109
131X PAG1A	75	8	12	120	40	35	5	60	.	0.02	35	25	4	40	180	35	<1	50	35	30	40	120	.	50
131X AGP3B	66	.	6	26	12	6	(11)	.	.	.	3	12	.	12	16	23	.	21	16	.	22	18	.	34
IMN SH3	59.0	.	11.0	7.7	9.2	9.6	11.3	.	8.7	.	27.3	29.7	.	44.9	25.7	25.4	.	48.6	8.7	.	.	25.7	25.8	43.8
131X AGP4B	41	.	3	9	7	2	(23)	.	.	.	3	6	.	5	7	7	.	12	6	.	6	5	.	20
IMN SJ1	15.3	.	1.8	4.9	1.4	2.2	2.1	.	1.4	.	6.5	2.6	.	7.2	2.0	1.2	.	1.5	1.2	.	.	1.6	(0.70)	382.6

**RM SILVER ALLOYS**

analysis in mass %

Number	Ag	Au	Cu	Pb	Zn	Units
132X AGB100C	99.94	.	0.009	.	.	~40 mm Ø x ~10 mm
132X AGB100A	99.89	.	0.136	.	.	~40 mm Ø x ~10 mm
132X AGB100B	99.84	.	0.012	.	.	~40 mm Ø x ~10 mm
132X AGB93B	92.70	.	7.27	.	.	~40 mm Ø x ~10 mm
132X 925Zn1B	92.70	.	6.09	.	1.39	25 mm Ø x 3 mm
132X 925Zn3B	92.64	.	4.53	.	2.88	25 mm Ø x 3 mm
132X AGB90A	90.16	.	9.56	.	.	~40 mm Ø x ~10 mm
132X AGB90B	89.73	.	10.24	.	.	~40 mm Ø x ~10 mm
132X AGB88B	88.12	.	11.87	.	.	~40 mm Ø x ~10 mm
132X AGB87B	87.13	.	12.67	.	.	~40 mm Ø x ~10 mm
132X AGB85C	84.87	.	15.09	.	.	~40 mm Ø x ~10 mm
132X AGB75B	75.20	.	24.75	.	.	~40 mm Ø x ~10 mm
132X AGB75C	75.11	.	24.53	.	.	~40 mm Ø x ~10 mm
133X AGQ3C	rem	1.975	9.612	0.921	.	25 mm Ø x 3 mm
133X AGQ2C	rem	0.978	5.808	0.469	.	25 mm Ø x 3 mm
133X AGQ1C	rem	0.251	2.532	0.245	.	25 mm Ø x 3 mm

**RM SILVER ALLOYS**

analysis in mass %

Number	Au	Bi	Cu	Pb	Sb	Se	Si	Sn	Zn	Al	As	Cd	Co	Cr	Fe	Ge	In
133X AGA1A	1.48	0.194	19.95	0.207	0.050	0.0169	.	0.291	0.211	0.0096	0.0255	0.0165	0.0406	.	0.039	0.0107	0.0037
133X AGA2A	0.507	0.113	10.00	1.02	0.192	0.0078	.	0.520	0.502	0.0019	0.0144	0.0113	0.0163	.	0.027	0.0047	0.0065
133X AGA3A	0.258	0.048	4.91	1.89	0.459	0.0044	.	0.921	0.816	(0.0020)	0.0080	0.0042	0.0050	.	(0.015)	0.0045	0.0134
131X AgSe2A	.	0.0790	0.1333	.	.	0.0465	0.0039	.	.	0.0043	.	.	.	0.0037	0.0022	.	.
131X AgSe1A	.	0.0304	.	.	.	0.0162	.	.	.	.	.	.	.	.	0.0023	.	.

Number	Mn	Ni	Pd	Pt	Te	Units
133X AGA1A	0.0061	0.0118	0.0054	0.0067	0.0271	~25 mm Ø x ~3 mm
133X AGA2A	0.0115	0.0264	0.0076	0.0114	0.0098	~25 mm Ø x ~3 mm
133X AGA3A	0.0098	0.0450	0.0156	0.0256	0.0054	~25 mm Ø x ~3 mm
131X AgSe2A	.	.	.	.	.	~40 mm Ø x ~10 mm
131X AgSe1A	.	.	.	.	.	~40 mm Ø x ~10 mm

TIN

# = class, where 1 = CRM and 2 = RM                      analysis listed in mass %                      \* Provisional Analysis

#	Number	Ag	Al	As	Au	Bi	C	Cd	Co	Cr	Cu	Fe	Ga	Ge	Hg	In
1	SRM 1728	0.4591	.	.	.	(0.0128)	.	0.00582 (0.0057)	(0.00012)	3.06	0.0111	.	.	.	0.011198	(0.0031)
1	71X SR2F	0.0305	0.0022	0.0070	0.0077	0.0403	.	0.0351	0.0064	0.0031	0.116	0.0133	.	0.009	0.141	0.0597
1	71X SR1F	0.0165	(0.002)	0.0032	0.0022	0.0102	.	0.0109	0.0016	.	0.0016	(0.002)	.	0.011	0.0178	0.0104
1	71X SR0D	0.0101	0.0057 (0.0006)	0.0039	(0.0007)	.	.	0.0020	0.0006	.	0.0049	0.0011	0.0070	(0.0005)	0.0083	0.0119
1	SRM 1729	(0.00075)	(0.0460)	.	.	0.01147	.	.	.	.	(0.0024)	(0.00141)	.	.	.	.
1	SRM 1727	.	.	(0.0100)	.	(0.0008)	.	(0.0002)	.	.	(0.0004)	(0.0020)	.	.	.	(0.0020)
2	BCS 192	.	.	<0.0001	.	<0.0001	0.001	<0.0001	.	.	<0.0001	<0.0001	.	.	.	<0.0001

Number	Ni	P	Pb	S	Sb	Se	Si	Sn	Te	Tl	Zn	Melt °C	Units
SRM 1728	0.00817 (0.0010)	0.0544	0.00349 (0.0087)	.	(0.0045)	(96.3)	.	.	.	(0.0156)	.	39	mm Ø x 15 mm
71X SR2F	0.0183 (0.007)	0.151	.	0.074	.	.	0.0246	0.005	0.0058	.	.	-40	mm Ø x -15 mm last
71X SR1F	0.0058	0.0014	0.0256 (0.002)	0.0203	0.004	.	0.0010	.	0.0126	.	.	-40	mm Ø x -15 mm
71X SR0D	0.0009	0.0007	0.038 (0.0047)	0.028	.	.	0.0019	.	0.0022	.	.	-40	mm Ø x -15 mm
SRM 1729	(0.00022)	.	0.000311	.	(0.00964)	.	(0.0020)	(96.9)	.	.	0.0518	39	mm Ø x 15 mm
SRM 1727	(0.0003)	.	0.003326	.	(0.0040)	.	.	.	.	.	.	30	mm x 30 mm x 30 mm
BCS 192	<0.0001	.	<0.001	0.0002	<0.001	.	.	99.996	.	.	<0.0001	231.9	300 g block or 100 g chips

RM                      TIN - LOW ALLOY                      37 mm Ø x 12 mm

Number	Ag	Al	As	Bi	Cd	Co	Cu	Fe	In	Ni	Pb	Sb	Sn	Zn
NF 54-1	0.005	0.005	<0.1	0.002	0.0002	0.002	0.01	<0.1	0.005	0.002	0.03	0.005	Rem	<0.1
NF 54-2	0.01	0.01	<0.1	0.005	0.0005	0.005	0.05	<0.1	0.01	0.005	0.15	0.01	Rem	<0.1
NF 54-3	0.03	0.03	<0.5	0.01	0.001	0.01	0.15	<0.1	0.02	0.01	0.40	0.02	Rem	<0.1
NF 54-4	0.06	.	<0.5	0.02	0.005	0.02	0.30	<0.1	0.04	0.02	0.70	0.04	Rem	<0.1
NF 54-5	0.10	.	<0.75	0.035	0.01	.	0.50	.	0.08	.	1.0	0.08	Rem	<0.1

RM                      BISMUTH AND SULPHUR IN TIN

certified analysis in bold, rest is informational composition                      37 mm Ø x 12 mm

Number	Bi	S	Ag	Al	As	Au	Cd	Cu	Fe	In	Ni	P	Pb	Sb	Sn	Zn
NF 60-4	3.99	<0.001	0.001	<0.001	<0.01	<0.001	<0.001	0.001	<0.001	0.005	<0.001	<0.01	Rem	0.005	60	<0.001
NF 60-3	3.00	<0.001	0.001	<0.001	<0.01	<0.001	<0.001	0.001	<0.001	0.005	<0.001	<0.01	Rem	0.005	60	<0.001
NF 60-2	2.39	<0.001	0.001	<0.001	<0.01	<0.001	<0.001	0.001	<0.001	0.005	<0.001	<0.01	Rem	0.005	60	<0.001
NF 60-1	2.01	<0.001	0.001	<0.001	<0.01	<0.001	<0.001	0.001	<0.001	0.005	<0.001	<0.01	Rem	0.005	60	<0.001
NF 59-5	0.008	0.020	3.98	<0.001	<0.01	<0.001	<0.001	0.51	0.005	0.006	0.001	<0.01	0.056	0.023	Rem	0.001
NF 59-4	0.008	0.0085	3.98	<0.001	<0.01	<0.001	<0.001	0.51	0.005	0.006	0.001	<0.01	0.056	0.023	Rem	0.001
NF 59-3	0.008	0.0048	3.98	<0.001	<0.01	<0.001	<0.001	0.51	0.005	0.006	0.001	<0.01	0.056	0.023	Rem	0.001
NF 59-2	0.008	0.0007	3.98	<0.001	<0.01	<0.001	<0.001	0.51	0.005	0.006	0.001	<0.01	0.056	0.023	Rem	0.001
NF 59-1	0.008	<0.0006	3.98	<0.001	<0.01	<0.001	<0.001	0.51	0.005	0.006	0.001	<0.01	0.056	0.023	Rem	0.001

CRM                      SPECIALTY TIN BASE LOW-LEAD and LEAD-FREE SOLDERS

analysis listed in mass %                      ~40 mm Ø x ~15 mm

Number	Ag	Al	As	Au	Bi	Cd	Co	Cu	Fe	Ge	Hg	In	Ni	P	Pb	S	Sb	Se	Zn
74X CA5B	4.09 (0.0014)	0.0125	0.0091	0.0050	0.0023	.	1.189	0.0021	.	0.0030	0.0129	0.0149	(0.011)	0.044	.	0.124 (0.0004)	(0.0019)		
74X CA7B	4.02 Cr:0.0045	0.0085	.	0.0102	0.0059	(0.0018)	0.347	0.007	.	0.049	0.0053	0.0315	.	0.107	.	0.194	0.0501		
74X AB1A	3.58	0.0280	0.0010	0.997	0.0199	0.0032	0.0285	0.0435	.	.	0.0262	0.0036	.	0.0353	.	0.0111	.		
74X CA2C	3.50	0.0145	0.0016	0.0298	0.0039	0.0025	0.797	0.0038	0.014	0.0054	0.0084	0.0336	0.005	0.057	.	0.0806	0.0015		
74X CA4D	3.07 Cr:0.0010	0.0030	0.0020	0.0515	0.0025	0.0005	0.552	0.0040	.	0.0075	0.009	0.0589	.	0.081	.	0.0612	0.0051		
74X CA3C	3.02	0.0005	0.0022	0.0087	0.016	0.0023	0.0053	0.071	0.0036	(0.002)	.	0.0052	0.0053	0.025	0.033	.	0.033	(0.0008)	
74X HAG	2.80 (0.002)	0.0032	.	0.0639	0.0018	.	0.629	0.0029	.	.	0.0090	0.0133	(0.0009)	0.077	.	2.10 (0.0008)	2.73		
74X CA8B	2.47	0.0144	.	0.0172	0.0101	0.0202	0.950	0.0043	0.0020	0.101	0.0062	0.0020	0.010	0.084	.	0.0180	.		
74X CA9A	1.002	0.0007	0.0173	0.0025	0.0364	0.0015	.	0.097	0.0085	0.0049	.	0.0165	0.0039	0.011	0.038	.	0.076	0.0010	
74X EF	0.667 (0.0012)	0.0092	.	0.0099	0.0003	.	2.94	0.0008	.	.	0.0074	0.0069	(0.0012)	0.0248	.	0.0168	0.0008	(0.0054)	
74X AMF	0.496 (0.0012)	0.0038	.	0.190	0.0061	.	3.07 (0.0006)	.	.	.	0.0082	0.0260	(0.0016)	0.126	.	1.064 (0.0013)	(0.0055)		
74X CA1B	0.440	0.0262	.	0.0053	0.0131	0.0071	.	0.682	.	.	.	.	.	0.077	.	0.0169	.		
74X WSA	0.298 (0.0007)	0.0105 (0.0002)	0.0063	0.00140	.	4.58 (0.0036)	.	0.020	.	.	0.0032	0.0048	0.0122	0.037	.	1.49	.	0.0009	
74X HNF	0.160	0.0011	0.016	.	0.042	0.0046	.	4.12	0.020	.	0.0052	0.195	(0.001)	0.0050	.	0.038	0.0024	0.0068	
74X HNE	0.143	0.005	0.010	.	0.122	0.0057	.	3.82	0.010	.	.	.	0.185	(0.002)	0.0404	last	0.037	0.0016	(0.0009)
74X OAA	0.100 (0.0007)	0.080 (0.0001)	1.065	0.00063	.	3.41	0.007	.	.	0.0034	0.0025	0.0072	0.128	.	0.0098	.	0.0098	(0.002)	
74X HBG	0.086 (0.0026)	0.045	.	0.038	0.0103	.	4.49	0.0138	.	0.0179	1.22	(0.002)	0.056	.	4.81	0.0038	(0.02)		
74X GE2A	0.079	0.068	.	.	0.0086	.	0.713	.	0.479	.	.	0.031	.	0.0467	.	.	.	.	.
74X GE1A	0.052	0.065	.	.	0.0059	.	0.662	.	0.046	.	.	0.0289	.	0.0339	.	.	.	.	.
74X TCF	0.039 (0.001)	0.024	.	0.106	0.0150	.	4.99	0.0031	.	.	0.0215	0.0167	(0.002)	0.183	.	0.124	0.0473	0.004	
74X BZ1A	0.004	0.0021	0.0119	.	3.03	0.0012	.	0.026	0.011	.	.	.	0.0097	.	0.0238	.	0.031	.	8.27



**RM TIN - SILVER ALLOYS**

37 mm Ø x 12 mm

Number	Ag	Bi	Cu	Ge	Hg	In	Ni	P	Pb	Sb	Sn	Zn
NF 46-3	5.0 #	0.25	0.030	# = segregation in Ag noted				.	0.21	0.059	Rem	(0.017)
NF 56-5	4.49	0.029	0.54	.	0.0024	.	.	0.006	0.26	.	Rem	.
NF 56-6	4.24	0.096	0.80	.	0.009	.	.	0.012	0.024	.	Rem	.
NF 46-2	4.1	0.095	0.096	.	.	.	.	.	0.059	0.11	Rem	(0.007)
NF 57-2	4.01	.	0.46	.	0.0002	.	.	0.006	<0.001	.	Rem	.
NF 56-2	3.77	0.50	0.60	.	0.0004	.	.	0.009	0.051	.	Rem	.
NF 56-3	3.53	.	0.4	.	0.014	.	.	0.003	0.009	0.50	Rem	.
NF 56-4	3.26	0.20	0.30	.	0.0045	.	.	0.021	0.22	.	Rem	.
NF 46-1	3.1	0.05	0.19	.	.	.	.	.	0.043	0.205	Rem	(0.015)
NF 57-1	3.00	0.004	0.49	.	0.0016	.	.	0.004	0.076	.	Rem	.
NF 9-1	3.00	0.048	0.073	.	.	.	.	.	Rem	0.51	59.90	.
NF 61-4	2.58	.	.	.	.	.	.	.	Rem	.	62.0	.
NF 63-6	2.56	.	0.50	0.042	.	<0.001	0.0073	.	0.009	.	Rem	.
NF 56-1	2.54	0.006	0.91	.	0.018	.	.	0.020	0.10	.	Rem	.
NF 61-3	2.33	.	.	.	.	.	.	.	Rem	.	62.0	.
NF 9-2	2.00	0.093	0.040	.	.	.	.	.	Rem	0.38	61.90	.
NF 61-2	1.81	.	.	.	.	.	.	.	Rem	.	62.0	.
NF 61-1	1.54	.	.	.	.	.	.	.	Rem	.	62.0	.
NF 63-4	1.50	.	0.194	0.025	.	0.027	0.12	.	0.012	.	Rem	.
NF 63-2	1.02	.	0.104	0.052	.	0.005	0.027	.	0.18	.	Rem	.
NF 63-5	1.01	.	0.51	0.010	.	0.11	0.065	.	0.018	.	Rem	.
NF 9-3	1.00	0.25	0.010	.	.	.	.	.	Rem	0.23	63.60	.
NF 63-1	0.74	.	0.077	0.079	.	0.200	0.068	.	0.009	.	Rem	.
NF 58-3	0.51	0.077	0.59	.	0.0043	.	.	0.010	0.040	.	Rem	.
NF 58-1	0.32	0.12	0.69	.	0.0003	.	.	0.001	0.085	.	Rem	.
NF 58-2	0.21	0.095	0.79	.	0.0024	.	.	0.006	0.008	.	Rem	.

**CRM TIN BASE SETS**

available in sets only, as grouped

Number	Ag	Al	As	Au	Bi	Cd	Cu	Fe	In	Ni	Pb	Sb	Sn	Zn
IMN LBA 1	0.632	.	0.0459	0.0115	0.230	0.00085	0.282	0.0195	0.208	0.0055	0.228	0.0517	Rem	0.0032
IMN LBA 2	0.697	(0.0029)	0.0314	0.0259	0.175	0.0052	0.487	0.0182	0.127	0.0107	0.319	0.0979	Rem	0.0047
IMN LBA 3	0.0971	0.0022	0.0239	0.0468	0.0989	0.0039	0.885	0.0057	0.0949	0.0224	0.141	0.142	Rem	0.0020
IMN LBA 4	0.0976	0.0061	(0.0086)	0.0632	0.0364	0.0058	1.21	0.0114	0.0503	0.0320	0.0862	0.457	Rem	0.0006
IMN LBA 5	0.214	.	(0.0090)	0.691	0.325	0.0053	0.763	0.0098	0.0228	0.0346	0.0579	0.286	Rem	(0.0009)
IMN LCA 1	0.210	<0.0012	0.0494	0.0677	0.269	0.0093	.	.	0.141	.	0.229	0.490	Rem	.
IMN LCA 2	0.158	.	0.0864	0.0542	0.146	0.0073	2.67	0.0155	0.0610	0.0210	0.0773	0.138	Rem	0.0016
IMN LCA 3	0.107	(0.0011)	0.0285	0.0260	0.100	0.0025	3.53	0.0143	0.0081	0.0102	0.137	0.101	Rem	0.0042
IMN LCA 4	0.0545	(0.0023)	0.0145	0.0100	0.0403	0.0115	4.51	0.0101	0.0442	0.0056	0.0890	0.0479	Rem	0.0103
IMN LCA 5	0.221	.	0.0386	0.0670	0.263	0.0006	1.52	0.0295	0.0533	0.0315	0.232	0.458	Rem	0.0011
IMN L89 1	.	.	0.019	.	0.012	0.19	3.20	0.18	.	0.010	0.072	5.66	Rem	0.099
IMN L89 2	.	.	0.037	.	0.026	0.091	4.15	0.086	.	0.031	0.13	6.39	Rem	0.059
IMN L89 3	.	.	0.065	.	0.052	0.041	3.49	0.058	.	0.090	0.29	7.41	Rem	0.042
IMN L89 4	.	.	0.12	.	0.099	0.021	2.81	0.028	.	0.16	0.52	8.14	Rem	0.020
IMN L89 5	.	.	0.18	.	0.20	0.011	2.12	0.013	.	0.33	1.11	8.86	Rem	.
IMN L89 6	.	.	0.029	.	0.014	0.19	4.51	0.17	.	0.014	0.20	8.03	Rem	0.096
IMN LA 1	.	.	0.012	.	0.014	1.41	2.45	0.012	.	0.011	3.18	6.79	Rem	0.0016
IMN LA 2	.	.	0.092	.	0.033	0.88	3.84	0.018	.	0.094	2.17	7.81	Rem	.
IMN LA 3	.	.	0.24	.	0.059	0.50	8.13	0.059	.	0.28	1.19	10.22	Rem	0.0095
IMN LA 4	.	.	0.43	.	0.085	0.096	6.95	0.080	.	0.45	0.41	11.66	Rem	.
IMN LA 5	.	.	0.54	.	0.099	0.011	5.45	0.096	.	0.53	0.070	13.58	Rem	0.020
IMN L 1	.	.	0.051	.	0.17	0.0020	0.11	.	.	.	Rem	0.52	56.06	0.00093
IMN L 2	.	.	0.034	.	0.11	0.0043	0.075	(0.011)	.	.	Rem	0.35	59.09	0.0019
IMN L 3	.	.	0.092	.	0.22	0.0065	0.034	(0.023)	.	.	Rem	0.14	60.18	0.0064
IMN L 4	.	.	0.017	.	0.055	0.0080	0.013	(0.0085)	.	.	Rem	0.079	62.81	0.0011
IMN L 5	.	.	0.0035	.	0.014	0.0097	0.0037	.	.	.	Rem	0.011	64.96	0.0056

**CRM TITANIUM**

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

#	Number	Al	B	C	Co	Cr	Cu	Fe	H	Mn	Mo	N	Nb	Ni	O
1	IARM 311A	0.32	.	0.009	.	0.013	0.0013	0.060	0.0021	0.0013	0.0012	0.012	(0.002)	0.014	0.083
1	<b>BS T-4A</b>	0.040	.	0.014	.	0.026	(0.001)	0.19	(0.0027)	0.003	0.0006	0.005	.	0.014	(0.37)
1	IARM 312B	0.018	<(0.001)	0.0092	<(0.002)	0.010	(0.003)	0.072	0.0004	(0.001)	(0.003)	0.007	(0.001)	0.019	0.128
1	IARM 303B	(0.015)	<0.001	0.035	<0.002	0.0018	(0.002)	0.120	(0.0008)	(0.001)	(0.002)	0.017	(0.006)	(0.0013)	0.176
1	IARM 361A	(0.013)	(0.0005)	(0.012)	<(0.002)	0.008	(0.003)	0.095	(0.0027)	<(0.05)	0.288	(0.006)	(0.004)	0.88	0.15

BCR: HIP; 090A: 40mm Ø x 20mm; 090B: ~25g of 0.2g cubes BS: 38-40 Ø x ~7 to 19mm IARM: 31mm Ø x 2 or 18mm

Number	P	Pd	Ru	S	Si	Sn	V	W	Y	Zr	Grade
IARM 311A	.	.	.	.	0.005	0.0020	0.004	(0.002)	(0.0002)	0.012	BT1-0
<b>BS T-4A</b>	(0.001)	.	.	(0.0004)	0.011	0.005	(0.001)	<0.002	.	<0.002	Ti Cp 1
IARM 312B	<(0.002)	<(0.005)	<(0.001)	(0.0008)	(0.006)	(0.004)	0.009	<(0.005)	<(0.001)	0.0014	Ti CP 4.1
IARM 303B	.	0.13	<0.01	<0.002	(0.006)	(0.006)	(0.0023)	<0.002	<0.001	(0.0028)	Ti Cp 7
IARM 361A	<(0.003)	(0.002)	<(0.006)	<(0.004)	(0.012)	(0.004)	(0.006)	<(0.03)	(0.0004)	(0.0016)	Ti CP 12

**17025** last

Ti: (99.6)



## CRM TITANIUM SET

Number	Al	Mo	Sn	Zr	Units
58A HC03001	4.51	2.69	1.36	5.35	35 mm Ø x 35 mm
58A HC03002	5.31	2.4	1.71	4.59	
58A HC03003	6.05	2.0	2.04	3.93	
58A HC03004	6.94	1.76	2.32	3.32	
58A HC03005	7.78	1.42	2.72	2.83	

## TITANIUM ALLOYS, chart 1 of 2

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

#	Number	Al	V	C	Cr	Cu	Fe	H	N	O	Mn	Mo	Ni	Si	Sn	Zr
1	IARM 269B	7.86	1.03	(0.014)	(0.0014)	(0.0023)	0.071	0.007	(0.006)	0.090	0.0071	0.98	(0.001)	(0.025)	0.008	(0.002)
1	58A ZB03002	6.54	3.61	0.014	.	.	0.066	.	0.016	.	.	.	<0.003	0.024	.	.
1	IARM Ti64-18	6.52	4.08	(0.034)	(0.013)	.	0.19	(0.0031)	(0.025)	0.181	.	(0.004)	0.011	(0.011)	(0.003)	.
1	58A CP03005	6.46	5.1	0.01	0.02	0.0099	0.231	.	.	.	0.0064	.	.	0.031	0.001	0.018
2	CT 6AL4V	6.39	4.01	.	.	.	.	.	.	.	.	.	.	.	.	.
1	SRM 654b	6.34	4.31	.	0.025	0.008	0.23	(0.002)	.	(0.17)	.	0.013	0.028	0.045	0.023	0.008
1	58A SY03005	6.24	4.08	0.013	.	.	0.047	.	.	.	.	.	.	0.024	.	.
1	IARM Ti64ELI-18	6.11	4.01	0.033	(0.004)	(0.002)	0.167	(0.0021)	(0.006)	0.118	(0.0014)	.	(0.003)	(0.014)	(0.022)	.
1	BCR 089	5.97	3.976	.	.	.	.	.	.	.	.	.	.	.	.	.
1	58A CP03004	5.88	1.61	0.017	0.028	0.0085	0.074	.	.	.	0.027	3.58	.	0.059	0.0085	0.024
2	AA Ti64-150	4.50	4.7	.	0.0221	0.019	0.16	.	Bi:0.0040	.	0.0148	0.0174	0.019	0.035	0.0189	0.029
1	IARM Ti662-18	5.61	5.35	0.007	0.046	0.46	0.510	0.0089	0.021	0.19	(0.005)	0.0031	0.039	0.011	2.01	(0.0011)
1	58A CP03003	5.21	4.89	0.014	0.997	.	1.01	.	.	.	.	4.87	.	0.038	.	0.02
1	IARM Ti42515-18	3.99	2.53	0.0067	0.015	(0.0022)	1.58	0.0018	0.0026	0.25	(0.006)	(0.0014)	0.009	0.011	(0.004)	(0.0019)
1	IARM Ti1023-18	3.31	9.75	(0.032)	(0.016)	(0.006)	1.98	(0.002)	(0.005)	0.109	(0.0024)	(0.003)	0.009	(0.018)	.	.
1	IARM 344A	3.15	15.3	0.011	3.09	(0.002)	0.20	(0.015)	0.005	0.107	(0.003)	0.004	0.011	(0.03)	3.09	(0.002)
1	58A SY03003	3.14	14.98	0.01	2.84	.	0.05	(0.001)	(0.02)	(0.013)	.	.	.	.	3.17	.
1	58A SY03004	3.13	2.82	0.01	.	.	0.042	(0.001)	(0.01)	(0.1)	.	.	.	.	.	.
1	SRM 1128	3.06	15.13	0.011	2.96	.	0.134	.	.	.	.	.	.	.	3.04	.
1	IARM 261E	3.05	2.51	0.012	0.016	0.0025	0.18	(0.0005)	0.006	0.084	(0.001)	0.003	0.018	0.007	0.005	(0.003)
1	IARM 261C	3.05	2.46	0.011	0.014	0.003	0.180	0.001	0.005	0.085	(0.003)	0.004	0.016	0.007	0.006	0.003
1	IARM 344B	3.03	14.7	0.0095	2.91	(0.0024)	0.118	(0.007)	(0.016)	0.118	(0.003)	(0.006)	0.021	(0.03)	3.01	(0.002)
1	IARM 261D	3.02	2.50	0.011	0.016	0.0028	0.185	(0.0005)	0.0051	0.083	(0.002)	0.003	0.018	0.008	0.005	0.003
1	IARM 261A	3.00	2.48	0.007	0.013	(0.002)	0.19	0.0023	0.007	0.10	0.0011	(0.003)	0.006	0.012	0.008	(0.002)
1	IARM 261B	2.98	2.23	0.011	0.016	0.003	0.19	(0.001)	0.004	0.083	(0.003)	0.004	0.023	0.008	0.004	(0.002)

#	Number	Al	V	C	Cr	Cu	Fe	H	N	O	Mn	Mo	Ni	Si	Sn	Zr
	Number	B	Co	Nb	P	Pd	Ru	S	Ta	Ti	W	Y	Units			
	IARM 269B	<(0.001)	<(0.0005)	(0.004)	(0.003)	<(0.005)	(0.004)	(0.003)	<(0.005)	(89.9)	(0.001)	<(0.001)	31 mm Ø x 2 or 18 mm			
	58A ZB03002	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 30 mm			
	IARM Ti64-18	.	.	.	.	.	.	.	.	(89.0)	.	.	31 mm Ø x 2 or 18 mm			
	58A CP03005	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 35 mm			
	CT 6AL4V	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x ~19 mm			
	SRM 654b	.	.	.	.	.	.	(0.001)	.	.	.	.	31 mm Ø x 19 mm			
	58A SY03005	.	.	.	.	.	.	.	.	.	.	.	36 mm Ø x 25 mm			
	IARM Ti64ELI-18	.	.	.	.	.	.	.	.	(89.7)	.	.	31 mm Ø x 2 or 18 mm			
	BCR 089	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm			
	58A CP03004	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 35 mm			
	AA Ti64-150	0.016	0.014	0.016	Er:0.0094	0.016	0.015	Hf:0.0153	0.016	Mg:(0.004)	.	0.005	~38 mm Ø x ~25 mm			
	IARM Ti662-18	.	.	.	.	.	.	.	.	85.8	.	.	31 mm Ø x 2 or 18 mm			
	58A CP03003	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 35 mm			
	IARM Ti42515-18	.	(0.0020)	(0.0016)	.	.	.	.	.	(91.6)	.	.	31 mm Ø x 2 or 18 mm			
	IARM Ti1023-18	.	.	.	.	.	.	.	.	84.8	.	.	31 mm Ø x 2 or 18 mm			
	IARM 344A	0.0011	(0.001)	(0.005)	(0.002)	(0.001)	.	(0.001)	(0.001)	(74.9)	(0.003)	<0.001	31 mm Ø x 2 or 18 mm			
	58A SY03003	.	.	.	.	.	.	.	.	.	.	.	36 mm Ø x 30 mm			
	58A SY03004	.	.	.	.	.	.	.	.	.	.	<0.001	35 mm Ø x 19 mm			
	SRM 1128	.	.	.	.	.	.	.	.	.	.	.	31 mm Ø x 2 or 18 mm			
	IARM 261E	0.0003	(0.0004)	(0.005)	<0.003	(0.002)	(0.001)	(0.001)	.	(94.1)	(0.001)	(0.001)	31 mm Ø x 2 or 18 mm			
	IARM 261C	0.0004	(0.005)	(0.003)	(0.003)	(0.002)	(0.001)	(0.001)	.	(94.1)	(0.001)	(0.0004)	31 mm Ø x 2 or 18 mm			
	IARM 344B	<0.001	<0.004	(0.003)	<0.003	<0.03	<0.02	<0.003	<0.04	(76.0)	<0.03	<0.006	31 mm Ø x 2 or 18 mm			
	IARM 261D	0.0003	<0.001	(0.003)	<0.004	(0.002)	(0.0005)	(0.001)	(0.0005)	(94.2)	(0.001)	(0.0005)	31 mm Ø x 2 or 18 mm			
	IARM 261A	.	.	.	.	.	.	(0.001)	.	.	.	.	31 mm Ø x 2 mm			
	IARM 261B	0.0004	<0.004	(0.002)	(0.004)	.	(0.001)	(0.0004)	.	(94.4)	(0.003)	(0.0004)	31 mm Ø x 2 or 18 mm			
	Number	B	Co	Nb	P	Pd	Ru	S	Ta	Ti	W	Y	Units			



## ZINC

# = class, where 1 = CRM and 2 = RM analysis listed in mass % Trace = informational values such as (&lt;0.001) or lower

#	Number	Pb	Al	Cd	Cu	Fe	In	Mg	Mn	Ni	Sb	Sn	Tl
1	41X Z6A	0.031	0.0096	0.0093	0.0088	(0.002)	0.0228	<0.0005	0.0002	0.0002	.	0.0038	.
1	41X Z5N	0.0286	0.0243	0.0165	0.0109	0.0262	0.0057	0.0107	0.0049	0.0051	0.0054	0.0063	0.0068
1	ERM-EB325	0.0142	.	0.00947	0.00475	0.00561	.	.	.	.	.	0.00461	0.00368
1	41X Z11A	0.0077	0.0261	0.0155	0.0116	0.0019	0.0345	.	.	.	0.0026	0.0072	(0.0010)
1	41X Z4L	0.00584	0.0065	0.00437	0.00326	0.0148	0.00304	0.00331	0.00286	0.00320	0.00340	0.00221	0.00277
1	41X Z3M	0.00502	0.00158	0.00327	0.00345	0.00605	0.00233	(0.00034)	0.00524	0.00209	0.00167	0.00297	0.00210
2	BS SP-5	0.005	0.0003	<0.0004	<0.001	<0.001	.	<0.002	.	.	<0.001	0.0010	.
1	ERM-EB323	0.00486	.	0.000651	0.00189	0.00113	.	.	.	.	.	0.00187	0.00108
1	BCR 327	0.004094	.	0.03014	(0.000056)	0.01440	.	.	.	.	.	.	.
1	BCR 326	0.003070	Trace	0.02030	0.01048	0.02648	.	.	.	.	.	.	.
2	BS SP-A	0.003	0.051	.	<0.0005	0.011	.	.	.	.	0.099	<0.001	.
1	ERM-EB324	0.00261	.	0.00489	0.000987	0.00585	.	.	.	.	.	0.00098	0.00199
2	BCS 194e	0.002	.	.	0.001	0.001	.	.	.	.	.	.	.
1	BAM M601	0.00157	<0.00005	0.000055	0.000189	0.000220	<0.000005	.	.	.	.	.	0.000225
1	ERM-EB322	0.00150	.	0.001508	0.000589	0.00191	.	.	.	.	.	0.00056	0.000528
1	SRM 683	0.00111	.	0.00011	0.00059	0.00022	Trace	.	Trace	.	.	(0.000002)	(0.00002)
1	SRM 631	(0.001)	0.50	0.0002	0.0013	0.005	0.0023	Trace	0.00015	Trace	.	0.0001	.
1	BCR 321	0.000485	<0.00007	(0.000023)	(0.000097)	(0.000222)	<0.00002	.	.	.	.	<0.00005	0.000078
1	SRM 682 *	.	(<0.000003)	(0.00001)	0.0000042	(0.00001)	.	(<0.00001)	Trace	(<0.00001)	.	(0.000002)	(<0.00002)

Number	Ag	Bi	Cr	Ga	Ge	Hg	Si	Zn	Melt 'C	Units
41X Z6A	.	0.0122	(0.0001)	.	.	.	.	.	.	50 mm Ø x 20 mm
41X Z5N	.	0.0056	.	.	.	0.0050	.	.	.	~50 mm Ø x 20 mm
ERM-EB325	.	.	.	.	.	.	.	.	.	60 mm Ø x 30 mm
41X Z11A	.	0.0189	.	.	.	(0.0009)	.	.	.	50 mm Ø x 20 mm
41X Z4L	.	0.00319	.	.	.	0.0025	.	.	.	50 mm Ø x 20 mm
41X Z3M	.	0.00315	.	.	.	0.00289	.	.	.	~50 mm Ø x ~20 mm
BS SP-5	.	.	.	.	.	.	.	.	.	37 mm Ø x 12 mm
ERM-EB323	.	.	.	.	.	.	.	.	.	60 mm Ø x 30 mm
BCR 327	.	.	.	.	.	.	.	.	.	80 mm Ø x 20 mm
BCR 326	.	.	.	.	.	.	.	.	.	80 mm Ø x 20 mm
BS SP-A	.	.	.	.	.	.	.	.	.	38 mm Ø x 14 mm last of stock
ERM-EB324	.	.	.	.	.	.	.	.	.	60 mm Ø x 30 mm
BCS 194e	.	.	.	.	.	.	.	99.99	419.5	300 g(4.5 x 3.5 x 3 cms)
BAM M601	.	.	.	.	.	.	.	.	.	45 mm Ø x 30 mm
ERM-EB322	.	.	.	.	.	.	.	.	.	60 mm Ø x 30 mm
SRM 683	0.00013	.	.	Trace	.	.	.	.	.	Cylinder segment 57mm Ø x 25mm x 19mm
SRM 631	Trace	.	0.0001	(0.0002)	(0.0002)	.	.	.	.	45 mm x 45 mm x 19 mm
BCR 321	.	.	.	.	.	.	.	.	.	80 mm Ø x 20 mm
SRM 682 *	(0.000002)	.	(<0.000006)	.	.	.	(<0.00005)	.	.	Cylinder segment 57mm Ø x 25mm x 19mm

\* SRM 682 has trace informational B, Be, C, Ca, Cl, F, K, Li, N, and Nb.

## CRM ZINC SETS

available in sets only, as grouped

Number	Al	Cd	Cu	Fe	Pb	Sn	Ti	Zn	Units
IMN ZA 1	.	0.0042	(0.0032)	0.00167	0.025	0.0038	.	Rem	Rods 10 mm Ø x 100 mm
IMN ZA 2	.	0.0029	0.0013	0.0061	0.011	0.0012	.	Rem	
IMN ZA 3	.	0.00092	0.00011	0.00078	0.0028	0.00036	.	Rem	
IMN ZA 4	.	0.00049	0.00032	0.00040	0.0016	0.00011	.	Rem	
IMN ZE 1	0.012	0.0019	0.011	0.020	0.018	0.0018	.	Rem	Discs 40 mm Ø x 25 mm
IMN ZE 2	0.0035	0.0031	(0.00037)	0.0052	0.0078	0.0074	.	Rem	
IMN ZE 3	0.025	0.0050	0.0032	.	0.0052	0.015	.	Rem	
IMN ZE 4	.	0.00023	0.013	(0.00035)	0.0012	0.0017	.	Rem	
IMN ZE 5	0.0011	0.0060	0.0049	0.011	0.0004	0.00045	.	Rem	
IMN ZL 1	0.0190	0.0365	0.342	0.00072	0.00498	0.0364	0.00745	Rem	Discs 40 mm Ø x 25 mm
IMN ZL 2	0.0119	0.0241	0.573	0.0174	0.00923	0.0420	0.114	Rem	
IMN ZL 3	0.00388	0.00492	0.201	0.00496	0.0247	0.00788	0.238	Rem	
IMN ZL 4	0.0497	0.0115	0.114	0.00879	0.0351	0.0114	0.394	Rem	
IMN ZL 5	0.0518	0.00085	0.0115	0.0299	0.0363	0.0011	0.598	Rem	

## CRM ZINC ROHS MONITOR

cast 50 mm Ø x 20 mm

Number	Cd	Cr	Hg	Pb
41X ZSC6A	0.215	<0.0002	0.029	0.0077
41X ZSC3A	0.119	0.0148	0.0021	0.0273
41X ZSC1A	0.0288	0.0039	0.026	0.0621
41X ZSC4A	0.0131	0.0299	0.050	0.156
41X ZSC2A	0.0016	0.0036	0.0053	0.111

## CRM ZAMAK (MAZAK) SPECIFICATIONS AND SUGGESTED SAMPLES

42X, 43X: ~50 mm Ø x ~15-20 mm BAM: 39 mm Ø x 39 mm BCR: 80 mm Ø x 20 mm SRM: 44 mm x 44 mm x 19 mm

Number	Al	Cu	Mg	Ni	Cd	Cr	Fe	Mn	Pb	Sn
<b>Zamak 2</b>	<b>3.9-4.3</b>	<b>2.6-2.9</b>	<b>0.025-0.05</b>	.	<b>&lt;0.003</b>	.	<b>&lt;0.075</b>	.	<b>&lt;0.004</b>	<b>&lt;0.002</b>
43X Z7A	3.68	<b>3.14</b>	0.062	0.0005	0.00092	0.0003	0.029	0.0025	0.0058	0.0031
43X Z6B	4.51	<b>2.85</b>	0.0238	0.0027	0.0031	0.0005	0.024	0.0022	0.004	0.0052
43X Z4C	4.79	<b>2.69</b>	0.0480	0.0258	0.0033	.	0.0017	0.0153	0.0062	0.0030
<b>Zamak 5</b>	<b>3.9-4.3</b>	<b>0.75-1.25</b>	<b>0.030-0.06</b>	.	<b>&lt;0.003</b>	.	<b>&lt;0.075</b>	.	<b>&lt;0.004</b>	<b>&lt;0.002</b>
<b>Zamak 6</b>	<b>3.9-4.3</b>	<b>0.75-1.25</b>	<b>&lt;0.05</b>	.	<b>&lt;0.003</b>	.	<b>&lt;0.075</b>	.	<b>&lt;0.004</b>	<b>&lt;0.002</b>
43X Z3M	3.40	<b>1.499</b>	0.114	0.0062	0.0109	0.0046	(0.042)	0.0013	0.0077	0.0058
BCR 360	3.427	<b>1.234</b>	0.0705	0.0267	0.00595	.	.	.	0.00739	0.00330
43X Z2P	4.07	<b>1.019</b>	0.0614	0.0100	0.0031	.	0.0013	0.0162	0.0048	0.0033
SRM 630	4.30	<b>0.976</b>	0.030	0.0027	0.0048	0.0031	0.023	0.0106	0.0083	0.0040
ERM-EB602	4.08	<b>0.812</b>	0.0415	0.00025	0.00011	.	0.00073	.	0.00195	0.00010
BCR 361	4.068	<b>0.798</b>	.	.	(0.000080)	.	0.001034	.	0.000531	0.00463
43X Z1L	4.48	<b>0.720</b>	0.0345	0.0069	0.0004	.	0.0009	0.0075	0.0011	(0.0005)
SRM 628	4.59	<b>0.611</b>	0.0094	0.030	0.0040	0.0087	0.066	0.0091	0.0045	0.0017
BCR 357	4.227	<b>0.5849</b>	0.0273	0.000982	0.000283	.	0.00257	.	0.00138	0.000351
<b>Zamak 3</b>	<b>3.9-4.3</b>	<b>&lt;0.10</b>	<b>0.025-0.05</b>	.	<b>&lt;0.003</b>	.	<b>&lt;0.075</b>	.	<b>&lt;0.004</b>	<b>&lt;0.002</b>
<b>Zamak 7</b>	<b>3.9-4.3</b>	<b>&lt;0.10</b>	<b>0.010-0.020</b>	<b>0.005-0.02</b>	<b>&lt;0.002</b>	.	<b>&lt;0.075</b>	.	<b>&lt;0.002</b>	<b>&lt;0.001</b>
BCR 356	4.434	<b>0.3944</b>	0.01323	0.000343	0.000073	.	0.00315	.	0.000987	(0.000032)
42X Z6B	3.67	<b>0.238</b>	0.177	0.00030	0.0039	0.0034	0.008	0.0157	0.0093	0.0057
42X Z12A	4.717	<b>0.156</b>	0.0488	0.0413	0.00277	0.00063	0.0457	0.0483	0.0079	0.0022
42X Z3J	3.84	<b>0.135</b>	0.0503	0.0071	0.0065	.	0.0145	0.0090	0.0068	0.0048
SRM 627	3.88	<b>0.132</b>	0.031	0.0029	0.0051	0.0038	0.023	0.014	0.0082	0.0042
42X Z5M	4.33	<b>0.111</b>	0.0508	0.041	0.0013	(0.0002)	(0.05)	0.0049	0.0030	0.0012
BCR 355	3.443	<b>0.1035</b>	0.0786	0.0268	0.00581	.	.	.	0.00569	0.00291
42X Z3K	3.53	<b>0.100</b>	0.060	0.0030	0.0023	.	0.014	0.0077	0.0033	<0.001
42X Z4J	3.55	<b>0.063</b>	0.058	0.0177	0.0076	.	0.012	0.0077	0.0113	0.0060
SRM 626	3.56	<b>0.056</b>	0.020	0.047	0.0016	0.0395	0.103	0.048	0.0022	0.0012
SRM 625	3.06	<b>0.034</b>	0.070	0.0184	0.0007	0.0128	0.036	0.031	0.0014	0.0006
BCR 354	3.726	<b>0.03123</b>	0.0602	0.00831	0.00297	.	.	.	0.00308	0.00141
42X Z2K	3.79	<b>0.0300</b>	0.0146	0.0155	0.0017	(0.0001)	0.0055	0.0274	0.0029	0.0011
BCR 352	4.150	<b>0.003126</b>	0.02830	0.000674	0.000288	.	.	.	(0.00064)	0.00030
BCR 351	4.355	<b>0.001213</b>	0.01310	(0.00019)	(0.000021)	.	.	.	0.000450	<0.0001
<b>Zamak 8</b>	<b>7.8-9.0</b>	<b>0.70-1.40</b>	<b>0.015-0.030</b>	<b>&lt;0.02</b>	<b>&lt;0.005</b>	.	<b>&lt;0.1</b>	.	<b>&lt;0.005</b>	<b>&lt;0.003</b>
43X Z14F	7.98	<b>1.238</b>	0.0123	0.0058	0.00567	0.0037	0.0025	(0.0003)	0.0019	0.0005

Number	Be	Bi	Ce	In	La	Sb	Si	Ti	Tl
<b>Zamak 2</b>	.	.	.	.	.	.	.	.	.
43X Z7A	0.0194	(0.0009)	.	.	.	0.0016	.	0.067	.
43X Z6B	.	0.0054	.	.	.	0.0044	.	.	.
43X Z4C	.	0.0113	.	.	.	(0.0023)	(0.0012)	.	.
<b>Zamak 5</b>	.	.	.	.	.	.	.	.	.
<b>Zamak 6</b>	.	.	.	.	.	.	.	.	.
43X Z3M	.	0.0092	.	.	.	0.0029	.	.	.
BCR 360	.	.	.	0.00298	.	.	.	.	0.00259
43X Z2P Ag:0.0098	.	0.0038	.	.	.	0.0012	.	.	.
SRM 630	.	.	.	.	.	.	0.022	.	.
ERM-EB602	.	.	.	.	.	.	0.00114	0.00048	.
BCR 361	.	.	.	(<0.00002)	.	.	.	.	0.00374
43X Z1L Ag:0.0037	.	(0.0008)	.	.	.	(0.0006)	.	.	.
SRM 628	.	.	.	.	.	.	0.008	.	.
BCR 357	.	.	.	0.000330	.	.	.	.	0.000276
<b>Zamak 3</b>	.	.	.	.	.	.	.	.	.
<b>Zamak 7</b>	.	.	.	.	.	.	.	.	.
BCR 356	.	.	.	<0.00002	.	.	.	.	0.000079
42X Z6B	.	.	(0.012)	0.00191	(0.011)	0.0169	(0.010)	.	0.0021
42X Z12A	.	.	0.0116	0.0068	0.0084	0.0070	.	.	0.0076
42X Z3J	.	.	0.0032	.	0.0013	0.0006	(0.0018)	.	.
SRM 627	.	.	.	.	.	.	0.021	.	.
42X Z5M	.	.	0.0328	.	0.0026	.	.	0.0017	.
BCR 355	.	.	.	0.00246	.	.	.	.	0.002325
42X Z3K	.	.	0.0067	.	0.0029	.	0.0011	.	.
42X Z4J	.	.	0.020	0.0016	0.020	(0.0029)	.	.	(0.0025)
SRM 626	.	.	.	.	.	.	0.042	.	.
SRM 625	.	.	.	.	.	.	0.017	.	.
BCR 354	.	.	.	0.00098	.	.	.	.	0.001101
42X Z2K	.	.	0.0055	0.0047	0.0150	0.0010	0.0011	.	.
BCR 352	.	.	.	0.000302	.	.	.	.	0.00032
BCR 351	.	.	.	<0.00002	.	.	.	.	0.000074
<b>Zamak 8</b>	.	.	.	.	.	.	<b>&lt;0.03</b>	.	.
43X Z14F	.	0.0106	.	.	.	0.0105	(<0.001)	(0.0001)	.

## CRM ZAMAK SET

SOLD IN SET/4 ONLY

40 mm Ø x 25 mm

Number	Al	Cd	Cu	Fe	Mg	Ni	Pb	Si	Sn
IMN ZG 1	3.07	0.00048	1.34	0.0083	0.074	0.0067	0.009	0.036	0.0068
IMN ZG 2	3.56	0.0049	0.72	.	0.048	0.0025	0.0065	0.024	0.0048
IMN ZG 3	4.00	0.0028	0.11	0.011	0.028	0.001	0.0033	0.01	0.00067
IMN ZG 4	4.64	0.011	(0.0089)	0.016	0.00055	0.00042	0.0013	(0.0047)	0.0021

**ZINC BINARY AND TERNARY SAMPLES**

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

#	Number	Al	Mn	Mg	Pb	Sb	Units
2	41X ZMA5.0	5.13	.	5.04	.	.	~40 mm Ø x ~15 mm
2	41X ZMA4.0	4.02	.	4.04	.	.	~40 mm Ø x ~15 mm
2	41X ZMA3.0	2.98	.	3.00	.	.	~40 mm Ø x ~15 mm
2	41X ZMA2.5	2.47	.	2.50	.	.	~40 mm Ø x ~15 mm
2	41X ZMA2.0	1.98	.	2.02	.	.	~40 mm Ø x ~15 mm
2	41X ZMA1.5	1.50	.	1.52	.	.	~40 mm Ø x ~15 mm
2	41X ZMA1.0	0.99	.	1.02	.	.	~40 mm Ø x ~15 mm
1	SRM 1741	0.5242	.	.	0.1571	.	50 mm Ø x 12 mm
2	41X ZMA0.5	0.50	.	0.52	.	.	~40 mm Ø x ~15 mm
1	SRM 1740	0.4177	.	.	0.0691	.	50 mm Ø x 12 mm
1	SRM 1738	0.1014	.	.	0.0101	.	50 mm Ø x 12 mm
1	41X ZMn1A	.	1.07	.	.	.	50 mm Ø x 20 mm last
2	41X ZSb1A	.	.	.	.	1.03	40 mm Ø x 15 mm
2	41X ZSb4A	.	.	.	.	3.78	40 mm Ø x 15 mm

**RM ZINC - ALUMINUM - ANTIMONY ALLOYS**

cast some Sb segregation in below series, last of stock 40 mm Ø x 15 mm

Number	Al	Sb	Bi	Cd	Cu	Fe	Mg	Pb	Sn
44X Z5A	20.4	5.2	0.004	0.001	0.001	0.010	<0.001	0.010	0.003
44X Z4A	20.3	6.7	0.016	0.011	0.007	0.011	0.008	0.032	0.018

**CRM ZINC ALLOY SETS**

available in SETS ONLY, as grouped

~40 mm Ø x ~25 mm

Number	Al	Bi	Cd	Cu	Fe	Mg	Mn	Ni	Pb	Sb	Sn	Ti	Zn
IMN ZK 1	11.789	0.200	0.0021	1.538	.	0.0009	.	.	0.0031	0.127	0.00085	.	.
IMN ZK 2	10.572	0.169	0.0031	3.119	.	0.0040	0.0137	.	0.0121	0.102	0.0015	.	.
IMN ZK 3	9.767	0.102	0.0071	3.996	.	0.0307	.	.	0.0226	0.0674	0.00267	.	.
IMN ZK 4	8.371	0.0188	0.0121	5.487	.	0.0640	.	.	0.0334	0.0121	0.00491	.	.
IMN ZK 5	6.476	0.0020	0.0207	6.663	.	0.0410	0.589	.	0.0507	0.0025	0.0065	.	.
IMN ZF 1	0.018	.	0.0041	0.013	0.020	.	.	.	0.0012	.	0.013	0.0014	Rem
IMN ZF 2	0.011	.	0.0055	0.46	0.011	.	.	.	0.0082	.	0.0077	0.11	Rem
IMN ZF 3	0.0033	.	.	0.098	0.0018	.	.	.	.	.	0.0022	0.021	Rem
IMN ZF 4	0.0058	.	0.00053	0.86	0.00045	.	.	.	0.0091	.	0.0017	0.20	Rem
IMN ZF 5	.	.	0.0088	0.011	0.0081	.	.	.	0.026	.	.	0.013	Rem

CRM ZINC ALLOYS, chart 1 of 2 X: ~50 mm Ø x ~15-20 mm CAN: 50 mm Ø x 12 mm SRM: 44 mm x 44 mm x 19 mm

Number	Al	Bi	Cd	Cr	Cu	Fe	Mg	Mn	Ni	Pb	Sb	Si	Sn	Ti
43X Z23E	30.7	.	0.0042	0.0147	3.22	0.055	0.0242	0.0090	0.0236	0.0112	.	0.077	0.0115	0.0045
CAN NZA-1	28.70	.	0.00098	.	1.51	0.046	0.020	.	.	0.0030	.	.	0.0069	.
43X Z22D	27.4	.	0.0043	0.0010	2.11	0.068	0.0099	0.0057	0.0101	0.0053	.	0.019	0.0020	0.0073
CAN NZA-4	26.65	.	0.0029	.	2.45	0.027	0.0106	.	.	0.0101	.	.	0.0087	.
CAN NZA-3	25.99	.	0.0064	.	2.00	0.066	0.0049	.	.	0.0045	.	.	0.0034	.
43X Z21D	23.9	.	0.0010	.	2.68	0.0067	0.0142	0.0022	0.0021	0.0087	.	0.0191	0.0007	.
CAN NZA-2	23.81	.	0.0047	.	3.00	0.021	0.029	.	.	0.0076	.	.	0.0045	.
43X GALF5A	15.03	.	0.0080	.	0.0114	(0.072)	0.0016	.	.	0.0084	.	.	0.0081	.
CAN NZA-7	13.17	.	0.00020	.	0.212	(0.016)	0.052	.	.	0.0136	.	.	0.0116	.
42X Z16A	12.28	.	0.0045	0.0007	0.235	0.033	0.105	0.0028	0.0039	0.0090	.	0.011	0.0034	.
43X Z11F	11.12	0.0046	0.0175	(0.0003)	0.335	0.015	0.0357	0.0032	0.0014	0.0202	0.0009	0.0013	0.0145	.
CAN NZA-5	10.85	.	0.0095	.	1.04	(0.016)	0.021	.	.	0.0012	.	.	0.0017	.
43X GALF4A	10.71	.	0.0108	.	2.470	0.074	0.0062	.	.	0.0122	.	.	0.0110	.
43X Z12E	10.38	0.0021	0.0045	0.0008	0.791	0.037	0.0287	0.0026	0.0033	0.0041	0.0032	(0.002)	0.0017	0.0050
42X Z15A	9.99	.	0.0023	0.0003	0.0028	0.026	0.0026	0.0037	0.0017	0.0074	0.0006	.	0.0006	.
43X Z13E	9.01	0.0014	0.0072	0.0004	1.113	0.0045	0.0198	0.0025	0.0036	0.0086	0.0020	(0.0012)	0.0035	.
43X GALF3A	8.37	.	0.0018	.	0.507	0.018	0.0099	.	.	0.0032	.	.	0.0025	.
43X Z15D	8.33	0.005	0.0036	.	1.18	0.005	0.0236	0.0067	0.0082	0.0029	(0.0010)	.	0.0020	.
CAN NZA-6	7.54	.	0.0147	.	3.17	(0.0105)	0.00037	.	.	0.0809	.	.	0.0051	.
43X Z16A	7.36	(0.005)	0.0030	0.0024	1.54	.	0.0022	0.0020	0.0019	0.0060	(0.005)	(0.007)	0.004	0.002
42X Z8A	7.03	.	0.0003	(0.0002)	0.0215	.	0.0033	0.0014	0.0019	0.0025	.	0.013	(0.0023)	(0.0001)
42X Z9A	5.58	.	0.0054	.	0.0070	.	0.0464	0.0006	(0.0003)	0.0021	.	(0.004)	(0.00035)	0.020
43X GALF2A	5.40	.	0.0043	.	0.0585	0.032	0.0504	.	.	0.0050	.	.	0.0040	.
SRM 629	5.15	.	0.0155	0.0008	1.50	0.017	0.094	0.0017	0.0075	0.0135	.	0.078	0.012	.
42X Z10A	4.93	.	0.0029	.	0.314	0.0009	0.0020	0.0183	0.0099	0.0065	0.0022	.	0.0033	.
43X GALF1A	4.68	.	0.0499	.	4.39	0.061	0.0999	.	.	0.0505	.	.	0.0514	.
42X Z7B	4.39	.	0.030	(0.0001)	0.0249	0.027	0.0095	0.0045	0.0067	0.0097	.	0.006	0.012	.
42X Z7C	4.39	.	0.030	(0.0001)	0.0249	0.027	0.0095	0.0045	0.0067	0.0097	.	0.006	0.012	(0.0001)
42X Z7D	4.37	.	0.0021	.	0.0240	0.023	0.0094	0.0046	0.0080	0.0040	.	0.0022	0.0025	.
43X SC4A	4.35	.	0.0058	0.009	1.122	0.022	0.093	0.044	0.0249	0.0064	.	0.022	0.0056	.
43X Z10A	3.99	.	0.0014	0.00027	2.97	0.007	0.0403	0.0050	0.0036	0.0046	.	0.009	0.0012	.
43X SC1A	3.75	.	0.0011	0.0082	1.903	0.073	0.740	0.0201	0.0161	0.0150	.	0.022	0.0082	.
43X SC2A	3.41	.	0.0018	0.023	4.80	0.046	0.498	0.0183	0.0096	0.0097	.	0.0133	0.0031	.
42X Z11A	3.19	.	0.0020	0.0016	0.093	(0.036)	0.0329	0.0196	0.0241	0.0058	0.0047	.	0.0017	.
43X Z9A	3.17	0.0033	0.0034	0.0034	4.82	0.073	0.0472	0.0108	0.0027	0.0078	0.0033	.	0.0020	0.0012
43X Z5B	3.164	0.0148	0.0030	.	5.92	0.10	0.0144	0.0061	0.0056	0.0029	0.065	.	(0.0004)	.
43X SC3A	3.14	.	0.0028	0.0108	3.03	0.018	0.257	0.0337	0.0261	0.0066	.	0.022	0.0078	.
43X Z8A	2.51	.	0.00090	0.00024	0.481	(0.0017)	0.00155	0.00021	0.00033	0.0027	.	.	(0.0005)	.
41X 0336 Zn2N	1.000	0.0043	0.147	.	0.216	0.0283	0.0568	0.0227	0.0047	0.492	0.0019	.	0.0547	.

Number	Al	Bi	Cd	Cr	Cu	Fe	Mg	Mn	Ni	Pb	Sb	Si	Sn	Ti
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Number	Ag	As	Be	Ce	In	La	Tl	Zr
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43X Z23E	.	.	.	.	.	.	.	.
CAN NZA-1	.	.	.	.	.	.	.	.
43X Z22D	.	.	.	.	.	.	.	.
CAN NZA-4	.	.	.	.	.	.	.	.
CAN NZA-3	.	.	.	.	.	.	.	.
43X Z21D	.	(0.0004)	.	.	.	.	.	.
CAN NZA-2	.	.	.	.	.	.	.	.
43X GALF5A	.	.	.	0.0041	.	0.0019	.	.
CAN NZA-7	.	.	.	.	.	.	.	.
42X Z16A	.	.	.	.	0.0051	.	(0.003)	.
43X Z11F	.	.	.	.	.	.	.	.
CAN NZA-5	.	.	.	.	.	.	.	.
43X GALF4A	.	.	.	0.079	.	0.041	.	.
43X Z12E	.	.	.	.	.	.	.	.
42X Z15A	.	.	.	.	0.0024	.	.	.
43X Z13E	.	.	.	.	.	.	.	.
43X GALF3A	.	.	.	0.0152	.	0.0076	.	.
43X Z15D	.	.	.	.	.	.	.	.
CAN NZA-6	.	.	.	.	.	.	.	.
43X Z15C	.	.	.	.	.	.	.	last
42X Z8A	.	.	.	0.0081	.	0.0079	.	.
42X Z9A	.	.	.	0.0047	.	0.0044	.	0.011
43X GALF2A	.	.	.	0.0318	.	0.0158	.	.
SRM 629	.	.	.	.	.	.	.	.
42X Z10A	.	.	.	.	0.0018	.	0.0013	.
43X GALF1A	.	.	.	0.0569	.	0.0284	.	.
42X Z7B	.	.	.	0.072	.	0.061	.	last
42X Z7C	.	.	.	0.09	.	0.08	.	last
42X Z7D	.	.	.	0.0581	.	0.025	.	.
43X SC4A	.	.	.	.	.	.	.	.
43X Z10A	.	.	.	.	.	.	.	.
43X ZSC1A	.	.	.	.	.	.	.	.
43X SC2A	.	.	.	.	.	.	.	.
42X Z11A	.	.	.	0.0014	0.0037	(0.0009)	0.0047	.
43X Z9A	.	.	0.0010	.	.	.	.	.
43X Z5B	0.0254	(0.0005)	.	.	.	.	.	.
43X ZSC3A	.	.	.	.	.	.	.	.
43X Z8	.	.	.	.	.	.	.	.
41X 0336 Zn2N	0.0131	.	.	.	.	.	0.0016	.

Number	Ag	As	Be	Ce	In	La	Tl	Zr
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## CRM ZINC ALLOYS, chart 2 of 2

41X CGL: 42 - 48 mm Ø x 20 mm other X: ~45--50 mm Ø x ~20 mm

Number	Al	Bi	Cd	Cr	Cu	Fe	Mg	Mn	Ni	Pb	Sb	Si	Sn	Ti
41X GLV10A	0.969	0.0031	0.0030	.	0.0073	0.0051	0.0040	0.0062	0.0022	0.0066	0.0009	.	0.0062	.
41X GLV9B	0.790	0.0038	0.0039	.	0.0194	0.0056	0.0029	0.0038	0.0059	0.0032	0.0016	.	0.0012	.
41X GLV4F	0.507	0.0045	0.0074	.	0.0142	0.0045	0.0015	0.0257	0.034	0.0076	0.0245	.	0.0031	.
41X GLV11A	0.463	0.0009	0.0010	.	0.0017	0.0027	0.0009	0.0008	0.0008	0.0057	0.168	.	0.0009	.
41X 4380 Zn4D	0.446	0.0101	0.086	0.0029	0.0284	0.017	0.118	0.0092	0.0172	0.310	0.0156	.	0.0416	(0.0003)
41X GLV6B	0.441	0.0254	0.0051	0.0007	0.0371	0.0020	.	0.00235	0.0007	0.097	0.0122	.	0.0155	.
41X GLV7A	0.399	(0.0108)	0.00056	0.0010	0.023	.	.	0.0025	0.0060	0.082	0.0031	.	(0.0006)	.
41X GLV7B	0.397	0.0114	0.0006	.	0.0269	0.0051	0.0048	0.0008	0.0146	0.081	0.0036	.	0.0012	.
41X 0336 Zn3K	0.336	.	0.341	.	0.353	0.0456	0.147	0.0106	0.0022	0.0282	.	.	0.127	.
41X GLV3C	0.326	0.0031	0.0183	0.0003	0.0332	0.0014	0.0014	0.0185	0.0335	0.0249	0.0555	.	0.0031	.
41X GLV1E	0.285	0.0045	0.0087	.	0.0188	(0.0008)	0.0021	.	0.0021	0.0175	0.0016	.	0.0049	.
41X CGLF	0.28	.	(0.0015)	.	(0.0005)	.	.	.	.	0.046	.	.	(<0.001)	.
41X 4380 Zn7D	0.277	.	0.0156	.	0.0133	0.0018	0.0029	0.0036	0.0120	1.18	0.086	.	0.0036	0.0065
41X GLV8B	0.258	0.0006	0.0004	(0.0001)	0.0111	0.0080	0.0009	0.0035	0.0023	0.0039	0.0062	.	0.0005	.
41X GLV13A	0.219	0.0009	0.0011	.	0.0049	0.0052	0.0012	0.0008	0.0028	0.0029	<0.001	.	0.0010	.
41X GLV12A	0.168	0.0048	0.0048	.	0.010	0.0156	0.0042	0.0082	0.0090	0.0102	0.0064	.	0.0081	.
41X GLV2C	0.0905	0.0158	0.0037	0.0015	0.0057	0.0155	0.0006	0.0218	0.0053	0.0248	0.0049	.	0.0097	.
41X 2951 Zn3A	0.078	.	0.0062	0.184	1.89	.	0.0164	0.0018	0.0010	0.0065	.	.	(0.006)	0.133
41X 4380 Zn1D	0.039	0.0021	0.394	0.0007	0.178	0.0276	0.0032	0.0006	0.0058	0.0618	0.0019	.	0.0510	0.0004
41X 2951 Zn2A	0.032	.	0.0037	0.142	1.37	.	0.0123	0.0011	0.0027	0.0040	.	.	(0.0015)	0.209
41X 2951 Zn1A	0.029	.	0.0005	0.083	0.79	.	0.0029	0.0013	0.0038	0.0042	.	.	(0.0007)	0.278
41X 4380 Zn6D	0.0260	0.0047	0.0466	0.0064	0.0327	0.0307	0.0044	0.200	0.0073	0.427	(0.002)	.	0.101	0.0029
41X 4380 Zn5C	0.0215	0.0308	0.0571	0.0075	0.071	.	0.00165	0.035	0.00147	0.140	0.0061	.	0.0101	0.339
41X 4380 Zn3C	0.0203	0.0103	0.0950	0.0029	0.073	.	0.0220	0.0180	0.0120	0.180	0.0046	.	0.080	0.125
41X 0336 Zn1L	0.0177	.	0.0067	.	0.0088	0.0106	0.0062	0.0102	0.0009	1.007	.	.	0.0051	.
41X 4380 Zn2C	0.0153	0.0076	0.284	0.0027	0.0288	.	0.0243	0.0087	0.0023	0.268	0.0093	.	0.0021	0.0251
41X GLV5B	0.0139	0.0098	0.0136	.	0.0103	0.0443	0.0014	.	0.0025	0.0166	0.148	.	0.0172	.
41X ZNi2A	0.0135	0.0050	0.0010	.	0.0056	0.0061	.	.	1.97	0.0172	.	.	0.141	.

Number	Al	Bi	Cd	Cr	Cu	Fe	Mg	Mn	Ni	Pb	Sb	Si	Sn	Ti
41X GLV10A	.	.	0.0002	.	.	.	.	.	.	.	.	.	.	.
41X GLV9B	.	.	0.0058	.	.	.	.	.	.	.	.	.	.	.
41X GLV4F	0.0047	(0.0005)	0.0048	.	.	.	.	.	.	.	.	.	.	.
41X GLV11A	.	.	(0.0001)	.	Sr: (0.0004)	.	.	.	.	.	.	.	.	.
41X 4380 Zn4D	.	.	0.0018	.	.	.	.	.	.	.	.	.	.	.
41X GLV6B	.	.	0.0061	.	V: <0.0005	.	.	.	.	.	.	.	.	.
41X GLV7A	.	0.0016	.	.	.	.	.	.	.	.	.	.	.	.
41X GLV7B	0.0016	(0.0006)	0.0016	.	.	.	.	.	.	.	.	.	.	.
41X 0336 Zn3K	.	0.0003	.	.	.	.	.	.	.	.	.	.	.	.
41X GLV3C	.	0.0036	0.0034	.	.	.	.	.	.	.	.	.	.	.
41X GLV1E	.	(0.0004)	0.0008	.	.	.	.	.	.	.	.	.	.	.
41X CGLF	.	.	.	(<0.001)	(<0.001)	last of stock	.	.	.	.	.	.	.	.
41X 4380 Zn7D	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X GLV8B	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X GLV13A	0.0011	.	0.0011	.	.	.	.	.	.	.	.	.	.	.
41X GLV12A	0.0054	.	0.0035	.	.	.	.	.	.	.	.	.	.	.
41X GLV2C	.	0.0017	0.0055	.	.	.	.	.	.	.	.	.	.	.
41X 2951 Zn3A	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X 4380 Zn1D	0.0012	.	.	.	.	.	.	.	.	.	.	.	.	.
41X 2951 Zn2A	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X 2951 Zn1A	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X 4380 Zn6D	0.0030	.	0.0091	.	.	.	.	.	.	.	.	.	.	.
41X 4380 Zn5C	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X 4380 Zn3C	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X 0336 Zn1L	.	0.0008	.	.	.	.	.	.	.	.	.	.	.	.
41X 4380 Zn2C	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41X GLV5B	.	0.00044	0.0011	.	.	.	.	.	.	.	.	.	.	.
41X ZNi2A	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Number	Ag	As	Co	In	Tl
41X GLV10A	.	.	0.0002	.	.
41X GLV9B	.	.	0.0058	.	.
41X GLV4F	0.0047	(0.0005)	0.0048	.	.
41X GLV11A	.	.	(0.0001)	.	Sr: (0.0004)
41X 4380 Zn4D	.	.	0.0018	.	.
41X GLV6B	.	.	0.0061	.	V: <0.0005
41X GLV7A	.	0.0016	.	.	.
41X GLV7B	0.0016	(0.0006)	0.0016	.	.
41X 0336 Zn3K	.	0.0003	.	.	.
41X GLV3C	.	0.0036	0.0034	.	.
41X GLV1E	.	(0.0004)	0.0008	.	.
41X CGLF	.	.	.	(<0.001)	(<0.001) last of stock
41X 4380 Zn7D	.	.	.	.	.
41X GLV8B	.	.	.	.	.
41X GLV13A	0.0011	.	0.0011	.	.
41X GLV12A	0.0054	.	0.0035	.	.
41X GLV2C	.	0.0017	0.0055	.	.
41X 2951 Zn3A	.	.	.	.	.
41X 4380 Zn1D	0.0012	.	.	.	.
41X 2951 Zn2A	.	.	.	.	.
41X 2951 Zn1A	.	.	.	.	.
41X 4380 Zn6D	0.0030	.	0.0091	.	.
41X 4380 Zn5C	.	.	.	.	.
41X 4380 Zn3C	.	.	.	.	.
41X 0336 Zn1L	.	0.0008	.	.	.
41X 4380 Zn2C	.	.	.	.	.
41X GLV5B	.	0.00044	0.0011	.	.
41X ZNi2A	.	.	.	.	.

## CRM ZIRCONIUM ALLOYS

analysis listed in mass %

31 mm Ø x 2 or 18 mm

Number	Al	C	Cr	Cu	Fe	H	Hf	N	Nb	O	Sn	Ti
IARM Zr702-18	0.014	0.017	(0.009)	.	(0.09)	(0.0011)	0.84	(0.003)	.	0.141	(0.04)	(0.004)
IARM Zr705-18	.	0.009	0.007	(0.007)	{0.08}	{0.0012}	0.38	{0.005}	2.53	0.133	.	.