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PURITY ALUMINUM SETTING-UP SAMPLES

typical analysis listed in mass % except * which is mg/kg

Number	Si	Ag	As	B*	Ba*	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
AL RC11/06	0.025	0.010	0.003	.	40	0.002	0.010	0.0023	0.0050	0.002	0.011	0.010	0.015	0.048
PY 60548	<0.01	<0.001	.	.	.	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	<0.01	<0.01
R A 10	<0.0020	<0.0005	.	<5	.	<0.0001	<0.0020	<0.0005	<0.0010	.	<0.0010	<0.0010	<0.0010	<0.0010
IARM 220G	0.0014	<0.00001	.	5.7	2.2	<0.00001	<0.00001	0.000010	<0.00001	.	<0.00001	0.000030	0.0027	0.0021
KUT Al 4N	0.0013	.	.	0.6	.	0.00001	0.00001	0.00002	0.0001	.	.	0.00006	0.0025	0.0018
V E10	<0.0010	<0.00005	.	<2	<3	<0.00002	<0.0003	<0.0001	<0.0001	.	<0.0001	<0.0001	<0.0004	<0.0005
V E1/0	<0.0005	<0.00001	.	<2	<1	<0.00001	<0.00005	<0.0001	<0.00002	.	<0.00001	<0.00005	<0.0004	<0.0003
V E0	<0.00008	<0.00001	.	<0.4	<0.1	<0.00001	<0.00002	<0.00004	<0.00002	.	<0.00001	<0.00003	<0.00004	<0.00005
AA SQ-10	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C Fe 0	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Number	Ga	Hg	In	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Sc
AL RC11/06	<0.001	0.005	0.010	0.010	<0.0001	0.018	0.016	0.067	0.002	0.010	0.0026	0.015	0.013	0.010
PY 60548	<0.0010	.	.	.	<0.001	<0.001	<0.001	.	<0.001	<0.001	.	<0.001	<0.001	.
R A 10	0.00014	.	.	.	<0.0010	<0.0010	<0.0010	.	<0.0001	<0.0020	.	<0.0010	<0.0020	.
IARM 220G	0.00005	.	<0.00001	.	<0.00001	0.00087	0.00023	.	0.000030	0.000060	.	0.000015	0.000010	.
KUT Al 4N	<0.0001	.	.	.	0.00002	0.0015	0.0002	.	0.0001	0.00004	.	0.0001	0.0002	.
V E10	<0.00002	.	<0.0002	.	<0.00002	<0.0003	<0.0001	.	<0.0001	<0.0001	.	<0.0002	<0.0003	.
V E1	<0.00001	.	<0.00001	.	<0.00001	<0.0003	<0.00005	.	<0.0001	<0.00005	.	<0.00005	<0.0001	.
V E0	.	.	<0.00001	.	<0.00001	<0.00006	<0.00002	.	<0.00002	<0.00001	.	<0.00001	<0.00002	.
AA SQ-10	.	.	.	.	.	.	.	.	.	.	.	.	.	.
C Al 0	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Number	Sn	Sr	Ti	V	W	Zn	Zr	Units
AL RC11/06	0.015	0.006	0.016	0.018	0.0057	0.019	0.017	60 mm Ø x 25 mm
PY 60548	<0.001	<0.001	<0.001	<0.001	.	<0.001	<0.001	60 mm Ø x 40 mm
R A 10	<0.0010	<0.0010	<0.0010	<0.0010	.	<0.0010	<0.0010	50 mm Ø x 50 mm
IARM 220G	<0.00001	<0.00001	<0.002	0.00052	.	0.0003	0.000088	57 mm Ø x 38 mm
KUT Al 4N	0.00005	0.0001	0.00006	0.0001	.	0.0003	0.00005	50 mm Ø x 35 mm
V E10	<0.0003	<0.00005	<0.0001	<0.0002	.	<0.0003	<0.0001	60 mm Ø x 40 mm
V E1	<0.00002	<0.00005	<0.0001	<0.00003	.	<0.0002	<0.00005	60 mm Ø x 40 mm
V E0	<0.00002	<0.00002	<0.00005	<0.00003	.	<0.00005	<0.00003	60 mm Ø x 40 mm
AA SQ-10	.	.	.	.	.	.	.	64 mm Ø x 37 mm
C Al 0	.	.	.	.	.	.	.	50 mm Ø x 30-50 mm

Al: 99.96
many more elements
1199 Alloy, no analysis issued
no analysis issued

POT METAL SETTING-UP SAMPLE typical analysis

Number	Base Metal	B	Li	Na	Units
AA SQ-18	P0506	0.02	0.02	0.02	64 mm Ø x 25 mm

SPECIALTY SETTING-UP SAMPLES typical analysis

Number	As	Bi	Cu	Fe	Mg	P	Pb	Sb	Sc	Si	Ti	Units
PY 10914	.	0.7	0.3	0.2	1.2	.	0.8	.	.	0.9	0.05	60 mm Ø x 41 mm
AA SQ-19	0.03	.	.	.	0.014	.	0.02	0.20	.	.	.	64 mm Ø x 37 mm

ALUMINUM SETTING-UP SAMPLES, chart 2 of 2

typical analysis

Number	Si	Cu	Fe	Mg	Mn	Ni	Zn	Be	Ca	Cr	Na	Pb	Sb	Sn	Sr	Ti
PY 9632	0.8	4.1	0.32	0.48	0.71	.	0.033	.	.	0.0181	.	0.0096	.	.	.	0.022
AA SQ-17	0.7	0.35	0.4	1.6	0.12	0.12	0.12	0.005	.	0.25	.	0.1	.	0.1	.	0.08
BS 6061	0.55	0.29	0.19	0.81	0.010	0.004	0.04	.	.	0.050	.	0.010	.	<0.001	.	0.024
AA SQ-13	0.5	0.04	0.6	0.04	0.04	0.04	0.04	0.005	.	0.04	.	0.04	.	0.04	.	0.04
AL RC50/02	0.5	0.003	0.85	4.5	0.005	0.5	0.02	0.005	0.02	0.5	0.004	.	0.05	0.3	0.02	.
PY 906	0.40	0.005	0.19	0.43	0.03	0.005	0.019	.	.	<0.004	<0.0001	.	.	.	.	0.011
BS 2017	0.30	4.05	0.25	0.51	0.51	0.006	0.065	.	.	0.015	.	0.010	.	0.002	.	0.020
IARM 221C	0.2	0.6	0.2	4.8	0.4	.	6.8	0.005	0.03	0.2	.	.	0.01	.	.	0.1
IARM 221D	0.2	0.6	0.2	4.7	0.4	.	6.7	0.005	0.03	0.2	.	.	0.02	.	.	0.1
IARM 221B	0.2	0.6	0.2	4.8	0.4	.	6.8	0.005	0.03	0.2	.	.	0.01	.	.	0.1
AA SQ-11	0.2	0.5	0.2	3.0	0.4	.	6.6	0.005	0.02	0.25	.	.	.	.	.	0.10
PY 9627	0.2	0.13	0.57	0.0004	1.06	0.01	0.057	.	.	0.0223	<0.00002	0.0065	.	.	.	0.022
PY 310	0.16	0.0037	0.58	0.0003	0.0078	0.004	0.017	.	.	0.0028	<0.00002	0.0019	.	.	.	0.004
PY 9325	0.11	0.0069	0.24	4.33	0.4	.	0.014	0.0001	0.0003	0.0007	<0.00002	0.007	.	.	.	0.005
PY 9324	0.11	0.0055	0.24	4.28	0.4	.	0.014	0.0001	0.0003	0.0007	<0.00002	0.007	.	.	.	0.005
BS 7075	0.10	1.40	0.13	2.26	0.03	0.005	5.6	.	.	0.19	.	0.003	.	0.001	.	0.028
AA SQ-14	0.1	0.5	0.1	0.9	0.4	0.4	1.2	0.002	.	.	.	0.5	.	0.1	.	0.1
PY 9630	0.1	0.062	0.46	0.0006	0.0123	0.008	0.054	.	.	0.0216	0.00003	0.0035	.	.	.	0.018
PY 325	0.1	0.003	0.27	0.74	0.005	<0.001	0.021	.	0.0011	0.011	0.0001	0.001	.	.	.	0.01
PY 9806-1	0.08	6.9	1.3	0.08	1.9	.	0.05	.	.	0.3	.	.	0.4	.	.	.
BS 2024	0.08	4.7	0.20	1.30	0.57	0.006	0.07	.	.	0.03	.	0.006	.	0.001	.	0.030
PY 9614	0.08	0.043	0.18	2.28	0.055	0.01	0.051	.	0.0009	0.21	0.00006	0.0057	.	.	.	0.019
C Al 3	0.08	0.004	0.17	2.8	0.215	0.002	0.007	.	.	0.001	.	0.002	.	0.002	.	0.009
PY 9321	0.07	4.2	0.013	0.27	0.02	0.01	0.04	.	.	.	<0.00002	0.001	.	.	.	0.21
BS 2011	0.052	5.2	0.32	0.016	0.010	0.004	0.024	.	.	0.001	.	0.56	.	0.001	.	0.006
PY 9401	0.04	1.58	0.12	2.29	0.01	0.007	5.84	.	.	0.006	<0.00002	.	.	.	.	0.032
AL RC20/02	0.029	6.0	0.061	0.29	0.24	1.45	0.24	.	.	.	.	0.41	0.20	0.051	.	.
V E8	0.012	0.020	0.014	0.005	0.006	0.004	0.005	0.001	0.004	0.005	.	0.003	0.010	0.003	0.002	0.004
R Al Mn 12	.	.	.	.	12	.	.	.	.	.	.	.	.	.	.	.
R Al Ce	Ce: 1.0	.	.	4.6	.	La: 0.4	.	Nd: 0.1	.	Pr: 0.07	.	Sm: 0.01	.	Y: 0.2	.	.
V E5	.	.	.	4.8	1.3
V E4	.	.	.	1.1	0.7	.	5.2	.	.	0.2
V E13	.	.	4.8

Number	Si	Cu	Fe	Mg	Mn	Ni	Zn	Be	Ca	Cr	Na	Pb	Sb	Sn	Sr	Ti
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Number	Ag	B	Ba	Bi	Cd	Co	Ga	Hg	In	Li	V	Zr	Al	Ø X H mm
PY 9632	0.033	.	50 x 50
AA SQ-17	.	.	.	0.08	.	.	0.03	.	.	.	0.03	.	.	64 x 37
BS 6061	.	.	.	0.006	.	.	.	.	.	.	0.01	<0.002	.	62 x 50
AA SQ-13	.	.	.	0.04	0.04	0.01	0.03	.	.	.	0.04	0.4	.	64 x 37
AL RC50/02	Ce:0.1	0.005	0.02	La:0.1	0.2	Mo:0.03	0.03	P:0.005	0.05	0.003	0.01	0.01	W:0.04	60 x 25
PY 906	50 x 50
BS 2017	.	.	.	0.002	.	.	.	.	.	.	0.007	0.002	.	62 x 50
IARM 221C	0.2	0.03	.	.	.	.	.	.	63 x 39
IARM 221D	0.2	0.03	.	.	.	.	.	.	63 x 39
IARM 221B	0.2	0.03	.	.	.	.	.	.	63 x 39
AA SQ-11	0.01	0.03	.	.	.	.	.	.	64 x 37
PY 9627	<0.0001	.	.	0.0001	.	0.00002	.	0.01	.	50 x 50
PY 310	<0.0002	.	.	<0.00002	.	0.00004	.	.	.	50 x 50
PY 9325	<0.0001	.	.	.	.	.	.	.	.	50 x 50
PY 9324	<0.0001	.	.	.	.	.	.	.	.	50 x 50
BS 7075	.	.	.	<0.001	.	.	.	.	.	.	0.006	0.006	.	62 x 50
AA SQ-14	.	.	.	0.5	.	.	.	.	.	.	.	.	.	64 x 37
PY 9630	0.0002	.	.	0.0001	.	0.00007	.	.	.	50 x 50
PY 325	.	0.0007	.	.	.	.	.	.	.	.	0.006	0.0005	.	50 x 50
PY 9806-1	.	.	.	0.7	.	0.9	.	.	.	.	.	.	.	60 x 40
BS 2024	.	.	.	0.002	.	.	.	.	.	.	0.01	0.01	.	62 x 50
PY 9614	0.0001	.	.	0.0004	.	.	.	0.02	.	50 x 50
C Al 3	0.011	.	.	.	.	.	96	50x30-50
PY 9321	50 x 50
BS 2011	.	.	.	0.44	.	.	.	.	.	.	0.007	<0.002	.	62 x 50
PY 9401	0.13	.	50 x 50
AL RC20/02	0.73	.	.	0.38	0.036	0.44	.	.	.	.	.	0.17	.	60 x 25
V E8	0.005	.	0.004	0.005	0.003	0.003	0.006	.	0.005	.	0.003	0.004	.	60 x 40
R Al Mn 12	3	.	50 x 50
R Al Ce	0.02	Rem	40 x 25
V E5	.	.	.	0.2	.	.	.	.	.	0.01	.	.	.	60 x 40
V E4	0.20	.	.	.	0.06	0.4	0.2	.	60 x 40
V E13	60 x 40

Number	Ag	B	Ba	Bi	Cd	Co	Ga	Hg	In	Li	V	Zr	Al	Ø X H mm
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CERAMIC SETTING-UP SAMPLE

Number	Al	C	Fe	O	Ti	W	Units
JK CE 650A	34	6	2.1	30	21	0.8	~25 mm Ø x 8 mm

COBALT BASE SETTING-UP SAMPLES

typical analysis T = trace, such as "<0.005" or "<0.01"

~35 mm Ø x ~25-35 mm

Number	Al	B	C	Cr	Cu	Fe	Mn	Mo	Nb	Ni	P	S	Si	Ta	Ti	V	W	Zr
R Co 16	0.3	0.02	0.2	0.04	1	21	0.03	3	2	<0.01	<0.01	<0.01	0.2	0.05	0.6	0.7	(0.01)	.
R Co 15	0.05	.	0.8	0.3	2	22	.	8	2	0.1	0.03	0.06	0.9	0.08	.	0.1	0.1	.
R Co 14	0.03	0.04	0.46	28.6	.	0.87	0.35	.	.	10.1	0.003	<0.01	0.64	.	<0.01	6.8	.	.
R Co 11	T	.	T	T	0.01	T	T	T	T	T	T	.	T	.	T	T	T	T

COPPER BASE SETTING-UP SAMPLES

typical analysis listed in mass %

Number	Cu	Sn	Zn	Al	Bi	Cr	Fe	Mn	Ni	Pb	Si	Ag	As	Au	Be
COPPER															
R C 11	99.98	<0.0030	<0.0005	.	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	.	.
BS SU Cu1	99.96	0.0001	0.0001	0.0001	.	0.0001	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0012	0.0001	0.0001
R C 20	99.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.
R C 110	Rem	0.006	0.006	0.002	0.004	0.004	0.005	0.004	0.002	0.003	0.003	0.005	0.001	0.002	0.0002
R C 14	98.8	<0.01	<0.002	<0.01	<0.01	0.9	0.03	<0.01	<0.01	<0.01	<0.02	.	<0.01	.	.
C Cu 2	.	0.2100	0.1150	.	0.0102	0.0113	0.0220	0.0112	1.0100	0.3710	.	0.5800	.	0.0046	.
C Cu 3	.	.	.	.	.	.	.	.	.	.	.	.	0.0875	.	.
R C 38	67.96	<0.01	<0.01	<0.01	<0.01	<0.01	0.72	0.93	29.9	<0.01	0.01	<0.01	<0.01	.	.
BRASS															
BS SU 464	[60.3]	0.73	38.8	.	.	.	0.05	.	0.007	0.04	0.004	.	0.001	.	.
C38.07	60	0.2	REM	0.1	0.1	.	0.1	0.2	0.2	0.2	0.03	.	0.1	.	.
R C 32	59.4	0.17	34.8	1.57	<0.01	<0.01	0.18	1.79	0.75	0.82	0.41	0.001	0.02	.	.
BRONZE															
R C 12	Rem	0.2	0.34	0.09	0.01	0.04	0.1	0.04	0.08	0.08	0.08	0.06	0.04	0.002	<0.002
165X PB10SUS	Rem	11	0.05	0.001	0.02	0.001	0.002	<0.001	0.06	0.04	0.001	.	0.02	.	.
BS SU 932A	83.5	6.88	2.29	.	0.003	.	0.008	0.002	0.19	6.9	0.011	0.0198	0.047	.	.
BS SU 932B	83.1	6.15	2.77	.	.	.	0.05	0.0005	0.52	7.1	0.004	0.0006	0.016	.	.
BS SU 936	82.5	7.0	0.25	0.001	.	.	0.003	0.001	0.36	9.6	0.004	.	0.002	.	.
BS SU 936A	82.5	7.0	0.24	0.0003	.	.	0.0007	0.0006	0.35	9.7	0.004	.	0.004	.	.
BS SU 932	82.1	7.28	2.80	.	0.002	.	0.03	0.002	0.19	7.4	0.015	0.0107	0.049	.	.
BS SU 936B	81.0	7.5	0.54	<0.005	.	<0.005	0.006	<0.001	0.51	10.2	0.003	.	0.01	.	.
R C 40	Rem	0.04	<0.01	8	.	<0.01	1.6	5	2	0.05	0.02	.	<0.01	.	.
165X ALB1 SUS	82	0.03	0.06	9.0	0.015	0.01	2.8	0.08	5.3	0.20	0.10	.	0.005	.	.
R C 33	81.42	0.03	0.18	10.0	0.004	0.005	3.8	0.3	4.1	<0.01	0.08	<0.001	0.02	.	<0.001
R C 36	76.98	7.70	0.68	<0.01	0.009	<0.001	0.016	<0.01	1.68	12.86	<0.01	0.02	0.01	.	<0.001
BS SU 863	62.7	0.031	27.1	4.87	.	0.0005	2.3	2.85	0.06	0.040	0.025	.	<0.005	.	.

Number	Cu	Sn	Zn	Al	Bi	Cr	Fe	Mn	Ni	Pb	Si	Ag	As	Au	Be
COPPER															
R C 11	.	.	<0.0001	<0.0010	<0.0001	(0.0010)	<0.0005	<0.0001	<0.0010	<0.0001	<0.0010	.	.	40 mm Ø x 40 mm	.
BS SU Cu1	0.0003	0.0001	.	0.0001	0.0001	0.0300	0.0001	0.0003	0.0001	.	0.0001	.	.	45 mm Ø x 40+ mm	.
R C 20	.	.	.	.	.	0.038	.	.	.	.	.	.	.	40 mm Ø x 40 mm	.
R C 110	.	.	0.003	0.003	0.003	.	0.003	0.004	0.006	0.005	0.007	0.001	<0.002	40 mm Ø x 40 mm	.
R C 14	.	.	.	.	.	.	<0.01	.	.	.	.	.	0.05	40 mm Ø x 40 mm	.
C Cu 2	.	.	.	.	.	.	.	.	0.2840	.	.	.	last	40 mm Ø x 30 mm	.
C Cu 3	.	.	0.0096	0.0496	.	.	.	0.0229	.	0.0475	0.0194	.	last	40 mm Ø x 30 mm	.
R C 38	.	.	<0.01	0.01	<0.01	.	<0.01	<0.01	0.04	.	.	.	0.07	40 mm Ø x 40 mm	.
BRASS															
BS SU 464	0.0006	.	.	.	.	0.0009	0.005	0.001	0.006	.	.	.	.	38 mm Ø x 40 mm	.
C38.07	.	.	.	.	.	.	.	.	0.1	.	.	.	last	50 mm Ø x 10-12 mm	.
R C 32	.	.	0.001	<0.01	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm	.
BRONZE															
R C 12	.	.	0.06	0.05	0.002	.	0.10	0.05	0.02	0.02	0.04	0.005	0.002	40 mm Ø x 40 mm	.
165X PB10SUS	.	.	.	0.01	.	.	0.002	0.03	0.15	0.01	.	.	.	~42 mm Ø x ~18 mm	.
BS SU 932A	0.001	.	.	.	.	.	0.007	0.053	0.15	.	.	.	.	38 mm Ø x 40+ mm	.
BS SU 932B	0.002	.	.	.	.	.	0.008	0.046	0.19	.	.	.	.	38 mm Ø x 40+ mm	.
BS SU 936	0.0008	.	.	0.009	.	0.003	0.07	0.007	0.10	.	.	.	.	50 mm Ø x 19 mm	.
BS SU 936A	0.009	.	.	0.008	.	0.0037	0.031	0.007	0.13	.	.	.	.	50 mm Ø x 19 mm	.
BS SU 932	0.002	.	.	.	.	.	0.008	0.051	0.13	.	.	.	.	38 mm Ø x 40+ mm	.
BS SU 936B	<0.05	.	0.01	.	.	0.01	0.03	0.03	0.14	.	.	.	.	38 mm Ø x 40+ mm	.
R C 40	.	.	.	.	<0.01	.	<0.01	.	.	.	.	.	.	40 mm Ø x 40 mm	.
165X ALB1 SUS	.	.	.	.	0.04	.	0.015	.	.	.	.	.	.	40 mm Ø x 18 mm	.
R C 33	.	.	<0.005	0.04	<0.001	.	<0.01	0.002	<0.001	.	.	<0.01	<0.001	40 mm Ø x 40 mm	.
R C 36	.	.	0.001	<0.001	<0.001	.	<0.01	0.03	0.25	.	.	<0.001	<0.001	40 mm Ø x 40 mm	.
BS SU 863	0.002	.	.	<0.005	<0.005	.	0.0081	0.0003	0.009	.	.	.	<0.005	38 mm Ø x 40+ mm	.

Number	C	Ca	Cd	Co	Mg	O	P	S	Sb	Se	Te	Ti	Zr	Units
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LEAD BASE SETTING-UP SAMPLES

chill cast typical analysis listed in mass % except * which is mg/kg

Number	Sn	Sb	Ag	As	Bi	Cd	Cu	Fe	In	Ni	S	Te	Tl	Zn
R Pb 15	33.2	2.0	2.7	0.03	0.13	0.01	(2.0)	<0.01	<0.01	(0.003)	.	0.01	<0.001	0.14
R Pb 17	3.24	10.9	2.01	0.15	0.11	0.002	1.38	<0.001	0.0001	0.002	<0.001	0.006	<0.001	<0.001
168X Pb SUS1	1.3	6.2	0.01	0.37	0.04	0.015	0.03	0.002	0.01	0.003	0.002	0.01	0.001	0.001
168X Pb SUS5	0.9	0.4	0.2	0.3	0.35	0.09	0.06	(0.0002)	0.07	0.0005	0.0005	0.007	0.005	.
R Pb 16	0.22	0.003	0.004	<0.001	0.02	<0.01	<0.01	<0.001	<0.0005	<0.0001	<0.0005	<0.001	<0.001	0.001
R Pb 13	0.16	0.13	0.03	0.06	0.19	0.03	0.10	.	<0.0001	<0.001	.	(0.01)	(0.02)	0.03
168X Pb SUS6	0.15	0.12	0.04	0.025	0.22	0.015	0.10	<0.001	0.01	0.003	0.0005	0.0005	0.03	0.002
R Pb 18	0.07	1.28	0.11	3.32	>3.34	0.02	0.05	<0.0001	0.02	<0.001	0.003	0.02	0.019	0.0001
R Pb 14	0.02	12.2	0.009	1.5	0.025	0.005	0.07	<0.001	0.001	<0.001	0.008	<0.005	<0.001	<0.001
R Pb 11	<0.0005	<0.0005	<0.0010	<0.0005	0.0010	<0.0005	<0.0005	<0.0005	.	<0.0005	.	<0.0005	.	<0.0005
168X Pb SUSPM1	.	0.0001	0.0040	0.0002	0.0100	.	0.0005	0.0001	.	0.0003	0.0002	0.0001	0.0010	.
R Pb PM	.	.	0.0100	.	.	.	.	.	.	.	.	.	.	.

continued

R Pb: 40 mm Ø x 30 mm 168X: ~45-50 mm Ø x ~20-40 mm

Number	Al	Au	Ba	Ca	Co*	Cr*	Ge	Hg	Ir*	Mg*	Mn*	Na	Pd	Pt	Rh*	Ru*	Se
R Pb 15	.	.	.	.	.	.	.	.	.	.	<1	.	.	.	.	.	.
R Pb 17	<0.001	(0.002)	.	.	20	<10	(0.001)	.	.	<10	.	.	(0.001)	(0.001)	.	.	.
168X Pb SUS1	.	0.001	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.01
168X Pb SUS5	.	0.002	.	.	.	.	.	0.015	.	.	.	.	.	.	.	.	0.002
R Pb 16	0.002	.	(0.01)	0.23	<1	<1	.	.	.	(10)	<1	(0.004)	.	.	.	.	.
R Pb 13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	(0.004)
168X Pb SUS6	.	0.001	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.003
R Pb 18	<0.0001	.	.	<0.0001	<1	1	.	.	.	.	<10	.	.	.	.	.	(0.01)
R Pb 14	.	.	.	.	.	.	.	.	.	.	<10	.	.	.	.	.	.
R Pb 11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
168X Pb SUSPM1	.	0.0035	.	.	0.5	.	.	.	2	.	.	.	0.0020	0.0055	12	1	.
R Pb PM	.	0.0100	.	.	.	.	.	.	3	.	.	.	0.0050	0.0050	50	50	.

MAGNESIUM BASE SETTING-UP SAMPLES

cast typical analysis listed in mass %

Number	Mg	Al	Cd	Cu	Fe	Mn	Ni	Pb	Si	Sn	Zn	Zr
R Mg 11	99.9	0.022	.	<0.003	<0.004	0.022	<0.005	.	0.037	.	<0.005	.
166X MG SUS3	Rem	0.4	0.005	0.07	<0.005	0.8	0.02	0.04	0.01	0.005	0.09	.
58A ST6310	Rem	2.84	.	0.017	0.0057	0.437	(0.0018)	.	0.052	.	0.865	.
58A ST6420	Rem	3.37	1.39	0.02	0.0048	0.079	(0.0019)	.	0.026	.	0.324	.
R Mg 13 *	Rem	5.7	0.0001	0.006	0.001	0.2	0.001	0.001	0.01	0.001	0.8	0.004
C Mg 2 *	Rem	5.7	0.0001	0.006	0.001	0.2	0.001	0.001	0.01	0.001	0.8	0.004
R Mg 16	Rem	.	.	0.001	.	.	.	.	.	.	.	0.06
58A ST7310	Rem	0.004	.	1.64	0.0098	0.967	0.002	.	0.025	.	7.2	.
58A ST6610	Rem	6.57	.	0.036	0.01	0.421	0.0044	.	0.103	.	1.08	.
R Mg 14	Rem	8	<0.01	0.3	0.01	(0.5)	0.05	.	0.8	0.1	1	<0.001

continued * currently R Mg 13 and C Mg 2 have the same chemistry

Number	Ag	Be	Ca	Ce	Na	Nd	P	Pr	Sr	Ti	Y	Units
R Mg 11	50 mm Ø x 40-50 mm
166X MG SUS3	0.02	0.0005	.	.	.	.	<0.001	.	.	<0.001	.	~50 mm Ø x ~20 mm
58A ST6310	45 mm Ø x 25 mm
58A ST6420	45 mm Ø x 25 mm
R Mg 13 *	0.001	.	.	.	.	.	.	50 mm Ø x 40-50 mm
C Mg 2 *	0.001	.	.	.	.	.	.	50 mm Ø x 40-50 mm
R Mg 16	.	.	.	2.2	.	1.6	.	0.26	.	.	2.2	50 mm Ø x 40 mm
58A ST7310	45 mm Ø x 25 mm
58A ST6610	45 mm Ø x 25 mm
R Mg 14	<0.01	.	.	.	.	.	.	50 mm Ø x 50 mm last of stock

NICKEL BASE SETTING-UP SAMPLES

typical analysis

Number	Ni	Al	C	Co	Cr	Cu	Fe	Mn	Mo	Nb	P	S	Si	Ti	W
R Ni 10	>99.90	<0.001	<0.001	<0.001	.	<0.01	<0.03	.	.	.	.	<0.005	<0.001	.	.
R Ni 11	99.4	<0.01	0.02	0.05	<0.01	.	0.06	0.27	.	.	<0.01	<0.01	0.18	<0.01	.
PV 202/1	.	.	0.085	.	14.48	0.253	7.48	0.217	.	.	(<0.01)	(<0.01)	0.472	.	.
BS SU 750	71.0	0.92	0.05	0.11	15.3	0.027	8.22	0.155	0.147	1.05	0.006	0.002	0.148	2.56	<0.5
R Ni 17	Rem	0.01	0.20	0.2	0.8	0.3	18	0.25	0.2	0.2	<0.01	<0.01	0.32	0.3	10
R Ni 12	65.0	3.2	0.12	<0.01	0.12	29.0	1.0	0.74	.	.	<0.01	<0.01	0.17	0.51	.
BS SU H230	60	0.26	0.087	0.26	22.4	0.08	1.2	0.47	1.44	0.016	0.0004	0.0002	0.42	0.016	12.7
R Ni 13	55.7	0.32	<0.01	0.14	16.0	0.01	6.1	0.5	17.5	0.01	<0.002	<0.001	.	<0.02	3.4
R Ni 15	52.6	0.5	0.02	0.2	18.8	0.06	18.2	0.11	2.9	5.2	<0.01	<0.01	0.11	0.9	0.2
R Ni 14	50.0	0.6	0.06	19.9	19.89	0.018	0.54	0.44	6.25	0.05	<0.01	<0.01	0.10	2.03	0.09
PV 204/1	39.46	.	0.017	.	22.49	1.93	30.35	0.773	3.27	.	0.014	(<0.01)	0.268	.	.

Number	As	B	Mg	N	O	Ta	V	Zr	Units
R Ni 10	40 mm Ø x 40 mm
R Ni 11	.	.	0.02	.	.	.	.	.	40 mm Ø x 40 mm
PV 202/1	40 mm Ø x 25 mm
BS SU 750	<0.005	0.005	0.003	0.005	<0.05	<0.05	0.04	0.035	38 mm Ø x 40+ mm
R Ni 17	.	0.02	.	.	.	0.02	0.06	.	40 mm Ø x 30 mm
R Ni 12	<0.01	.	.	40 mm Ø x 40 mm
BS SU H230	0.0040	0.010	.	0.059	0.0003	0.079	0.005	0.004	38 mm Ø x 40+ mm
R Ni 13	.	0.007	.	.	.	<0.003	0.18	.	40 mm Ø x 40 mm
R Ni 15	.	0.003	.	.	.	<0.01	0.09	0.02	40 mm Ø x 40 mm
R Ni 14	.	0.003	.	.	.	<0.01	<0.01	<0.01	40 mm Ø x 40 mm
PV 204/1	40 mm Ø x 25 mm

NICKEL-PHOSPHORUS LAYER ON STEEL

Number	Ni	P%	Pb%	Layer	Intended For	Unit
JK SUS NiP-1	Rem	5.8	0.26	8.7µm	GD-OES	plate 102mm x 68mm x 0.5mm

ROHS/WEEE DIRECTIVE XRF DISCS

available individually or in SET/3

typical analysis

40 mm Ø x 5 mm

Number	Al ₂ O ₃	B ₂ O ₃	Br	CaO	CdO	Cl	Cr ₂ O ₃	MgO	Na ₂ O	PbO	Sb ₂ O ₃	SiO ₂
BR ROHS 1/3	7.0	5.5	0	10.0	0	0	0	6.5	17.0	0	1.0	53.0
BR ROHS 2/3	7.0	4.536	0.100	10.0	0.011	0.5	0.146	6.5	17.0	0.107	1.1	53.0
BR ROHS 3/3	7.0	2.118	0.5	10.0	0.114	1.0	0.73	6.5	17.0	0.538	1.5	53.0

TIN BASE SETTING-UP SAMPLES

typical analysis

Number	Sn	As	Bi	Cu	Fe	Pb	Sb	Ag	Al	Au	Cd	Co	Ge
R Sn 10	>99.99	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0020	<0.0001	<0.0005	.	<0.0001	.	.
R Sn 11	99.9	<0.001	<0.001	0.003	0.003	<0.001	0.012	.	.	.	.	.	.
1611X Sn SUS 6	.	0.3	0.08	0.4	0.03	1.0	0.15	0.1	.	0.001	0.01	0.02	.
1611X SAC305	.	.	.	0.47	.	0.11	.	2.9	.	.	0.35	.	.
R Sn 21	Rem	0.006	0.1	0.4	0.1	0.09	0.06	10	0.02	.	<0.001	0.1	0.1
R Sn 13	84.7	<0.01	0.05	0.2	0.13	1.3	13.4	<0.01	0.04	.	0.02	0.05	.
1611X Sn SUS 7	.	2.1	2.3	11	(0.06)	0.35	9	0.3	<0.001	0.005	0.03	0.005	.
R Sn 15	Rem	.	0.3	7.0	0.04	.	8	2.5	0.04	0.01	.	.	0.8
R Sn 20	Rem	<0.001	10	<0.01	<0.01	0.07	0.02	<0.001	<0.001	.	<0.001	<0.001	.
R Sn 12	Rem	0.26	0.11	1.0	<0.01	41.8	1.85	0.21	<0.001	.	0.12	<0.01	.
R Sn 14	45	.	40	.	.	.	.	.	.	.	12	.	.

Number	In	Ni	P	Pt	S	Se	Te	Tl	Zn	Units
R Sn 10	<0.0005	<0.0005	<0.0003	.	<0.0003	.	.	<0.0005	<0.0001	40 mm Ø x 40 mm
R Sn 11	.	.	.	.	.	.	.	.	<0.002	40 mm Ø x 40 mm
1611X Sn SUS 6	0.005	0.03	(0.005)	.	(0.001)	0.003	0.001	0.005	0.005	50 mm Ø x 20 mm
1611X SAC305	.	.	.	.	.	.	.	.	.	40 mm Ø x 6-10 mm
R Sn 21	0.08	0.4	<0.001	.	.	.	.	<0.001	0.3	40 mm Ø x 40 mm
R Sn 13	<0.01	0.23	.	.	.	.	.	<0.001	0.02	40 mm Ø x 40 mm
1611X Sn SUS 7	0.03	0.05	.	.	.	0.005	0.003	0.03	0.005	50 mm Ø x 20 mm
R Sn 15	.	0.03	.	.	.	.	.	.	0.06	40 mm Ø x 40 mm
R Sn 20	7.7	<0.01	<0.01	.	.	.	.	<0.001	25	40 mm Ø x 40 mm
R Sn 12	0.11	<0.01	.	.	.	.	.	0.03	<0.01	40 mm Ø x 40 mm
R Sn 14	.	.	0.05	.	.	.	.	.	.	40 mm Ø x 40 mm

TITANIUM BASE SETTING-UP SAMPLES

typical analysis		40 mm Ø x 40 mm								
Number	Ti	Al	C	Fe	Mo	Pd	Sn	V	Zr	
R Ti 11	99.9	.	0.01	0.05	.	.	.	.	.	.
R Ti 12	Rem.	.	0.02	0.2	.	0.2	.	.	.	.
R Ti 13	Rem.	6	<0.01	0.2	.	.	.	4	.	.
R Ti 14	Rem.	6	<0.02	0.02	2	.	2	.	4	.

ZINC BASE SETTING-UP SAMPLES

typical analysis		169X, 1690X: 50 mm Ø x 20 mm					C: 40 mm Ø x 30 mm			R: 40 mm Ø x 30 mm						
Number	Zn	Ag	Al	Bi	Cd	Cu	Fe	In	Mg	Mn	Ni	Pb	Sb	Sn	Ti	Tl
R Zn 14	88	<0.001	10	.	0.02	2.8	0.05	<0.001	0.11	0.03	<0.001	0.05	<0.001	0.03	0.05	<0.005
C Zn 3/4	.	.	3.93	.	0.001	0.071	0.016	.	0.055	.	.	0.0056	.	0.001	.	.
C Zn 3/3	.	.	3.92	.	0.0001	0.064	0.0106	.	0.046	.	.	0.0054	.	0.0010	.	last
C Zn 4/8	.	.	0.93	.	0.10	0.51	.	.	.	.	.	1.26	.	0.99	.	.
C Zn 4/3	.	.	0.54	.	0.110	0.39	.	.	.	.	.	1.95	.	0.98	.	last
169X ZnSUS1 *	.	0.04	0.35	0.005	0.3	0.35	0.05	0.25	0.002	0.001	0.06	0.6	0.2	0.3	0.001	0.06 last
R Zn 13	97.5	0.05	0.3	.	0.3	0.3	0.009	0.26	<0.01	<0.01	0.05	0.6	0.2	0.3	<0.01	0.03
R Zn 15	Rem.	.	0.20	.	0.5	0.23	0.2	.	.	0.01	.	0.14	0.03	0.05	.	.
R Zn 16	.	.	0.23	.	0.049	0.011	0.092	.	.	.	.	0.23	.	0.009	.	.
R Zn 12	99.9	0.004	0.006	0.006	0.008	0.009	0.024	0.009	0.005	0.002	0.008	0.009	(0.01)	0.007	0.006	0.007
R Zn 11	99.99	.	<0.0005	.	<0.0005	<0.0005	<0.0005	.	<0.0005	<0.0005	<0.0005	<0.0005	.	<0.0005	<0.0010	.

* 169X ZN SUS1 also contains Cr: 0.001 and Si: 0.003

RM ZINC BINARY

cast typical analysis listed in mass %

Number	Mn	Sb	Zn	Size
41X ZMn1	1.06	.	Remainder	50 mm Ø x 20 mm
41X ZSb1	.	1.03	Remainder	40 mm Ø x 15 mm
41X ZSb4	.	3.78	Remainder	40 mm Ø x 15 mm
41X ZSb8	.	7.68	Remainder	40 mm Ø x 15 mm

ZIRCONIUM ALLOY

* mill certificate given as provisional analysis listed in mass %

Number	Al	Bi	C	Cr	Cu	Fe	H	Hf	Mo	N	Nb	Ni
IARM Zr705 *	0.015	0.0003	0.007	<0.01	<0.0025	0.08	0.0004	1.2	<0.0025	0.003	2.5	0.004

Number	O	P	Si	Sn	Ta	Ti	V	W	Zr	Units
IARM Zr705 *	0.12	0.0003	0.003	0.004	<0.01	<0.0035	<0.0025	0.002	96	31 mm Ø x 18 mm

CAST IRON SETTING-UP SAMPLES

Number	typical analysis																	
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Nb	Sn	Ti	V	W	Mg	Ce	
C Fe 5	4.12	0.2	0.09	0.03	0.36	0.08	0.08	0.11	0.11	0.05	<0.0015	0.003	0.02	0.13	.	.	.	
NCS AH11355a	4.07	0.220	0.054	0.041	1.45	0.266	1.46	2.12	0.724	0.073	0.022	0.146	0.042	0.090	0.039	0.0024	(0.0006)	
SUS 5/55	3.8	0.61	.	0.008	2.1	0.003	0.97	0.02	.	0.03	.	0.07	<0.005	0.48	.	0.09	0.03	
NCS AH11356a	3.78	0.618	0.084	0.021	2.47	0.68	0.522	0.175	0.344	0.079	0.037	0.076	0.085	0.265	0.105	0.054	(0.045)	
SUS 5/54	3.7	0.60	.	0.008	2.1	0.007	1.0	0.02	.	0.04	.	0.07	<0.005	0.49	.	0.08	0.03	
C Fe 7	(3.7)	0.07	0.015	0.005	3.15	0.14	0.05	0.03	<0.01	0.015	.	0.003	0.010	0.018	.	0.035	.	
SUS 2/48	3.6	0.73	0.17	0.12	1.8	0.23	0.49	0.07	0.11	0.01	.	0.10	0.06	0.53	.	.	.	
IARM 215A	3.5	1.3	0.3	0.13	2.1	0.6	0.9	0.6	0.5	0.037	.	0.17	0.07	0.5	.	.	.	
R G 13+Se	3.4	1.0	0.6	0.06	2.1	0.7	0.5	1.0	0.3	0.05	<0.01	0.3	0.03	0.3	0.01	.	.	
SUS 3/21	3.4	0.90	1.0	0.10	2.2	0.01	0.01	0.25	<0.005	<0.005	.	<0.005	0.11	0.27	.	.	.	
C Fe 6	(3.3)	0.7	0.04	0.03	2.6	0.8	0.03	0.03	<0.01	0.004	.	0.002	0.02	0.007	.	.	.	
R G 14	3.3	0.2	0.06	<0.01	1.8	0.07	1.1	1.0	.	0.03	.	0.2	<0.01	0.1	.	0.05	0.02	
BS SU CCD	3.28	0.59	0.020	0.008	2.53	0.050	0.020	0.030	0.002	0.015	.	0.002	0.006	0.014	.	0.032	.	
C Fe 8	3.2	0.42	0.025	0.02	1.3	0.062	0.11	0.05	<0.01	0.05	<0.001	0.01	0.05	0.04	<0.01	.	.	
R G 16	3.2	0.2	0.3	<0.01	1.9	0.07	1.2	1.0	.	0.05	.	0.2	<0.01	0.1	.	0.06	0.03	
SUS 4/27	3.2	0.17	.	0.01	2.7	0.78	0.10	0.09	.	0.02	.	<0.005	0.05	0.50	.	0.03	.	
R G 13	3.1	0.9	0.4	0.04	1.9	0.5	0.5	1.1	0.3	0.04	<0.01	0.3	0.01	0.3	<0.01	.	.	
SUS 1/19	3.1	0.44	0.05	0.07	2.8	0.47	0.19	0.50	0.33	0.02	.	0.05	<0.005	0.04	.	.	.	
R N 15	2.9	1.6	0.008	0.07	<0.1	.	2.3	0.05	.	0.14	.	0.05	0.06	0.01	.	.	.	
CKD T	2.8	1.3	0.15	0.18	1.6	0.3	0.2	0.1	0.2	.	.	0.04	0.05	0.05	.	.	.	
SUS 7/8	2.8	0.29	0.09	0.18	0.94	0.21	.	0.07	.	0.02	.	<0.01	.	0.06	.	.	.	
BS DNR-2	2.72	0.85	0.031	0.006	2.52	0.02	18.9	1.62	0.007	<0.1	<0.05	<0.1	<0.05	<0.1	.	0.05	.	
BS DNR-1	2.52	0.88	0.031	0.005	2.79	0.016	18.6	1.56	0.006	<0.1	<0.1	<0.1	<0.1	<0.1	.	0.04	.	
SUS 6/6	2.5	0.65	0.05	0.12	1.8	0.02	.	0.10	.	<0.005	.	0.05	0.02	0.02	.	.	.	
NCS AH11354a	2.25	1.17	0.375	0.095	2.66	1.65	0.623	0.493	0.253	0.072	0.117	0.046	0.184	0.518	0.434	0.0056	(0.0033)	
R G 15	2.0	0.7	0.3	0.1	4.2	<0.01	0.5	0.5	0.8	0.06	.	0.1	.	.	.	.	.
C Fe 4	1.53	0.40	0.012	0.012	0.31	0.06	0.27	11.4	0.75	<0.005	<0.02	<0.02	<0.02	0.90	<0.02	.	.	

Number	typical analysis													Units
	As	B	Bi	Ca	Co	La	N	Pb	Sb	Se	Te	Zn	Zr	
C Fe 5	40 mm Ø x 30 mm
NCS AH11355a	.	0.013	.	.	0.027	(0.0003)	.	.	.	.	.	.	.	31 mm Ø x 24 mm
SUS 5/55	<0.005	.	.	.	.	.	.	0.04	.	.	.	.	.	60 mm x 35 mm x 18 mm
NCS AH11356a	.	0.041	.	.	0.032	(0.020)	.	.	.	.	.	.	.	31 mm Ø x 24 mm
SUS 5/54	<0.005	.	.	.	.	.	.	0.04	.	.	.	.	.	60 mm x 35 mm x 18 mm last
C Fe 7	<0.001	.	.	.	.	.	.	40 mm Ø x 49 mm last
SUS 2/48	60 mm x 35 mm x 18 mm
IARM 215A	35 mm Ø x 38 mm
R G 13+Se	<0.01	.	<0.001	.	~0.02	.	.	.	.	~40 mm Ø x 20 mm
SUS 3/21	60 mm x 35 mm x 18 mm
C Fe 6	40 mm Ø x 50 mm last
R G 14	.	0.02	.	.	0.01	.	.	.	.	.	.	.	.	~40 mm Ø x 20 mm
BS SU CCD	0.001	.	.	0.0027	0.009	.	.	.	.	.	.	.	.	33 mm Ø x 17 mm last
C Fe 8	.	0.03	.	.	0.005	.	.	.	.	0.003	.	.	.	38 mm Ø x 25 mm
R G 16	.	0.01	.	.	0.01	.	.	.	.	.	.	.	.	40 mm Ø x 20 mm
SUS 4/27	<0.005	.	.	.	.	.	<0.005	.	.	.	.	.	.	60 mm x 35 mm x 18 mm
R G 13	<0.01	.	<0.001	.	.	.	.	.	.	~40 mm Ø x 20 mm
SUS 1/19	60 mm x 35 mm x 18 mm
R N 15	.	0.01	.	.	.	.	.	0.03	.	.	.	.	.	35-40 mm Ø x 40 mm
CKD T	0.03	.	.	.	0.05	.	.	0.1	.	0.02	.	0.01	.	39 mm x 39 mm x 20 mm
SUS 7/8	.	0.004	<0.001	.	.	.	.	.	.	.	.	.	.	60 mm x 35 mm x 18 mm
BS DNR-2	<0.1	Fe: [73.3]	.	<0.1	.	.	.	.	.	33 mm Ø x 21 mm
BS DNR-1	<0.1	Fe: [73.5]	.	<0.1	.	.	.	.	.	33 mm Ø x 21 mm
SUS 6/6	.	<0.001	0.01	.	.	.	.	.	.	.	.	.	.	60 mm x 35 mm x 18 mm
NCS AH11354a	.	0.055	.	.	0.094	(0.0013)	.	.	.	.	.	.	.	31 mm Ø x 24 mm
R G 15	0.02	.	0.047	<0.02	.	.	.	.	.	~40 mm Ø x 20 mm
C Fe 4	40 mm Ø x 40 mm

CAST IRON SETTING-UP SET

DUCTILE IRON SETTING-UP SET

Number	typical analysis					available in SET/6 only				34 mm Ø x 5 mm	Number	Mg	typical analysis			45 mm Ø x 5 mm	
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	C			Mn	P	S	Si	
KTC-9 B1	2.40	0.04	0.005	0.11	3.03	0.04	1.03	0.99	0.049	KTC-10 M-1	0.05	3.4	0.1	0.015	0.002	2.5	
KTC-9 B2	2.61	0.23	0.024	0.082	2.69	0.20	0.81	0.81	0.20	KTC-10 M-2	0.04	3.4	0.1	0.015	0.002	2.5	
KTC-9 B3	3.05	0.37	0.049	0.059	2.28	0.40	0.60	0.62	0.43	KTC-10 M-3	0.03	3.4	0.1	0.015	0.002	2.5	
KTC-9 B4	3.36	0.55	0.069	0.039	1.91	0.61	0.41	0.42	0.62	KTC-10 M-4	0.02	3.4	0.1	0.015	0.002	2.5	
KTC-9 B5	3.70	0.83	0.094	0.021	1.49	0.82	0.21	0.21	0.83	KTC-10 M-5	0.01	3.4	0.1	0.015	0.002	2.5	
KTC-9 B6	4.08	0.99	0.12	0.003	0.94	1.01	0.05	0.06	1.06								

CARBON AND LOW ALLOY STEEL SETTING-UP SAMPLES - CONTINUED FROM PREVIOUS

typical analysis

Number	As	B	Bi	Ca	Nb	O	Pb	Sb	Ta	Te	Zn	Zr	Units
BS SU D2	0.003	0.0002	.	.	0.004	.	0.0006	0.003	.	.	.	.	38 mm Ø x 40 mm
R H 18	.	.	.	Fe:68.1	0.03	.	.	.	.	.	.	.	40 mm Ø x 40 mm
BR ST2	0.027	0.0018	.	.	0.086	.	(0.001)	(0.002)	.	.	.	0.005	45 mm Ø x 30 mm
KUT K3	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 39 mm
BS SU E52100	0.004	0.0001	.	<0.0005	0.0008	0.001	<0.0005	.	.	.	.	0.0004	38 mm Ø x 40 mm Fe: [96.7]
R N 13	<0.01	<0.001	<0.005	<0.001	<0.01	.	<0.01	0.04	<0.01	<0.01	.	0.17	40 mm Ø x 40 mm
R H 13	.	.	.	.	0.02	.	.	.	.	.	.	.	40 mm Ø x 40 mm
R N 16	<0.01	<0.001	<0.001	<0.001	<0.01	.	<0.01	0.04	<0.01	<0.01	.	0.18	40 mm Ø x 40 mm
R N 19	0.07	<0.01	0.02	<0.001	>0.4	.	0.03	0.07	0.31	0.06	0.02	0.11	40 mm Ø x 40 mm
BAM SUS-1 R	.	.	.	.	0.6	.	.	.	.	.	.	.	50 mm Ø x 42 mm
IARM 219A	0.01	0.01	.	<0.0001	0.4	.	0.003	0.1	0.01	.	0.01	0.002	38 mm Ø x 38 mm
R Fe D	0.007	<0.01	<0.01	<0.001	>0.42	.	<0.01	0.09	0.07	0.01	.	0.04	40 mm Ø x 40 mm
NCS AH21311	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm
SUS D	.	<0.001	.	.	0.05	.	.	.	.	.	.	.	44 mm Ø x 25, 75, or 150 mm
NCS AH21313	0.027	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm
BS SU LAS-14	0.004	0.0006	0.0025	0.0008	0.0069	.	<0.001	0.023	0.004	0.0045	<0.001	0.001	40 mm Ø x 40 mm Fe: [95.4]
NCS AH21309	0.017	0.0041	.	0.0009	0.313	.	.	0.0034	0.098	.	.	.	40 mm Ø x 40 mm
KUT K4	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 39 mm
KUT K6	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 39 mm
IMZ S-04	.	.	.	.	.	.	.	.	.	.	.	.	43 mm Ø x ~35 mm
BS 02H	0.006	0.0004	.	0.0012	<0.001	.	<0.001	<0.001	<0.001	.	.	<0.001	38 mm Ø x 150 mm
BS 02B	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 150 mm last
PV 101/1	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 25 mm
BS SU 4340	0.005	0.0002	.	0.0002	0.004	0.0007	0.0001	.	.	.	.	0.002	38 mm Ø x 40 mm Fe: 95.5
BS SU 8740	.	.	.	.	.	0.0016	.	.	.	.	.	.	38 mm Ø x 40 mm
BS SU41L40	<0.05	<0.005	.	<0.005	<0.05	<0.05	0.14	.	.	.	.	<0.05	41 mm Ø x 40+ mm Fe: 96.6
BS SU 4942	0.0009	<0.0005	.	<0.005	0.001	0.001	<0.005	.	.	.	.	<0.005	38 mm Ø x 40 mm Fe: [96.7]
BS SU P-20B	0.007	<0.001	.	0.0022	0.003	.	<0.005	<0.01	.	.	.	0.0032	38 mm Ø x 40 mm
C Fe 2 50mm	0.053	0.0032	.	0.0006	0.015	.	(0.0006)	0.02	0.02	.	.	.	40 mm Ø x 50 mm
BS SU 4130A	0.005	.	.	<0.001	0.002	.	<0.0005	<0.01	0.009	.	.	0.001	38 mm Ø x 40 mm Fe: [97.4]
Number	As	B	Bi	Ca	Nb	O	Pb	Sb	Ta	Te	Zn	Zr	Units
C Fe 2	0.045	0.0015	.	<0.001	0.018	.	(0.0009)	0.005	0.03	.	.	.	40 mm Ø x 40 mm
BS SU 4130	.	.	.	.	.	0.002	.	.	.	.	.	.	44 mm Ø x 40 mm
BS 210	.	.	.	.	0.016	.	.	.	.	.	.	.	32 mm Ø x 17 mm last
BS SU LF-1a	<0.005	<0.005	.	0.002	<0.005	0.012	0.001	.	.	.	.	<0.005	~36 mm Ø x ~40 mm Fe: 98.69
BS SU82MOD	0.005	0.0002	.	0.0007	0.001	0.0009	Fe:[97.6]	Mg:0.0002	.	.	.	<0.001	38 mm Ø x 40 or 150 mm
BS SU LF-1	<0.005	<0.005	.	0.002	<0.005	0.010	0.001	.	.	.	.	<0.005	~36 mm Ø x ~40 mm Fe: 98.71
BS SU 8620A	0.005	0.0003	.	0.0006	0.003	0.0019	0.0005	.	.	Mg: 0.0002	0.0007	<0.005	38 mm Ø x 40 mm Fe: 97.1
BS SU 4620	.	.	.	.	.	0.002	.	.	.	.	.	.	44 mm Ø x 40 mm
BS SU 4820	0.006	<0.0005	.	0.0003	0.003	0.0016	<0.0005	0.003	0.006	Mg:0.0004	<0.0005	<0.0005	38 mm Ø x 40 mm Fe: [95.2]
BS SU LF-2A	0.003	.	.	<0.0002	.	0.002	.	.	.	.	.	0.001	48 mm Ø x 150 mm
PV 102/1	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 25 mm
BS 03D	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 150 mm
IMZ S-07	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x ~30 mm
BS SU LF-2	.	.	.	.	.	0.002	.	.	.	.	.	.	38 mm Ø x 40 mm
BS SU LF-3	.	.	.	.	.	0.002	.	.	.	.	.	.	44 mm Ø x 40 mm
BS SU 11L17	.	<0.0005	.	<0.0005	0.002	0.016	0.27	.	.	.	.	.	41 mm Ø x 40 mm Fe: [98.1]
BS SU 1018E	0.006	0.0003	.	0.0010	0.001	Mg:<0.0005	0.0011	<0.01	<0.01	0.02	.	0.0015	38 mm Ø x 150 mm Fe: [98.3]
R N 17	0.04	0.003	0.01	0.003	0.5	.	0.01	0.01	0.11	0.02	.	0.002	40 mm Ø x 40 mm
BS 213	.	.	.	.	0.013	.	.	.	.	.	.	.	32 mm Ø x 17 mm Tl: (0.002)
R Fe C	0.05	<0.001	0.02	<0.01	0.07	.	0.03	0.01	0.13	0.03	0.016	<0.01	40 mm Ø x 40 mm
BS 207	.	.	.	.	0.024	.	.	.	.	.	.	.	32 mm Ø x 17 mm
IMZ 501	.	.	.	.	.	.	.	.	.	.	.	.	48 mm Ø x 25 mm
NCS AH11357	.	.	.	.	.	.	.	.	.	.	.	.	38 mm Ø x 40 mm
IMZ S-13	.	.	.	.	0.45	.	.	.	.	.	.	.	40 mm Ø x ~29 mm
IMZ 503	.	.	.	.	.	.	.	.	.	.	.	.	48 mm Ø x 25 mm
BS SU 9310	.	.	.	.	0.006	0.002	.	.	.	.	.	.	38 mm Ø x 40 mm
BS SU 9310A	0.004	<0.005	.	<0.005	0.008	0.0016	<0.005	.	.	.	.	<0.005	38 mm Ø x 40+ mm Fe: [94.1]
BS 214	.	.	.	.	(0.007)	.	.	.	.	.	.	.	32 mm Ø x 17 mm Tl: (0.002)
KUT K9	.	.	.	.	(0.04)	.	.	.	.	.	.	.	30-35 mm Ø x 18 or 39 mm
IMZ S-11	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x ~25 mm
C Fe 9	0.003	0.0001	.	.	.	.	0.3	0.0005	.	.	.	.	40 mm Ø x 30, 40, or 50 mm
IARM 218A	0.1	0.0004	.	<0.0001	<0.0001	.	<0.001	0.02	0.02	.	<0.001	<0.001	38 mm Ø x 38 mm
SUS A	.	.	.	.	<0.005	.	.	.	.	.	.	.	44 mm Ø x 75 mm or 150 mm
IARM 217A	0.003	<0.0001	.	<0.0001	0.001	.	0.004	0.006	0.01	.	<0.0001	0.005	38 mm Ø x ~20-30 mm
R N 14	0.06	0.005	<0.01	<0.001	>0.4	.	0.01	0.02	0.2	0.02	.	<0.005	40 mm Ø x 40 mm
DSZU SUS 40L	0.0006	.	0.0004	0.003	0.0006	.	0.0005	0.002	.	.	0.001	0.002	40 mm Ø x 50 mm
NCS AH21308	.	0.0011	.	0.0005	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm
SAG 0203	0.002	<0.0005	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	.	32 mm Ø x 40 mm
SAG 0204	0.002	<0.0005	.	<0.001	<0.001	.	<0.001	<0.001	<0.001	<0.001	.	.	40 mm Ø x 40 mm
SAG 0202	0.001	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm
Number	As	B	Bi	Ca	Nb	O	Pb	Sb	Ta	Te	Zn	Zr	Units

* NCS 28301 also contains Al(ins): 0.0049 and Al(sol): 0.0056.

LOW ALLOY STEEL SETTING-UP SETS WITH SOLUBLE/INSOLUBLE VALUES

available in SETS only, as grouped															Sol. = soluble		Ins. = insoluble		typical analysis				35 mm Ø x 20 mm	
Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al	Sol.Al	Ins.Al	B	Ca	Sol.N	Ins.N								
KTC-1/5 01	0.0008	0.01	0.001	<0.001	<0.01	0.01	0.01	0.01	<0.001	.	<0.001	<0.001	0.0002	0.0001	.	.								
KTC-1/5 02	0.10	0.21	0.003	0.005	0.61	0.07	0.05	3.99	0.50	.	0.003	0.001								
KTC-1/5 03	0.16	0.76	0.002	0.009	0.40	0.70	0.10	3.24	0.40	.	0.012	<0.001								
KTC-1/5 04	0.20	2.01	0.010	0.016	0.05	0.10	0.52	2.51	0.32	.	0.083	<0.001								
KTC-1/5 05	0.24	1.63	0.013	<0.001	0.26	0.40	1.02	2.04	0.10	.	0.036	0.002	.	0.0002	.	.								
KTC-1/5 06	0.36	1.33	0.049	0.001	0.36	0.50	1.53	1.54	0.20	.	0.020	0.001	0.0005	0.0006	.	.								
KTC-1/5 07	0.51	1.02	0.040	0.029	0.30	0.20	2.05	1.02	0.62	.	0.029	0.001	0.0009	0.0018	.	.								
KTC-1/5 08	0.66	0.50	0.031	0.023	0.16	0.31	2.54	0.51	1.01	.	0.056	<0.001	0.0020	0.0030	.	.								
KTC-1/5 09	0.80	0.31	0.019	<0.001	0.20	0.15	3.26	0.10	0.84	.	0.064	<0.001	0.0038	0.0031	.	.								
KTC-1/5 10	1.05	0.10	0.006	0.022	0.10	0.07	4.06	0.07	0.050	.	0.090	0.001	0.0088	.	.	.								
KTC-15 N-1	0.015	0.10	0.002	0.003	0.10	.	.	0.21	.	0.050	.	.	.	.	0.0012	0.0001				
KTC-15 N-2	0.014	0.10	0.002	0.003	0.10	.	.	0.29	.	0.048	.	.	.	.	0.0048	0.0002				
KTC-15 N-3	0.012	0.10	0.002	0.003	0.10	.	.	0.19	.	0.048	.	.	.	.	0.0076	0.0003				
KTC-15 N-4	0.012	0.10	0.003	0.004	0.10	.	.	0.20	.	0.048	.	.	.	.	0.0110	0.0002				
KTC-15 N-5	0.012	0.11	0.003	0.004	0.10	.	.	0.41	.	0.050	.	.	.	.	0.0194	0.0008				

Number	As	Co	Nb	Sn	Ti	V	W
KTC-1/5 01	<0.001	<0.001	0.001	0.001	0.001	0.001	<0.01
KTC-1/5 02	.	0.010	0.10	0.062	0.021	0.40	.
KTC-1/5 03	0.010	0.15	0.069	0.042	0.10	0.022	.
KTC-1/5 04	0.021	0.050	0.019	0.021	0.31	.	.
KTC-1/5 05	0.044	0.10	0.040	0.010	0.011	0.31	.
KTC-1/5 06	0.062	0.20	0.010	.	0.054	0.052	.
KTC-1/5 07	.	.	.	.	0.20	0.11	0.05
KTC-1/5 08	.	.	.	.	0.16	0.15	0.12
KTC-1/5 09	.	.	.	.	.	0.21	0.22
KTC-1/5 10	.	.	.	.	.	0.50	0.15
KTC-15 N-1	.	.	.	.	.	.	.
KTC-15 N-2	.	.	.	.	.	.	.
KTC-15 N-3	.	.	.	.	.	.	.
KTC-15 N-4	.	.	.	.	.	.	.
KTC-15 N-5	.	.	.	.	.	.	.

LOW ALLOY STEEL SETTING-UP SET

SOLD AS SET/3 ONLY										typical analysis				formerly known as set ST A-C						35 mm Ø x 20 mm	
Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Sol.Al	Ins.Al	Nb	Ti	V	W	As	B	Ca	Co	
KTC-2 A	1.00	0.01	0.002	0.001	0.05	0.11	4.09	.	.	.	0.086	<0.001	0.10	0.36	0.03	0.19	.	.	.	.
KTC-2 B	0.01	0.52	0.045	.	0.57	0.69	0.50	3.98	0.20	0.093	.	.	0.03	.	.	0.050	0.0085	0.0035	0.01	0.01	
KTC-2 C	0.11	1.96	.	0.028	.	.	.	0.50	1.00	.	0.019	0.001	.	0.50	.	.	.	.	.	0.20

STAINLESS STEEL SETTING-UP SAMPLE SETS

available in SETS only, as grouped															Sol. = soluble		Ins. = insoluble		typical analysis				35 mm Ø x 20 mm	
Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sol.Al	Ins.Al	As	Co	Nb	Ti									
ST I	0.26	0.21	0.008	0.024	0.19	0.01	0.01	26.78	0.046	0.002	0.004	<0.001	0.003	0.013	0.010									
ST H	0.088	0.47	0.009	0.010	0.50	0.04	0.57	17.95	0.49	0.031	0.005	0.011	0.054	0.094	0.094									
ST G	0.031	1.37	0.029	0.005	1.26	0.19	3.87	11.85	1.14	0.086	0.005	0.075	0.19	0.98	0.30									
KTC-5 31	0.068	0.51	0.023	0.005	1.24	0.19	3.91	11.23	0.71	0.10	0.003	0.10	0.19	0.90	0.31									
KTC-5 32	0.040	1.16	0.030	0.007	0.52	0.01	2.56	12.71	1.01	0.013	0.004	0.008	0.014	0.082	0.051									
KTC-5 33	0.044	0.30	0.008	0.022	0.32	0.10	1.03	15.12	1.19	0.031	0.004	0.001	0.10	0.30	0.007									
KTC-5 34	0.084	0.99	0.025	0.004	0.78	0.04	0.48	16.99	0.48	0.045	0.006	0.009	0.051	0.083	0.098									
KTC-5 35	0.22	1.35	0.002	0.029	0.58	<0.01	0.05	24.14	0.029	0.057	0.007	<0.001	0.005	0.007	0.005									
KTC-5 36	0.15	0.43	0.014	0.009	0.14	<0.01	0.11	22.31	0.043	0.001	0.008	<0.001	0.003	0.001	0.005									
KTC-5 37	0.11	0.74	0.007	0.019	0.99	<0.01	0.20	19.51	0.20	0.001	0.002	<0.001	0.002	<0.001	0.003									
KTC-5 38	0.30	0.19	0.010	0.013	0.40	<0.01	0.01	25.52	0.004	0.001	0.002	<0.001	0.002	<0.001	0.003									

CARBONATE IN XRF DISC

typical analysis

38-40 mm Ø x 5-8 mm

Number	CO ₂	Al ₂ O ₃	BaO	CaO	Cl	F	Fe ₂ O ₃	MgO	Na ₂ O	P ₂ O ₅	SO ₃	SiO ₂	SrO
FLX MB2	Rem	0.02	0.03	50.04	.	.	.	0.91	0.07	.	.	0.02	0.02
ASO TUD	47.51	0.207	.	30.28	0.013	<0.01	0.023	21.76	0.046	0.012	0.023	0.093	0.004

CALCIUM AND FLUORITE IN XRF DISCS

typical analysis

38-40 mm Ø x 5-8 mm

Number	CaO	CaF ₂	Al ₂ O ₃	As ₂ O ₃	B ₂ O ₃	Cr ₂ O ₃	F	Fe ₂ O ₃	K ₂ O	MgO	MnO	Mn ₂ O ₃	Na ₂ O	P ₂ O ₅	SO ₃	SiO ₂	TiO ₂
BR U 33	56	.	0.25	.	.	.	.	0.2	.	.	.	.	.	.	.	0.3	.
FLX C1	44.11	.	10.09	.	23.8	0.07	.	2.27	0.76	1.51	0.16	.	0.80	0.17	0.53	16.59	0.14
BR SP1/1	40.60	.	5.0	.	25.65	.	.	2.0	2.0	8.0	.	.	1.0	.	0.05	15.0	.
BR BF2	37.0	.	10.0	.	3.43	.	.	1.0	0.4	8.0	0.77	.	.	2.0	0.2	36.0	1.0
BR BCEM	35.00	.	4.88	.	2.40	.	.	2.25	0.99	2.37	.	0.01	2.12	0.01	0.50	49.15	0.01
FLX C2	33.69	.	2.75	.	18.1	0.18	1.63	1.6	0.51	1.27	0.07	.	0.3	0.45	0.18	36.16	0.12
FLX Z1	32.77	.	0.42	.	41.6	.	3.54	0.09	0.09	0.29	0.05	.	5.51	0.23	3.59	12.18	0.08
BR SP2	30.0	.	9.0	.	19.50	.	.	5.0	2.0	6.0	.	.	2.0	.	0.30	25.0	.
BR WR1	30.0	.	13.0	.	30.0	1.5	.	0.1	2.0	5.0	0.2	.	5.0	0.1	0.1	12.5	.
FLX C3	29.36	.	11.16	.	31.0	0.09	.	1.87	0.733	2.87	0.16	.	2.22	0.58	0.40	19.76	0.19
FLX SP1	28.61	.	.	3.53	.	.	.	2.72	.	.	.	.	14.84	.	.	45.57	.
FLX SLAG2	27.8	.	6.0	.	.	0.28	1.05	5.68	0.14	10.8	2.53	.	1.59	1.61	31.4	1.41	.
FLX D1	26.52	.	0.51	.	21.5	.	.	.	0.44	19.14	0.35	.	0.47	0.01	30.46	0.43	.
BR B 1	25.0	.	.	.	.	.	.	19.0	.	.	.	.	.	.	51.0	.	.
FLX Z4	24.93	.	16.07	0.147	.	.	0.37	0.179	0.249	0.701	.	.	.	.	56.94	0.253	.
BR SS3	24.0	.	17.6	.	16.6	0.2	.	10.5	0.4	4.1	3.5	.	.	0.9	.	21.4	0.8
FLX Z5	22.67	.	18.16	.	.	0.19	.	9.39	0.41	4.07	2.7	.	.	0.89	.	25.63	0.73
FLX SLAG1	19.12	.	1.02	.	Rem	0.09	0.91	0.46	0.55	2.04	0.07	.	0.57	0.54	0.51	41.95	0.49
BR VA2/2	15.0	.	10.0	.	8.7	.	.	12.0	5.0	15.0	4.0	.	14.0	3.0	0.1	13.2	.
FLX S10	12.15	.	4.25	.	.	.	.	0.285	0.223	2.29	.	.	9.09	0.104	.	65.94	0.116
BR U 29	.	71.0	.	.	.	.	48	.	.	.	.	.	.	.	.	.	.
BR WC	.	20.00	25.00	.	.	.	.	0.80	.	5.00	.	.	10.00	0.15	.	38.10	0.80

Number	BaO	Cl	Cr ₂ O ₃	CuO	FeO	GeO ₂	Li ₂ O	MoO ₃	Nb ₂ O ₅	NiO	PbO	Sb ₂ O ₃	SrO	V ₂ O ₅	ZnO	ZrO ₂
BR U 33
FLX C1	0.17	.	0.07	.
BR SP1/1	.	0.20	.	.	.	.	.	.	.	.	.	.	0.50	.	.	.
BR BF2
BR BCEM	0.31	.	.	.	.
FLX C2	.	0.15	.	.	.	.	3.9	.	.	.	.	.	0.1	.	0.08	.
FLX Z1	.	1.15	.	.	.	.	.	.	.	.	.	.	0.01	.	.	.
BR SP2	.	0.70	.	.	.	.	.	.	.	.	.	0.50	.	.	.	.
BR WR1	.	.	1.5	.	.	.	.	.	.	.	.	0.5	.	.	.	.
FLX C3	.	0.21	.	.	.	.	1.5	.	.	.	.	.	0.21	.	0.09	.
FLX SP1	5.37	.	.	.	.	3.76	.	.	.
FLX SLAG2	0.09	.	.	0.09	.	0.11	Rem	.	0.08	0.06	0.08	.	1.61	0.09	0.08	.
FLX D1
BR B 1	.	.	0.5	3.0	.	.	.	.	.	1.0	.	.	.	.	.	last of stock
FLX Z4
BR SS3	.	.	0.2	.	.	.	.	.	.	.	.	.	.	.	.	.
FLX Z5
FLX SLAG1	0.11	.	.	0.09	.	.	5.0	.	0.11	0.09	0.09	.	0.09	0.49	0.09	0.10
BR VA2/2
FLX S10
BR U 29
BR WC	0.15	.	.	.

CLASSIC XRF DISC SET

available in set/6 or individually

typical analysis

40 mm Ø x 5 mm

Number	Al ₂ O ₃	As ₂ O ₃	B ₂ O ₃	BaO	CaO	CoO	CuO	F	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	NiO	P ₂ O ₅	PbO	Sb ₂ O ₃	SiO ₂	TiO ₂	V ₂ O ₅	WO ₃	ZnO
BR PA	15.8	.	4.2	2.0	0.83	.	.	0.17	1.16	2.16	3.2	20.3	0.13	.	0.58	.	.	36.52	3.9	0.01	.	7.4
BR PB	6.75	.	0.04	21.3	1.62	0.25	1.4	12.2	0.04	0.23	0.89	0.09	0.79	2.1	4.4	.	.	42.54	1.2	.	1.85	0.45
BR PC	27.18	0.78	19.1	1.0	0.03	.	.	.	5.4	6.9	.	0.47	7.9	0.29	15.6	.	.	9.9	0.10	0.26	0.90	.
BR PD	20.22	1.86	22.2	.	14.3	.	.	.	0.58	0.09	7.3	.	9.6	.	5.8	1.7	1.85	5.48	0.03	0.86	0.32	3.7
BR PE	8.5	0.44	4.0	4.6	0.60	0.74	0.82	1.3	0.03	0.95	.	6.5	15.3	1.85	.	0.45	0.43	50.07	0.02	.	.	0.92
BR PF	3.85	.	2.0	0.34	2.84	0.25	1.8	5.0	0.07	18.3	0.82	.	1.2	.	.	0.05	0.86	56.31	0.04	1.7	.	.

Number	Ag ₂ O	Ga ₂ O ₃	Bi ₂ O ₃	CdO	Ce ₂ O ₃	Cr ₂ O ₃	Cs ₂ O	GeO ₂	In ₂ O ₃	La ₂ O ₃	MoO ₃	Nb ₂ O ₅	Nd ₂ O ₃	Pr ₂ O ₃	Rb ₂ O	Sm ₂ O ₃	SnO ₂	SrO	Ta ₂ O ₅	TeO ₂	Y ₂ O ₃	ZrO ₂
BR PA	.	.	.	0.39	.	0.15	0.04	0.08	0.04	.	.	.	.	.	0.04	.	.	0.71	.	0.04	.	0.15
BR PB	0.92	0.008	0.85	0.08	.	.
BR PC	.	.	0.50	0.16	.	.	.	0.27	.	.	2.0	0.60	0.46	0.20	.	.	.	.	.	.	.	.
BR PD	.	0.46	0.18	.	0.84	.	.	0.41	.	0.88	0.87	.	.	.	.	.	.	0.13	.	.	.	0.34
BR PE	0.13	.	0.08	.	0.56	.	.	0.09	0.40	.	0.05	.	.	.	.	.	0.60	0.31	0.05	0.03	0.18	.
BR PF	.	0.09	.	0.96	0.39	0.27	0.13	.	0.26	.	0.38	.	.	.	0.16	0.18	0.20	.	0.36	.	0.45	0.74

LEAD IN XRF DISCS

typical analysis

40 mm Ø x 5 mm

Number	PbO	Al ₂ O ₃	As ₂ O ₃	B ₂ O ₃	BaO	CaO	CdO	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	P ₂ O ₅	SO ₃	SiO ₂	ZnO
BR SF6	71.5	.	0.3	.	.	.	.	.	2.0	.	.	1.0	.	.	25.2	.
BR SF1	62.2	.	0.5	.	.	.	.	.	3.2	.	.	.	.	.	34.1	.
BR AK2	50.0	.	.	.	1.0	1.0	1.0	.	0.50	.	.	10.0	4.0	0.67	30.83	1.00
BR VA1	50.0	0.5	.	20.96	.	2.79	.	4.27	0.1	3.31	0.64	0.4	0.23	0.3	1.2	15.0
BR H 1	23.5	4.00	.	.	.	3.8	.	.	8.7	2.6	.	6.2	.	.	51.1	.

NEODYMIUM IN XRF DISCS

typical analysis

Number	Nd ₂ O ₃	Al ₂ O ₃	CaO	F	Fe ₂ O ₃	K ₂ O	MgO	Na ₂ O	SO ₃	Sb ₂ O ₃	SiO ₂	ZnO	Units
BR U 38	2.5	1.2	5.3	0.5	0.04	7.5	0.07	9.2	0.11	0.2	72.0	1.1	40 mm Ø x 5-8 mm

PHOSPHORUS IN XRF DISCS

typical analysis

40 mm Ø x 5-6 mm

Number	P ₂ O ₅	Al ₂ O ₃	B ₂ O ₃	BaO	CaO	Cl	CoO	Cr ₂ O ₃	F	Fe ₂ O ₃	K ₂ O	MgO	MnO	MoO ₃	Na ₂ O	NiO	SO ₃	SiO ₂	SrO	TiO ₂	V ₂ O ₅	ZnO	
BR UC5	67.88	6.0	.	11.0	.	.	8.99	.	.	.	3.7	2.43
BR HPII	30.0	25.0	20.0	5.0	.	.	.	10.0	.	.	10.0
FLX R5	18.61	0.195	.	5.87	0.11	1.01	.	.	.	.	4.19	.	4.22	6.18	13.47	.	.	42.04	.	.	2.94	5.9
FLX PR3	9.72	17.68	.	.	3.16	.	.	1.07	.	.	.	6.76	.	.	.	0.373	.	41.28	.	3.32	.	.	
FLX Z2	6.75	7.17	34.8	.	7.35	0.15	.	0.23	0.91	1.92	2.17	7.33	0.50	.	0.73	.	0.11	29.97	0.05	0.98	.	0.10	

ELEMENTS IN XRF DISCS

typical analysis

listed in mass %

all available individually

40 mm Ø x 6 mm

Number	Ag	Al	As	B ₂ O ₃	Ba	Ca	Cd	Cl	Co	Cr	Cu	Fe	K	Li ₂ O	Mg	Mn	Mo
FLX OME 5	<0.0001	0.0005	.	.	0.0005	0.0005	<0.0001	<0.0001	.	0.0005	<0.0001	0.0005	0.0005	.	0.0005	0.0005	0.0005
FLX OME 10	<0.0001	0.0010	.	.	0.0010	0.0010	0.0010	<0.0001	.	0.0010	<0.0001	0.0010	0.0010	.	0.0010	0.0010	0.0010
FLX OME 25	0.0025	0.0025	.	.	0.0025	0.0025	0.0025	<0.0001	.	0.0025	0.0008	0.0025	0.0025	.	0.0025	0.0025	0.0025
FLX OME 50	0.0050	0.0050	.	.	0.0050	0.0050	0.0055	<0.0004	.	0.0050	0.0033	0.0050	0.0050	.	0.0050	0.0050	0.0050
FLX OME 100	0.0100	0.0100	.	.	0.0100	0.0100	0.0100	<0.0003	.	0.0100	0.0056	0.0100	0.0100	.	0.0100	0.0100	0.0100
FLX OME 250	0.0250	0.0250	.	.	0.0250	0.0250	0.0250	0.0058	.	0.0250	0.0203	0.0250	0.0250	.	0.0250	0.0250	0.0250
FLX OME 500	0.0500	0.0500	.	.	0.0500	0.0500	0.0500	0.0123	.	0.0500	0.0500	0.0500	0.0500	.	0.0500	0.0500	0.0500
FLX OME 900	0.0900	0.0900	.	.	0.0900	0.0900	0.0900	0.0250	.	0.0900	0.0900	0.0900	0.0900	.	0.0900	0.0900	0.0900
FLX OME 1000	0.0684	0.0886	.	.	0.0924	0.1010	0.0967	0.0190	.	0.0906	0.0925	0.0961	0.0864	.	0.0958	0.0934	0.1120
FLX OME 2500	0.1960	0.2500	.	.	0.2500	0.2500	0.2500	0.0808	.	0.2500	0.2500	0.2500	0.2500	.	0.2500	0.2500	0.2500
FLX O1	0.52	1.93	.	.	5.61	4.3	0.53	0.35	.	0.63	0.90	0.80	0.87	.	2.82	0.27	1.55
FLX L2	.	5.88	0.12	37.2	.	0.17	.	.	0.56	.	.	0.25	.	8.0	.	.	2.59

Number	Na	Ni	P	Pb	S	Si	SiO ₂	Sn	Ti	V	W	Zn	Zr
FLX OME 5	0.0005	<0.0001	0.0005	0.0005	0.0004	0.0005	0.0005	<0.0001	0.0005	0.0005	.	0.0005	0.0005
FLX OME 10	0.0010	<0.0001	0.0010	0.0010	<0.0001	0.0010	0.0010	<0.0001	0.0010	0.0010	.	0.0010	0.0010
FLX OME 25	0.0025	0.0016	0.0025	0.0025	<0.0001	0.0025	0.0025	<0.0008	0.0025	0.0025	.	0.0025	0.0025
FLX OME 50	0.0050	0.0041	0.0050	0.0050	0.0024	0.0050	0.0050	0.0029	0.0050	0.0050	.	0.0050	0.0050
FLX OME 100	0.0100	0.0086	0.0100	0.0100	0.0057	0.0100	0.0100	0.0057	0.0100	0.0100	.	0.0100	0.0100
FLX OME 250	0.0250	0.0250	0.0250	0.0250	0.0215	0.0250	0.0250	0.0250	0.0250	0.0250	.	0.0250	0.0250
FLX OME 500	0.0500	0.0500	0.0500	0.0500	0.0366	0.0500	0.0500	0.0500	0.0500	0.0500	.	0.0500	0.0500
FLX OME 900	0.0900	0.0900	0.0900	0.0900	0.0790	0.0900	0.0900	0.0900	0.0900	0.0900	.	0.0900	0.0900
FLX OME 1000	0.0938	0.0995	0.0967	0.0908	0.0801	0.0926	0.1030	0.0939	0.0946	0.0921	.	0.0921	.
FLX OME 2500	0.2500	0.2500	0.2500	0.2500	0.2007	0.2500	0.2500	0.2500	0.2500	0.2500	.	0.2500	0.2500
FLX O1	5.26	0.92	0.58	2.79	0.07	24.75	0.90	0.66	0.63	0.35	.	3.51	.
FLX L2	0.18	1.21	0.59	0.11	0.02	.	43.55	.	.	0.55	0.22	.	.

CRM GLASS XRF DISCS AND PLATES

analysis listed in mass %

typical analysis

Number	Type	SiO ₂	Al ₂ O ₃	B ₂ O ₃	BaO	CaO	CdO	FeO	Fe ₂ O ₃	K ₂ O	MgO	Na ₂ O	SO ₃	SrO	TiO ₂	ZnO
SRM 93a	Borosilicate	80.8	2.28	12.56	.	0.01	.	0.016	0.028 (T.Fe)	0.014	0.005	3.98	.	.	0.014	.
SRM 1831	Soda-Lime Sheet	73.08	1.21	.	.	8.20	.	0.025	0.087 (T.Fe)	0.33	3.51	13.32	0.25	.	0.019	.
SRM 1830	Soda-Lime Float	73.07	0.12	.	.	8.56	.	0.032	0.121 (T.Fe)	0.04	3.90	13.75	0.26	.	0.011	.
SRM 620	Soda-Lime Flat	72.08	1.80	.	.	7.11	.	.	0.043	0.41	3.69	14.39	0.28	.	0.018	.
SRM 1411	Soft Borosilicate	58.04	5.68	10.94	5.00	2.18	.	.	0.050	2.97	0.33	10.14	.	0.09	0.02	3.85
SRM 1412	Multicomponent	42.38	7.52	4.53	4.67	4.53	4.38	.	(0.031)	4.14	(4.69)	4.69	.	4.55	.	4.48

continued

Number	As ₂ O ₃	Cl	Li ₂ O	PbO	ZrO ₂	Units
SRM 93a	.	0.060	.	.	0.042	1 Disc 32 mm Ø x 6 mm
SRM 1831	3 Plates 37 mm x 37 mm x 3 mm
SRM 1830	3 Plates 32 mm x 32 mm x 6 mm
SRM 620	0.056	.	.	.	.	3 Plates 35 mm x 35 mm x 3 mm
SRM 1411	10 Plates 32 mm x 32 mm x 3 mm
SRM 1412	.	.	(4.50)	4.40	.	8 Plates 32 mm x 32 mm x 3 mm

HIGH SILICA IN XRF DISCS

typical analysis

40 mm Ø x 5-6 mm

Number	SiO ₂	Al ₂ O ₃	BaO	Bi ₂ O ₃	CaO	Cl	K ₂ O	Fe ₂ O ₃	K ₂ O	Na ₂ O	SO ₃	Sb ₂ O ₃	SrO	TiO ₂	
ASO TU1	99.99	0.005	.	.	0.005	.	.	<0.01	.	0.005	.	.	.	.	last of stock
FLX Q0	99.99	.	.	.	.	.	.	.	.	.	.	.	.	.	.
BR K 1/3	99.5	0.17	.	.	0.02	0.05	.	0.02	0.07	0.10	0.04	.	.	0.02	.
ASO TU7	61.2	.	0.5	8.4	.	0.6	10.0	.	.	17.0	.	0.14	0.25	2.0	last of stock

CRM URANIUM IN XRF DISCS

typical analysis listed in mg/kg

12 mm Ø x 5 mm

Number	U
IRMM 540R	15.0
IRMM 541	49.4

URANIUM IN XRF DISCS

typical analysis

30-40 mm Ø x 5 mm

Number	UO ₃	U ₃ O ₈	Al ₂ O ₃	As ₂ O ₃	B ₂ O ₃	BaO	CaO	CdO	CoO	Cr ₂ O ₃	CuO	F	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	NiO	P ₂ O ₅	SiO ₂	Sb ₂ O ₃	TiO ₂	ZnO
SV F	1.0	.	2.0	.	3.0	0.3	3.0	.	0.5	.	.	4.0	.	29.3	1.0	.	1.0	.	.	58.23	1.0	1.0	0.2
SV E	0.5	.	1.5	0.5	6.0	3.0	5.0	.	1.0	4.0	1.0	0.8	.	2.5	.	5.0	15.0	0.5	.	50.9	.	.	2.0
BR AS1	0.01	.	15.8	0.44	3.22	.	0.83	0.39	.	0.15	.	0.17	1.16	2.16	3.20	20.3	0.13	.	0.58	38.9	.	3.9	7.4
BR U 26	.	1.0	1.5	.	.	0.1	6.5	.	.	.	.	1.0	0.07	3.0	.	.	13.3	.	.	69.98	0.25	.	1.0
BR U 21	.	0.40	2.0	.	10	.	6.5	1.5	0.25	0.6	1	.	0.05	5.8	0.05	0.15	10.0	0.15	.	60.0	0.25	.	.
BR EK01	.	0.10	.	0.13	0.74	2.24	4.96	0.02	0.38	1.17	0.63	.	.	6.82	.	.	8.54	0.64	.	67.05	0.44	.	3.73
BR U 25	.	0.10	3.0	.	.	.	6.9	.	.	0.27	0.18	.	0.34	2.9	0.15	6.0	9.3	.	.	69.3	0.20	.	0.8
BR CH1	.	0.1	28.0	0.8	20.0	1.0	.	0.15	.	.	.	.	7.0	8.0	.	0.5	6.5	0.3	14.0	9.11	.	0.1	.

Number	Bi ₂ O ₃	CeO ₂	Cs ₂ O	Ga ₂ O ₃	GeO ₂	In ₂ O ₃	La ₂ O ₃	MoO ₃	Nb ₂ O ₅	Nd ₂ O ₃	PbO	Pr ₂ O ₃	Rb ₂ O	SO ₃	SeO ₂	SnO	SrO	Ta ₂ O ₅	TeO ₂	ThO ₂	V ₂ O ₅	WO ₃	ZrO ₂
SV F	.	0.5	.	0.1	.	.	0.5	.	0.5	0.6	.	0.15	.	.	.	.	1.0	0.12	.	.	.	.	1.0
SV E	0.5	0.3	.	.	.	.	.	.
BR AS1	.	.	0.04	.	0.08	0.04	.	.	.	.	0.5	.	0.04	.	.	.	0.71	.	0.04	0.04	0.01	.	0.15
BR U 26	.	2.0	.	.	.	.	.	.	.	.	.	.	.	0.2	0.14	.	.	.	.	.	.	.	.
BR U 21	.	0.15	.	.	.	.	.	.	.	.	.	.	.	0.15	0.02	.	.	.	.	.	.	.	.
BR EK01	0.30	.	.	0.65	.	.	.	.	0.57	.	.	.	.	0.89	.	.
BR U 25	0.12	.	.	.	.	.	.	.	.	.
BR CH1	1.0	.	.	.	0.3	.	.	.	0.7	0.5	.	0.4	0.04	.	.	.	.	.	.	.	0.3	1.2	.

ZINC AND ZIRCONIUM IN XRF DISCS

typical analysis

40 mm Ø x 5-6 mm

Number	ZnO	ZrO ₂	SiO ₂	Al ₂ O ₃	B ₂ O ₃	BaO	Bi ₂ O ₃	CaO	Cr ₂ O ₃	CdO	Co ₂ O ₃	F	Fe ₂ O ₃	K ₂ O	Li ₂ O	MgO	MnO ₂	Na ₂ O	
BR TL2	.	30	10	0.5	9.3	.	.	.	.	.	.	.	0.1	15	5	.	.	.	15
BR N 1	80.2	.	0.2	.	.	.	4.5	.	1.6	.	.	1.9	.	.	.	.	.	0.7	.
FLX F1	12.92	.	65.81	2.14	.	.	.	1.62	.	0.181	.	2.57	0.116	0.781	.	.	.	.	13.53
FLX SP2	2.50	2.17	44.75	.	20.0	5.35	.	.	.	3.71	.	.	.	.	.	18.42	.	.	.

Number	NiO	P ₂ O ₅	PbO	Sb ₂ O ₃	SO ₃	TiO ₂
BR TL2	.	0.1	10	.	.	5
BR N 1	0.7	.	.	9.3	.	0.9
FLX F1	.	.	.	.	0.264	.
FLX SP2	.	.	4.65	.	.	.

GEOLOGICAL POWDER SETTING-UP SAMPLES

analysis in mass %

Data Sheet shows two lists of analytical results, no uncertainties

100 g powder

Number	Al ₂ O ₃	Ba	CaO	Cu	F	T.Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	P ₂ O ₅	Pb	S	SiO ₂	TiO ₂	W	Zn
US GXR-6	33.4	0.13	0.25	0.0066	0.022	7.98	2.25	1.01	0.13	0.14	0.08	0.0101	0.016	46.68	0.83	0.00019	0.0118
US GXR-2	31.10	0.224	1.30	0.0076	0.045	2.66	1.65	1.41	0.13	0.75	0.24	0.069	0.0313	47.54	0.5	0.00019	0.053
US GXR-4	13.6	0.164	1.41	0.652	0.284	4.42	4.83	2.75	0.02	0.76	0.27	0.0052	1.77	66.19	0.48	0.00308	0.0073
US GXR-3	12.1	0.50	19.0	0.0015	8.62	27.2	0.88	1.34	2.88	1.13	0.25	0.0015	0.232	13.36	0.17	1.07	0.0207
US GXR-1	6.64	0.068	1.34	0.111	0.126	33.8	0.06	0.36	0.11	0.07	0.15	0.072	0.26	48.57	0.06	0.0164	0.076

continued analysis in mg/kg

Number	Ag	As	Au	B	Be	Bi	Br	Cd	Ce	Cl	Co	Cr	Cs	Hg	La
US GXR-6	1.3	330	0.095	9.8	1.4	0.29	1.4	1	36	.	13.8	96	4.2	0.068	13.9
US GXR-2	17	25	0.036	42	1.7	0.7	3.2	4.1	51.4	.	8.6	36	5.2	2.9	25.6
US GXR-4	4	98	0.47	4.5	1.9	19	0.5	0.86	102	78	14.6	64	2.8	0.11	64.5
US GXR-3	2.4	3970	.	160	26	16	.	0.3	18	.	43	19.3	175	0.33	8.8
US GXR-1	31	401	3.4	15	1.22	1380	0.5	3.3	17	136	8.2	13	3	3.9	7.5

Number	Li	Mo	Ni	Rb	Sc	Se	Sn	Sr	Te	Th	U	V	Y	Zr	Type
US GXR-6	32	2.4	27	90	27.6	0.94	1.7	35	0.018	5.3	1.54	186	14	110	Soil
US GXR-2	54	2.1	21	78	6.88	0.61	1.7	160	0.69	8.8	2.9	52	17	269	Soil
US GXR-4	11.1	310	42	160	7.7	5.6	5.6	221	0.97	22.5	6.2	87	14	186	Copper Ore
US GXR-3	114	6.6	60	92	16.8	0.15	.	950	0.009	2.94	3	42	15	63	Tungsten Ore
US GXR-1	8.2	18	41	14	1.58	16.6	55	259	13	2.44	33	76	32	38	Jasperoid

AUSMON XRF DRIFT MONITORS (wavelength dispersive XRF)

The monitors listed below have been formulated so that they have appropriate count rates for different ores and products. The monitors contain little flux and most have been in use for many years and have given excellent stability.

The monitor discs are 32 or 40mm diameter and about 4mm high. The monitors are polished flat so that they can be mounted precisely and are easily cleaned. The following types for wavelength dispersive XRF are available:

AUSMON Bauxite

Suitable with bauxites and other materials with high Aluminum and contain **Fe, Si, Al, Ca, F, Na, Mg, P, S, Cl, K, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, As, Br, Sn, and Ga.** (24 elements)

AUSMON Cement A

Suitable when making detailed analyses of cements or other materials with high Calcium and contain **Ca, Si, Al, Mg, Fe, Na, Cl, S, F, P, K, Ti, Cr, Mn, Zn, Sr, Br, Ba, and Pb.** (19 elements)

AUSMON Iron Ore

Suitable with iron ores and related materials, containing **Fe, Si, Al, Ca, F, Na, Mg, P, S, Cl, K, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, As, Br, Sn, Cd, Sb, Bi, Mo, Ba, and Pb.** (28 elements)

AUSMON Manganese Ore

Suitable with manganese ores and contain: **Mn, Fe, Si, Na, Mg, Al, P, K, Ca, Ti, V, Sr, Br, Ba, and Pb.** (15 elements)

AUSMON Mineral Sands

Suitable with mineral sand products, including but not limited to ilmenite, rutile, zircon, monazite and xenotime. The following elements are present: **Ti, Fe, Zr, Si, Y, La, Ce, Nd, Pr, Yb, P, F, Na, Mg, Al, S, Cl, K, Ca, Sc, V, Mn, Cr, Co, Ni, Cu, Zn, Br, As, Sr, Nb, Mo, Cd, Sn, Ba, Hf, Pb, Th, and U.** (39 elements)

AUSMON Nickel Ore

Suitable with nickel ores and related materials, containing **Ni, Fe, S, Si, F, Na, Mg, Al, P, Cl, K, Ca, Ti, Mn, Cr, Co, Cu, Zn, As, Se, Br, Mo, Ag, Pb, and Bi.** (25 elements)

AUSMON Rare Earths

Suitable with monazite, xenotime and other rare earth minerals for the rare earth oxides. The following elements are present: **La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y, P, F, Na, Mg, Al, Si, S, Cl, K, Ca, Sc, Ti, Mn, Fe, Ni, Br, Sr, Zr, Nb, Ba, Hf, Pb, Th, and U.** (39 elements)

AUSMON Silicates

These monitors were designed for the analysis of rocks, soils and related materials. They can also be used as general purpose monitors for a wide range of materials, eg. vegetables, etc. They contain the following elements as majors: **Fe, Mn, Ti, Ca, K, Cl, S, P, Si, Al, Mg, Na and F.** In addition about 2000ppm of each of the following are present: **Sc** (1000ppm), **V, Cr, Co, Cu, Ni, Zn, Ga, Ge, Se, As, Rb, Sr, Br, Y, Zr, Nb, Mo, Ag, Cd, Sn, Sb, Te, Cs, Ba, La, Ce, Nd, Pr, Gd, Sm, Yb, Hf, Ta, W, Bi, Tl, Pb, Th, and U.** (53 elements)

AUSMON Sulfides

These monitors are for use with lead, zinc, iron and copper sulphides, as ores, concentrates and related products. They contain: **Pb, Zn, Fe, Cu, S, F, Na, Mg, Al, Si, P, K, Ca, Cl, Ti, Co, Ni, Cr, Mn, As, Sr, Se, Ag, Cd, Sn, Sb, Ba, Te, Tl, Mo, U, and Bi.** (32 elements)

AUSMON XRF DRIFT MONITORS (energy dispersive XRF)

The monitors listed below have been formulated so that they have appropriate count rates for different ores and products. The monitors contain little flux and most have been in use for many years and have given excellent stability.

The monitor discs (except AUSMON Cement B) are 32mm diameter and about 4mm high. The monitors are polished flat so that they can be mounted precisely and are easily cleaned. The following types for energy dispersive XRF are available:

AUSMON MCACAL

Intended for the energy dispersive XRF system, this monitor contains the following elements: **F, Na, Mg, Si, Cl, Ca, V, Zn, As, Fe, Y, Mo, Cd, Ba.** (14 elements)

AUSMON Mon A

This is intended as a drift monitor with the following elements: **Mg, Si, P, W, Pb, Sn.** (6 elements)

AUSMON Mon B

This is a drift monitor with the following elements: **Na, Al, Si, Ca, Ti, Cr, and Ni.** (7 elements)

AUSMON Cement B

This 40mm monitor has fewer trace elements than Cement A and is designed for on line analysis using wavelength or energy dispersive spectrometers. It contains **Na, Mg, Al, Si, P, Cl, K, Ca, and Fe.** (9 elements)

AUSMON SPECIALS

Monitor discs can be made to suite needs not covered by the above. Very often this is for laboratories performing analysis on materials that do not have long term stability and so they cannot use a similar product as a monitor, eg aqueous liquids or liquids from the petroleum industry. Cl in brine, Ca in milk, Cl, Br, and trace elements in synthetic rubbers are some common examples for which custom monitors have been made.