

INDEX

- ALUMINUM 2, 3, 4
ALUMINUM IN XRF DISCS 15
AUSMON 25, 26
- BARIUM IN XRF DISCS 15
BAUXITE 25
BORON IN XRF DISCS 15
BRASS 5
BRONZE 5
- CALCIUM IN XRF DISCS 16
CARBON STEEL 11, 12
CARBONATE IN XRF DISC 16
CAST IRON 9, 10
CEMENT 25
CERAMIC 5
COBALT 5
COPPER 5
- ELEMENTS IN XRF DISCS 17
- FLUORITE IN XRF DISCS 16
- GEOLOGICAL 24
GLASS XRF DISCS AND PLATES 17
- HIGH ALLOY STEEL 14
- ILMENITE 25
IRON 9, 10
IRON ORE 25
- LAYER 7
LEAD 6
LEAD IN XRF DISCS 17
LOW ALLOY STEEL 11, 12, 13
- MAGNESIUM 6
MANGANESE ORE 25
MINERAL SANDS 25
MONAZITE 25
MULTI-ELEMENT XRF DISCS 19
- NEODYMIUM IN XRF DISCS 17
NICKEL 7
NICKEL ORE 25
- PHOSPHORUS IN XRF DISCS 17
POWDER 24
- RARE EARTHS 25
RoHS 7
RUTILE 25
- SETS 10, 13
SILICA IN XRF DISCS 18, 25
STAINLESS STEEL 13, 14
SULFIDES 25
- TIN 7
TITANIUM 8
- URANIUM IN XRF DISCS 18
- WEEE 7
- XENOTIME 25
XRF DISCS
7, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26
- ZINC 8
ZINC IN XRF DISCS 18
ZIRCONIUM IN XRF DISCS 18

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 RC11/07	0.028	0.010	0.005	.	10	0.002	0.010	0.0024	0.0049	0.003	0.012	0.011	0.015	0.046
R A 10	<0.0020	<0.0005	.	<5	.	<0.0001	<0.0020	<0.0005	<0.0010	.	<0.0010	<0.0010	<0.0010	<0.0010
AL RC10/02	<0.002	<0.0002	.	<2	<1	<0.0001	<0.0002	<0.0001	<0.0002	.	<0.0002	<0.0002	<0.0002	<0.001
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	<0.0002	.	<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 RC11/07	0.021	0.005	0.010	0.012	0.0008	0.018	0.016	0.026	0.0015	0.010	0.0029	0.015	0.012	0.010
R A 10	<0.0010	.	.	.	<0.0010	<0.0010	<0.0010	.	<0.0001	<0.0020	.	<0.0010	<0.0020	.
AL RC10/02	<0.0002	.	<0.0002	.	<0.0001	<0.0003	<0.0002	.	<0.0001	0.0002	<0.0005	<0.0003	<0.0003	.
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 RC11/07	0.018	0.005	0.015	0.017	0.0047	0.020	0.015	60 mm Ø x 25 mm
R A 10	<0.0010	<0.0010	<0.0010	<0.0010	.	<0.0010	<0.0010	50 mm Ø x 50 mm Al: 99.96
AL RC10/02	<0.0002	<0.0001	0.0004	<0.0002	.	<0.0005	<0.0002	60 mm Ø x 25 mm
IARM 220G	<0.00001	<0.00001	<0.0002	0.00052	.	0.0003	0.000088	57 mm Ø x 38 mm many more elements
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 1199 Alloy, no analysis issued
C Al 0	.	.	.	.	.	.	.	50 mm Ø x 30-50 mm 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 ALUMINUM 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 1 of 2

typical analysis

Number	Si	Cu	Fe	Mg	Mn	Ni	Zn	Be	Ca	Cr	Na	Pb	Sb	Sn	Sr	Ti
C Al 4	18	0.01	5	<0.001	0.03	1.9	<0.01	.	0.009	.	.	<0.01	.	.	.	.
PY 9601	17.3	1.21	0.43	1.09	0.12	1.1	0.07	.	0.0026	.	0.0003	0.006	0.02	0.004	0.0058	0.08
R A 16	15	4	0.2	0.2	<0.001	2.7	0.3	<0.001	0.002	0.003	0.003	0.4	>0.2	0.1	0.03	<0.001
R A 20	14.8	5.4	0.78	1.1	0.27	2.7	0.16	<0.0002	0.006	0.12	0.01	0.09	0.02	0.06	0.02	0.06
KUT ASC-1	14.0	6.0	1.6	1.2	0.4	0.6	0.5	0.003	0.02	0.2	.	0.1	0.02	0.1	0.03	0.5
R A 18	14	8	0.2	0.2	0.3	3	0.4	.	0.003	<0.005	0.002	0.3	0.16	0.4	0.02	<0.001
AL RC40/02	13.2	1.03	1.19	1.09	.	.	6.03	.	0.0131	.	.	0.10	.	0.21	0.14	0.20
PY 9327	12.8	0.01	0.15	0.003	0.005	0.003	0.01	.	<0.0007	.	<0.0004	0.001	<0.0003	0.0003	.	0.006
PY 9326	12.8	0.01	0.15	0.003	0.005	0.003	0.01	.	<0.0007	.	<0.0004	0.001	<0.0003	0.0003	.	0.006
AL RC40/03	12.5	1.03	1.23	1.05	.	.	6.14	.	0.0195	.	.	0.11	.	0.21	0.14	0.20
AA SQ-15	12.0	0.5	0.7	1.2	0.05	2.5	.	.	.	0.05	.	.	.	.	0.02	0.1
PY 9415	11.7	1.24	0.53	1	0.12	0.86	0.07	.	0.0006	.	0.00004	0.01	0.01	0.01	.	0.02
STG AL 2/2	11.7	0.02	0.1	0.2	0.01	0.005	0.02	0.0002	0.003	0.002	.	0.005	0.01	0.004	0.06	0.1
PY 2150	10.6	0.6	.	0.9	0.4	0.5	1.2	.	.	0.06	.	0.8	.	0.3	0.1	0.3
V E3	10.0	4.0	.	.	.	0.9	.	.	0.009	.	.	0.25	0.3	.	.	.
STG AL 2/1	9.6	0.008	0.07	0.14	0.009	0.003	0.007	0.009	0.002	0.001	.	0.02	0.02	0.02	0.03	0.14
164X ALSUS 8	9.5	0.75	0.25	0.9	0.45	0.12	0.25	0.015	<0.001	0.06	.	0.001	0.03	0.13	0.07	0.02
C Al 5	8.8	1.4	0.7	1.9	0.08	1.3	0.28	.	.	0.08	.	0.07	.	0.07	.	0.09
PY 9313	8.8	0.003	0.1	0.32	0.005	<0.002	0.01	.	0.0009	.	<0.0004	<0.0004	<0.003	0.0004	.	0.12
PY 2001	8.5	2.9	0.7	0.22	0.23	0.05	0.13	.	0.002	.	.	0.07	.	0.012	.	0.08
PY 9520	6.6	0.012	0.1	0.34	0.005	0.003	0.017	.	0.0044	.	0.0005	<0.0001	<0.008	0.0004	0.052	0.12
PY 9517	6.4	2.8	0.48	0.3	0.25	0.02	0.2	.	0.009	.	0.001	0.02	0.01	0.01	0.014	0.13
AL RC41/01	5.9	5.1	0.4	0.09	0.5	0.02	1.3	.	0.004	0.03	.	0.02	.	0.02	0.02	0.03
PY 9809	5.5	.	0.5	.	.	1.9	.	.	.	.	.	.	.	.	.	.
PY 20001	5.4	3.1	0.48	0.23	0.22	0.03	0.14	.	0.0033	.	0.00004	0.01	.	0.01	.	0.07
58A AC19215b	5.05	0.049	1.0	0.08	.	.	.	.	.	.	.	.	.	.	.	.
AA SQ-16	4.0	10.0	1.0	0.3	0.2	0.2	0.2	.	.	.	.	.	.	.	.	.
58A AC19214b	3.96	0.096	2.07	0.041	.	.	.	.	.	.	.	.	.	.	.	.
58A AC19213b	2.88	0.21	3.15	0.017	.	.	.	.	.	.	.	.	.	.	.	.
58A AC19212b	1.92	0.41	4.14	0.011	.	.	.	.	.	.	.	.	.	.	.	.
R A 19	1.83	0.72	0.97	8.0	1.1	0.52	8.4	0.008	0.001	0.16	<0.001	<0.01	.	.	.	0.23
AL RC60/02	1.34	0.29	0.49	0.92	1.1	0.10	0.10	.	.	0.20	.	.	.	.	.	0.21
C Al 2	1.205	0.0614	0.439	0.809	0.662	.	.	.	.	0.0036	.	.	.	.	.	0.052
KUT AMS-1	1.2	0.6	0.8	1.3	0.5	0.02	0.4	0.002	0.01	0.2	0.005	0.05	0.02	0.03	.	0.2
PY 2006	1.2	0.07	0.11	6.2	0.07	0.06	7.8	0.01	0.03	0.02	0.02	0.04	.	0.06	.	0.06
AA SQ-12	1.1	4.8	0.6	0.15	1.1	0.25	0.20	0.005	.	.	.	0.06	.	0.06	.	.
PY 2004	1.1	0.08	0.11	6.1	0.07	0.07	7.7	0.01	0.03	.	0.03	0.04	.	0.06	.	0.06
164X ALSUS 7	0.9	4	0.55	0.15	0.06	1.1	0.12	0.1	<0.001	0.01	<0.001	0.11	0.12	0.01	0.003	0.3
STG AL 3/1	0.9	0.3	0.9	1.4	1.5	0.02	0.1	.	0.002	0.02	.	0.008	0.02	0.004	0.002	0.07
V E2	0.9	0.20	0.9	0.20	0.20	0.20	0.10	0.004	0.008	0.05	0.008	0.10	.	0.20	0.11	0.20

Number	Si	Cu	Fe	Mg	Mn	Ni	Zn	Be	Ca	Cr	Na	Pb	Sb	Sn	Sr	Ti
C Al 4	.	.	0.0008	.	.	.	.	.	.	.	.	.	.	75	50x30-50	.
PY 9601	0.0086	.	.	.	.	50 x 50	.
R A 16	<0.001	.	0.01	<0.001	0.01	<0.001	0.01	<0.001	<0.001	0.005	<0.001	0.002	Rem	50 x 45	.	last
R A 20	.	.	<0.001	.	.	0.007	.	.	<0.001	0.017	0.12	0.08	Rem	50 x 50	.	
KUT ASC-1	.	.	.	0.1	0.05	.	0.04	.	.	.	0.02	0.01	.	.	45 x 35	.
R A 18	.	<0.005	0.003	0.004	.	0.005	0.007	.	.	0.05	0.009	<0.005	<0.001	73	50 x 50	.
AL RC40/02	60 x 25	Sc: 0.20
PY 9327	0.0017	.	.	.	.	50 x 50	.
PY 9326	0.0017	.	.	.	.	50 x 50	.
AL RC40/03	60 x 25	Sc: 0.20
AA SQ-15	64 x 37	.
PY 9415	0.0058	.	.	.	.	50 x 50	.
STG AL 2/2	.	.	.	0.004	0.001	.	0.01	.	.	0.004	0.01	0.002	.	87.96	65 x 30	.
PY 2150	0.9	.	.	0.02	.	0.04	.	0.06	.	0.04	.	0.02	.	.	60 x 40	.
V E3	.	.	0.01	.	.	.	.	.	0.007	.	.	.	.	.	60 x 40	.
STG AL 2/1	.	.	0.001	0.003	0.001	.	0.01	.	.	.	0.005	0.007	0.005	89.65	65 x 30	.
164X ALSUS 8	0.09	.	.	.	.	0.025	.	.	.	.	.	0.025	.	.	50 x 25	.
C Al 5	.	.	0.0010	.	.	.	.	.	.	.	0.0050	.	.	85.3	50x30-50	.
PY 9313	0.0011	.	.	.	.	50 x 50	.
PY 2001	50 x 50	.
PY 9520	0.0009	.	.	.	.	50 x 50	.
PY 9517	0.002	.	.	.	.	50 x 50	.
AL RC41/01	0.001	.	0.01	.	.	.	.	0.008	0.005	.	60 x 25	.
PY 9809	0.01	0.12	0.14	.	.	60 x 40	.
PY 20001	0.001	.	.	.	.	50 x 50	.
58A AC19215b	0.083	.	.	.	.	.	.	.	45 x 35	.
AA SQ-16	64 x 37	.
58A AC19214b	0.044	.	.	.	.	.	.	.	45 x 35	.
58A AC19213b	0.024	.	.	.	.	.	.	.	45 x 35	.
58A AC19212b	0.011	.	.	.	.	.	.	.	45 x 35	.
R A 19	0.19	.	0.002	0.17	0.07	0.33	0.06	0.07	<0.01	.	.	0.14	0.21	Rem	50 x 50	.
AL RC60/02	.	.	.	0.10	.	.	0.011	.	.	0.0045	0.11	.	.	.	60 x 25	.
C Al 2	0.010	.	.	.	.	.	.	.	50x30-50	.
KUT AMS-1	.	.	0.004	0.01	0.03	.	0.01	.	0.01	.	.	0.03	.	.	45 x 35	.
PY 2006	.	.	.	0.01	.	.	0.03	.	0.01	.	.	.	0.02	.	50 x 50	.
AA SQ-12	0.05	.	.	0.06	0.20	0.01	0.03	.	.	.	.	0.10	0.15	.	64 x 37	Hg: 0.01
PY 2004	0.02	.	0.03	.	0.01	.	.	.	0.02	.	60 x 40	.
164X ALSUS 7	0.2	.	.	.	.	.	0.18	.	.	50 x 25	.
STG AL 3/1	.	.	0.003	0.01	0.005	.	0.03	.	.	.	0.003	0.04	0.005	94.68	65 x 30	.
V E2	0.22	.	.	.	.	0.04	0.06	.	.	.	.	0.11	.	.	60 x 40	.

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

mm typical analysis T = trace, such as "<0.005" or "<0.01" ~35 mm Ø x ~25-35

Number	Al	B	C	Cr	Cu	Fe	Mn	Mo	Nb	Ni	P	S	Si	Sn	Ta	Ti	V	W	Zr
R Co 16	0.05	0.04	0.2	0.06	0.8	21	0.01	2.1	2	0.03	<0.01	<0.01	0.3	0.2	~0.04	0.5	0.7	.	.
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	0.05	0.05	0.5	29	Co:51	0.9	0.3	.	.	10	<0.001	<0.01	0.7	.	.	.	<0.01	7	.
R Co 11	T	.	T	T	T	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	.	0.2180	0.1150	.	0.0090	0.0110	0.0227	0.0113	0.4220	0.3710	.	0.4930	.	0.0047	.
C Cu 3	.	.	.	.	.	.	.	.	.	.	.	.	.	0.0875	.
R C 38	67	0.01	0.01	<0.01	<0.01	<0.001	0.7	0.8	31	<0.01	0.02	<0.001	0.02	.	.
BRASS															
BS SU 464	[60.3]	0.73	38.8	.	.	.	0.05	.	0.007	0.04	0.004	.	0.001	0.001	.
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	0.21	0.19	0.13	0.009	0.04	0.10	0.08	0.04	0.09	0.08	0.06	0.09	(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	0.19	.
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	<0.01	<0.01	8	.	<0.01	1.5	5.5	2	0.02	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	80	0.03	0.08	11	<0.006	0.03	3.8	0.2	4.6	<0.01	0.05	<0.001	0.02	.	.
R C 36	76	7.4	1.0	<0.005	0.01	<0.001	0.03	<0.005	1.6	14	<0.005	0.015	0.009	.	<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	C	Ca	Cd	Co	Mg	O	P	S	Sb	Se	Te	Ti	Zr	Units
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	.	.	.	.	.	.	.	.	0.2830	.	.	.	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	<0.001	<0.001	.	<0.01	<0.01	0.01	.	.	.	<0.001	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
R C 32	.	.	0.001	<0.01	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm
BRONZE														
R C 12	.	.	0.05	0.05	0.002	.	0.09	0.04	0.01	(0.02)	(0.04)	(0.002)	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	<0.01	<0.001	.	<0.01	<0.005	.	.	.	.	<0.001	40 mm Ø x 40 mm
R C 36	.	.	<0.001	<0.001	<0.001	.	<0.01	0.04	0.23	.	.	<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	30	2.2	2.6	0.07	0.10	0.02	1.5	<0.001	<0.01	0.002	.	.	.	0.08
R Pb 17	3.5	14	2.1	0.14	0.13	<0.001	2.0	<0.001	<0.0005	0.001	<0.001	0.01	<0.001	<0.01
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
R Pb 13	0.14	0.15	0.05	0.05	0.29	0.06	0.14	.	.	.	.	0.03	(0.03)	0.06
R Pb 16	0.12	<0.001	0.002	<0.001	<0.01	<0.001	<0.001	<0.001	<0.0005	<0.001	0.002	.	<0.001	<0.001
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	<0.005	12.6	0.008	1.4	0.02	<0.005	0.06	<0.001	<0.002	<0.001	0.01	<0.005	.	<0.001
R Pb 11	<0.0005	<0.0005	<0.0010	<0.0010	<0.0030	<0.0005	<0.0005	<0.0005	.	<0.0005	.	<0.0005	.	<0.0005
R Pb PM	.	.	0.0100

Number	Sn	Sb	Ag	As	Bi	Cd	Cu	Fe	In	Ni	S	Te	Tl	Zn
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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	.	.	.	.	<30	<10	(0.001)	.	.	.	.	.	.	(0.001)	(0.001)	.	.	.
R Pb 17	0.01	(0.002)	.	.	.	.	.	.	.	.	<10	.	.	.	.	.	.	.
168X Pb SUS1	.	0.001	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.01
R Pb 13	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.003
R Pb 16	0.03	.	(0.01)	0.2	.	.	.	.	.	(10)	.	<0.001	.	.	.	.	.	.
R Pb 18	<0.0001	.	.	<0.0001	<1	1	.	.	.	.	<10	.	.	.	.	.	.	(0.01)
R Pb 14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
R Pb 11	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
R Pb PM	.	0.0100	3	.	.	.	0.0050	0.0050	50	50	.	

Number	Al	Au	Ba	Ca	Co*	Cr*	Ge	Hg	Ir*	Mg*	Mn*	Na	Pd	Pt	Rh*	Ru*	Se
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MAGNESIUM BASE SETTING-UP SAMPLES

cast typical analysis listed in mass %

Number	Al	Cd	Cu	Fe	Mg	Mn	Ni	Pb	Si	Sn	Zn	Zr
R Mg 17	7.5	<0.01	<0.01	0.009	Rem	0.2	0.001	.	0.04	0.03	0.4	<0.001
R Mg 13 *	5.7	0.0001	0.006	0.001	Rem	0.2	0.001	0.001	0.01	0.001	0.8	0.004
C Mg 2 *	5.7	0.0001	0.006	0.001	Rem	0.2	0.001	0.001	0.01	0.001	0.8	0.004
166X MG SUS3	0.4	0.005	0.07	<0.005	Rem	0.8	0.02	0.04	0.01	0.005	0.09	.
R Mg 11	0.022	.	<0.003	<0.004	99.9	0.022	<0.005	.	0.037	.	<0.005	.
58A ST7310	0.004	.	1.64	0.0098	Rem	0.967	0.002	.	0.025	.	7.2	.
R Mg 16	.	.	.	0.001	Rem	.	.	.	.	.	.	0.06

continued

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

Number	Ag	Be	Ce	Na	Nd	P	Pr	Ti	Y	Units
R Mg 17	.	.	.	<0.001	.	.	.	.	.	50 mm Ø x 50 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
166X MG SUS3	0.02	0.0005	.	.	<0.001	.	<0.001	.	.	~50 mm Ø x ~20 mm
R Mg 11	50 mm Ø x 40-50 mm
58A ST7310	45 mm Ø x 25 mm
R Mg 16	.	.	2.2	.	1.6	.	0.26	.	2.2	50 mm Ø x 40 mm

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	>99.9	<0.001	<0.005	<0.001	.	<0.001	0.02	.	.	.	.	<0.001	<0.002	.	.
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	.
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	3	0.1	<0.01	0.01	29	1.2	0.6	.	.	<0.01	<0.01	0.09	0.6	.
BS SU 625	[60.8]	0.16	0.022	0.040	21.8	0.15	3.83	0.096	9.11	3.52	0.008	<0.005	0.11	0.23	0.036
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
BS SU C-22	[57.8]	0.19	0.002	0.11	21.3	0.057	3.45	0.32	13.6	0.016	0.008	<0.005	<0.05	0.004	3.09
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	Rem	0.6	0.01	0.2	18	0.06	18	0.10	3	5	<0.01	<0.01	0.09	1	0.09
R Ni 14	50.5	0.5	0.05	19.4	20.9	0.01	0.3	0.2	5.2	.	0.01	<0.01	0.05	2.2	0.1

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
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 625	<0.005	0.0025	0.005	0.028	0.001	<0.05	0.015	0.001	38 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
BS SU C-22	<0.005	0.001	0.004	<0.05	<0.005	0.004	0.009	Sn:0.002	38 mm Ø x 40 mm
R Ni 13	.	0.007	.	.	.	<0.003	0.18	.	40 mm Ø x 40 mm
R Ni 15	.	<0.01	.	.	.	<0.01	0.09	0.02	40 mm Ø x 40 mm
R Ni 14	0.5	0.003	.	.	.	<0.01	0.01	0.01	40 mm Ø x 40 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 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	Rem	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	0.3	0.1	1	<0.01	34	2	0.2	<0.001	.	0.1	<0.001	.
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	<0.002	40 mm Ø x 40 mm
1611X SAC305	.	.	.	.	.	.	.	.	.	40 mm Ø x 6-10 mm
R Sn 21	0.08	0.4	<0.001	.	.	.	<0.001	0.3	0.3	40 mm Ø x 40 mm
R Sn 13	<0.01	0.23	.	.	.	.	<0.001	0.02	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	0.1	<0.001	.	.	.	.	.	(0.03)	0.03	40 mm Ø x 40 mm
R Sn 14	.	.	0.05	.	.	.	.	.	.	40 mm Ø x 40 mm

last

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	<0.01	0.03	2	.	2	.	4

ZINC BASE SETTING-UP SAMPLES

typical analysis

169X, 1690X: 50 mm Ø x 20 mm

C: 40 mm Ø x 30-40 mm

JK, R: 40 mm Ø x 30 mm

Number	Al	Cd	Cu	Fe	Mg	Mn	Ni	Pb	Sb	Sn	Tl	Ag	Bi	Cr	Ga	In	Ti	Zn
R Zn 14	8	0.02	2	0.06	0.09	0.03	<0.001	0.09	<0.001	0.04	<0.001	<0.001	.	.	.	<0.001	0.009	90
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	.	.	.	.	.	.	.	.
R Zn 13	0.4	0.3	0.3	0.01	<0.01	<0.01	0.04	0.6	0.2	0.3	0.05	0.05	.	.	.	0.2	<0.01	97
R Zn 16	0.23	0.049	0.011	0.092	.	.	.	0.23	.	0.009	.	.	.	.	.	.	.	.
JK SUS Zn-1	0.2024	0.0014	0.0014	0.0273	.	0.0006	0.0043	0.0021	0.00001	0.00003	0.0008	0.0002	0.00002	0.0055	0.00004	.	.	.
R Zn 15	0.20	0.5	0.23	0.2	.	0.01	.	0.14	0.03	0.05	.	.	.	.	.	.	.	Rem
JK SUS Zn-5	0.1992	0.0063	0.0015	0.0318	.	0.0009	0.0047	0.0108	0.0024	0.0099	0.0003	0.0002	0.0136	0.0081	0.0019	0.0029	.	.
JK SUS Zn-2	0.1394	0.0075	0.0019	0.0314	.	0.0007	0.0043	0.0077	0.0034	0.0061	0.0005	0.0002	0.0056	0.0063	0.00004	.	.	.
R Zn 12	0.006	0.008	0.009	0.024	0.005	0.002	0.008	0.009	(0.01)	0.007	0.007	0.004	0.006	.	.	0.009	0.006	99.9
R Zn 11	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	.	<0.0005	.	.	.	.	.	.	<0.0010	99.99

RM

ZINC BINARY

cast typical analysis listed in mass %

Number	Mn	Zn	Size
41X ZMn1	1.06	Remainder	50 mm Ø x 20 mm

CAST IRON SETTING-UP SETS

typical analysis set KTC-13/1 8 pcs (3 pcs A and B 34mm Ø x 5mm, 1 each C 35mm Ø x 10mm) set KTC-14 10 pcs (2 pcs D, 4 pcs E and F) 34mm Ø x 5mm

Table with 20 columns: Number, C, Mn, P, S, Si, Cu, Ni, Cr, Mo, Al, B, Bi, Ce, Mg, Sb, Sn, Ti, V, Zn. Rows include KTC-13/2 A, B, C-1, C-2 and KTC-14 FCD-D, E, F.

CAST IRON SETTING-UP SETS

typical analysis available in sets only, as grouped 34 mm Ø x 5 mm

Table with 20 columns: Number, C, Mn, P, S, Si, Cu, Ni, Cr, Mo, Al, Ce, Mg, Sn, Ti, V, Zn. Rows include KTC-11 D-1 to D-10 and KTC-12 01 to 10.

Table with 6 columns: Number, B, Bi, Ca, Pb, Sb. Rows include KTC-11 D-1 to D-10 and KTC-12 01 to 10.

IRON SETTING-UP SAMPLES

typical analysis C Fe O: no analysis issued

Table with 15 columns: Number, C, Mn, P, S, Si, Cu, Ni, Cr, Al, Sol.Al, Co, Mo, N, Sn. Rows include R E 13, C Fe 1, DSZU SUS 50L, MBH RE12-20, SAG 0201, NCS AH11351b, BS LC-7C SUS, R E 12, NCS AH11351c, NCS AH11351a, C Fe 0.

Table with 15 columns: Number, As, B, Ca, Fe, Mg, Nb, Pb, Sb, Ta, Ti, V, W, Zr, Units (mm). Rows include R E 13, C Fe 1, DSZU SUS 50L, MBH RE12-20, SAG 0201, NCS AH11351b, BS LC-7C SUS, R E 12, NCS AH11351c, NCS AH11351a, C Fe 0.

CARBON AND LOW ALLOY STEEL SETTING-UP SAMPLES

CONTINUED ON THE NEXT PAGE

typical analysis

Table with columns: Number, C, Mn, P, S, Si, Cu, Ni, Cr, Mo, Sn, Al, Co, N, Ti, V, W. Contains multiple rows of material analysis data including BS SU D2, R H 18, BR ST2, KUT K3, BS SU E52100A, BS SU E52100, R N 13, R H 13, R N 16, BAM SUS-1 R, R Fe D, NCS AH21311, SUS D, R N 19, NCS AH21313, BS SU LAS-14, KUT K4, KUT K6, IMZ S-04, BS O2H, BS SU 4340, BS SU 8740, BS SU41L40, BS SU 4942, C Fe 2 50mm, BS SU 4130A, C Fe 2, BS 210, BS SU8620MOD, BS SU LF-1, BS SU 8620A, BS SU 4620, BS SU 4820, BS SU LF-2A, BS O3D, BS SU 1018D, BS SU 1018F, IMZ S-07, BS SU LF-2, BS SU 1018C, BS SU LF-3, BS SU 11L17, BS SU 1018E, BS 213, CZ CM-22A (RM), R Fe C, BS 207, IMZ 501, IMZ S-13, IMZ 503, BS SU 9310, BS SU 9310A, BS SU LAS13-2, BS 214, KUT K9, IMZ S-11, C Fe 9, IARM 218A, DSZU SUS 40L, R N 14, R N 17, SAG 0203, SAG 0204, SAG 0202.

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	.	.	.	.	<0.001	.	.	.	.	.	.	.	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 last	
KUT K3	.	.	.	.	.	.	.	.	.	.	.	.	30-35 mm Ø x 39 mm
BS SU E52100A	0.003	.	.	<0.005	0.001	<0.005	<0.005	<0.05	.	.	.	0.002	38 mm Ø x 40 mm Fe: [96.6]	
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	<0.0005	<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	
BAM SUS-1 R	.	.	.	.	0.6	.	.	.	.	.	.	.	50 mm Ø x 42 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 SOLD OUT	
NCS AH21311	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x 40 mm
SUS D	.	<0.001	.	.	0.05	.	.	.	.	.	.	.	44 mm Ø x 25, 75, or 150 mm
R N 19	0.07	0.007	0.01	.	0.36	.	0.02	0.05	0.30	0.01	0.02	0.07	40 mm Ø x 40 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]	
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 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	<0.0005	.	.	.	.	<0.005	38 mm Ø x 40 mm Fe: [96.7]
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]	
C Fe 2	0.045	0.0015	.	<0.001	0.018	.	(0.0009)	0.005	0.03	.	.	.	40 mm Ø x 40 mm	
BS 210	.	.	.	.	0.016	.	.	.	.	.	.	.	32 mm Ø x 17 mm last
BS SU8620MOD	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	last	<0.005	~36 mm Ø x ~40 mm Fe: 98.71
Number	As	B	Bi	Ca	Nb	O	Pb	Sb	Ta	Te	Zn	Zr	Units	
BS SU 8620A	0.005	0.0003	.	0.0006	0.003	0.0019	0.0005	.	.	.	Mg: 0.0002	0.0007	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 40-150 mm
BS 03D	.	.	.	.	.	.	.	.	.	.	.	.	41 mm Ø x 150 mm
BS SU 1018D	0.005	0.0005	.	0.001	0.003	.	<0.002	<0.001	<0.001	.	.	<0.001	41 mm Ø x ~110 mm last	
BS SU 1018F	0.004	0.0003	.	<0.005	0.001	<0.05	.	0.002	.	.	.	0.001	38 mm Ø x 150 mm Fe: [98.92]	
IMZ S-07	.	.	.	.	.	.	.	.	.	.	.	.	40 mm Ø x ~30 mm
BS SU LF-2	.	.	.	.	.	0.002	.	.	.	.	.	.	38 mm Ø x 19-40 mm last
BS SU 1018C	0.006	0.0006	.	0.0012	0.002	.	<0.002	<0.001	<0.001	.	.	0.001	38 mm Ø x ~40 mm last	
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	.	last	0.0015	38 mm Ø x ~25 or 150 mm	
BS 213	.	.	.	.	.	0.013	.	.	.	.	.	.	32 mm Ø x 17 mm T1: (0.002)
CZ CM-22A (RM)	0.057	.	.	.	0.019	.	.	.	.	.	.	.	~39 mm Ø x ~25 mm
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 SOLD OUT	
BS 207	.	.	.	.	0.024	.	.	.	.	.	.	.	32 mm Ø x 17 mm
IMZ 501	.	.	.	.	.	.	.	.	.	.	.	.	48 mm Ø x 25 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 SU LAS13-2	0.04	0.005	0.02	0.0005	0.05	<0.05	0.003	0.005	0.008	Ce: 0.004	0.01	0.02	36 mm Ø x 40 mm also Fe and Mg	
BS 214	.	.	.	.	.	(0.007)	.	.	.	.	.	.	32 mm Ø x 17 mm T1: (0.002)
KUT K9	.	.	.	.	.	(0.04)	.	.	.	.	.	.	30-35 mm Ø x 18 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 last	
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	
R N 14	0.05	0.006	<0.005	<0.001	>0.4	.	0.007	0.02	0.05	0.02	.	<0.005	40 mm Ø x 40 mm	
R N 17	0.05	0.006	<0.005	<0.001	>0.4	.	0.007	0.02	0.05	0.02	.	<0.005	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							
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	Pb	Ta										
KTC-3/1 21	0.13	0.40	0.003	0.026	0.18	.	4.03	27.02	.	.	.	.	0.003	.	0.003	.	.						
KTC-3/1 22	0.058	0.62	0.029	0.005	0.43	.	19.73	24.90	.	0.073	0.003	0.001										
KTC-3/1 23	0.11	1.60	0.005	0.021	0.82	0.048	9.99	22.17	1.01	0.045	0.003	0.104	.	<0.01	.	0.005	.										
KTC-3/1 24	0.084	0.80	0.009	0.014	0.60	0.031	14.12	20.18	1.46	0.006	0.004	0.050	.	.	.	0.018	.										
KTC-3/1 25	0.027	1.42	0.010	0.021	1.43	0.011	8.05	18.32	2.49	0.001	0.001	0.012	0.050	.	.	0.044	.										
KTC-3/1 26	0.044	1.19	0.021	0.008	1.01	.	17.62	16.18	0.49	0.004	0.002	.	0.21	0.29	0.075	.	0.40										
KTC-3/1 27	0.057	1.00	0.019	0.011	1.19	.	15.74	13.39	0.008	0.016	0.002	.	0.014	1.53	0.24	.	0.24										
KTC-3/1 28	0.011	0.22	0.036	0.003	0.10	.	29.79	10.06	.	0.019	<0.001	.	.	0.072	0.45	.	0.054										
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	CLEARANCE SALE	.										
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	CLEARANCE SALE	.										
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	CLEARANCE SALE	.										
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	.	.										
JSM M205 1	0.054	0.43	0.031	0.011	0.27	0.09	0.26	15.9	0.13	.	.	.	0.022	.	N:0.0409	.	V:0.052										
JSM M205 2	0.049	1.64	0.042	0.26	0.36	0.35	8.46	17.0	0.29	Al: <0.005	.	.	0.17	.	N:0.077	.	V:0.049										
JSM M205 3	0.059	1.48	0.034	0.025	0.49	0.38	8.16	18.2	0.22	Al: <0.005	.	.	0.21	.	N:0.079	.	V:0.099										
JSM M205 4	0.028	1.85	0.035	0.010	0.27	0.52	9.09	19.4	0.31	Al: <0.005	.	.	0.19	.	N:0.076	.	V:0.10										
JSM M205 5	0.068	1.58	0.033	0.001	0.32	0.26	13.1	22.1	0.19	Al: <0.005	.	.	0.27	.	N:0.067	.	V:0.080										
JSM M205 6	0.020	1.08	0.029	<0.001	0.39	0.32	19.1	24.2	0.17	Al: 0.010	.	.	0.35	.	N:0.0281	.	V:0.074										
JSM M205 7	0.057	1.31	0.034	0.026	0.47	0.30	10.2	16.6	2.04	Al: <0.005	.	.	0.24	.	N:0.0472	.	V:0.079										
JSM M205 8	0.022	1.28	0.036	0.017	0.51	0.27	12.1	17.2	2.02	Al: <0.005	.	.	0.17	.	N:0.0432	.	V:0.046										

STAINLESS AND HIGH ALLOY STEEL SETTING-UP SAMPLES

typical analysis

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	Co	Nb	Ti	V	W	N
IMZ S-22	1.1	1.1	0.01	0.02	0.94	0.03	0.63	19.1				0.02		0.02	0.033		
162X FeSUS1	1.1	0.8	0.15	0.35	1.8	0.3	0.5	25.0	0.45	0.05	0.6	1.1	0.05	0.4	0.4	0.2	
R N 18	1	1.2		0.2		7	10			0.2	0.05						
R H 12	0.47	16.6	0.07	<0.01	0.37	0.09	0.12	3.55	0.11	<0.01	0.01	0.03	0.03	<0.01	0.05	0.06	
BS SU 420	0.32	1.0	0.018	0.27	0.42	0.12	0.45	12.8	0.37	0.005	<0.005	0.028	0.02	0.001	0.11	0.048	0.034
IMZ S-15	0.32	0.7	0.01	0.01	2.0		7.3	11.9									
IMZ 502	0.31	0.47	0.02	<0.005	2.8		6.7	12.8									
NCS AH21312	0.297	16.24	0.033	0.117	0.48	0.208	0.43	0.69	0.506		2.98	0.032		0.045	0.23	0.35	
IMZ S-21	0.26	0.50	0.02	0.02	0.44	0.30	2.2	18.3	0.4					0.12	0.25	0.4	
IMZ S-30	0.20	1.6	0.02	0.01	0.93		12.6	18.7					1.0				
IMZ S-06A	0.2	1.4	0.01	0.01	0.2	0.04	20	10.8	0.5				1.5			0.4	
KUT K10	0.155	1.77	0.022	0.020	0.88	0.16	11.2	17.5	2.98				0.98				
KUT K10B	0.14	1.77	0.022	0.020	0.88	0.16	11.2	17.5	2.98				0.98				
KUT K10C	0.13	1.77	0.022	0.020	0.88	0.16	11.2	17.5	2.98				0.98				
IMZ S-24	0.13	0.7	0.01	0.02	0.95		0.76	26.8									
BS SU 410	0.124	0.41	0.020	0.008	0.35	0.039	0.098	12.02	0.017	0.004	0.010	0.015	0.003	0.003	0.029	0.004	0.0284
IMZ S-10	0.12	0.65	0.01	0.01	0.32	2.4	1.1	28					0.6	1.4			
IMZ S-34	0.11	1.7	0.015	0.01	0.62		9.1	20.8	1.6					0.5		0.5	
BS 224	0.11	0.60	0.024	0.019	1.32	0.07	0.75	12.8	0.056	0.007	0.013	0.03	0.02		0.041	(0.004)	
IMZ S-33	0.10	1.2	0.03	0.01	0.75		8.3	19.6			0.1			0.6			
IMZ S-16	0.10	0.65	0.015	0.01	1.3	0.12	0.59	14.3			0.5			0.20			
BS SU 309	0.077	1.68	0.027	0.0009	0.50	0.26	13.68	22.50	0.30	0.007	0.006	0.13	0.027		0.065		0.095
KUT K7	0.063	1.44	0.026	0.012	0.89	0.20	10.45	17.8						0.27			
KUT K8	0.061	1.10	0.026	0.017	1.38	(0.18)		23.5			1.53						
R H 34	0.06	7.4	<0.01	0.01	0.3	1.9	18	17	0.08	<0.01	<0.01	0.3	0.44	0.04	0.06	0.1	0.16
IMZ S-36	0.06	2.0	0.01	0.01	0.9	3.0	29.0	25.5	3.1			0.03		0.8	0.05		
BS SU 347	0.056	1.61	0.030	0.027	0.51	0.16	9.43	17.26	0.39	0.007	0.005	0.05	0.79				0.060
BS SU 321	0.055	1.67	0.016	0.023	0.63	0.21	10.15	17.18	0.22	0.004	0.19	0.16		0.45	0.13		0.012
NCS AH11333d	0.054	1.23	0.029	0.014	0.577	0.136	8.08	17.34	0.153		0.082			0.399	0.074		
C Fe 3	0.05	1.54	0.02	0.02	0.37	0.241	9.92	17.38	2.07	0.02		0.322	(0.54)	(0.021)	0.07		
BS SU 321A	0.046	1.77	0.024	0.020	0.38	0.67	9.09	17.40	0.25	0.008	0.10	0.052	0.014	0.53	0.10	0.04	
BS SU 321B	0.039	1.58	0.03	0.0004	0.56	0.465	9.2	17.65	0.357	0.012	0.025	0.1	0.012	0.29	0.076	0.025	0.02
R H 33	0.031	10.02	<0.01	0.015	0.09	1.9	18.9	18.0	0.02	<0.01	0.025	0.027	0.51	0.25	0.04	0.09	
IMZ S-28	0.03	1.6	0.01	0.01	0.75		14.3	16.3	2.25								
IMZ S-31	0.03	1.5	0.01	0.01	0.30		11.0	17.6									
IMZ 504	0.03	1.43	0.02	0.01	0.56		11.1	18.2									0.17
R H 31	0.03	1.1	0.02	0.01	0.6	2.0	20.0	17.02	2.3	<0.01	<0.01	0.06	0.3	<0.01	0.04	0.06	
BS SU 2507	0.026	0.78	0.024	0.002	0.32	0.23	6.8	25.2	3.8	0.005	0.007	0.042	0.009	0.003	0.06	0.085	0.30
BS SU 304	0.024	1.45	0.031	0.026	0.367	0.47	8.1	18.25	0.49	0.014	<0.005	0.125	0.013	0.002	0.072	0.032	0.084
BS SU 304 BAR	0.024	1.45	0.031	0.026	0.367	0.47	8.1	18.25	0.49	0.014	<0.005	0.125	0.013	0.002	0.072	0.032	0.084
NCS AH11367c	0.022	0.942	0.038	0.0038	0.348	0.062	10.07	16.82	2.04		0.012	0.226			0.090	0.0055	0.066
SUS 1.3974	0.02	5.7	0.02	<0.001	0.40	0.12	14.8	23.3	2.9		<0.01	0.06	0.14	0.01	0.12	0.13	
SUS G	0.02	1.7	0.03	0.02	0.32	0.30	10.0	16.8	2.1	0.006	0.003	0.15	0.01	<0.005	0.08	0.04	0.08
SUS F/6	0.02	0.61	0.02	<0.005	0.53	0.63	7.2	25.8	3.4	<0.005	0.005	0.05	0.005	<0.005	0.06	0.63	0.25
SUS F/5	0.02	0.50	0.02	<0.005	0.26	0.59	7.0	24.7	3.5	<0.001	<0.005	0.01	<0.005	<0.005	0.03	0.62	0.23
BS SU 316L-A	0.017	1.67	0.029	0.0232	0.41	0.41	9.83	16.67	2.03	0.0088	0.001	0.17	0.007	0.0061	0.062	0.051	0.08

Number	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	Al	Co	Nb	Ti	V	W	N	
Number	As	B	Bi	Ca	Fe	O	Pb	Sb	Ta	Te	Zn	Zr	Units					
IMZ S-22	0.002		0.001															45 mm Ø x ~29 mm
162X FeSUS1	0.005			0.005			0.005	0.015			0.002	0.04						43 mm Ø x 20 mm last
R N 18				0.06				0.2		0.06								40 mm Ø x 40 mm
R H 12	<0.01																	40 mm Ø x 40 mm
BS SU 420	0.002		0.0005		0.0002	[83.9]	0.006	<0.005	<0.005			0.001						38 mm Ø x 40+ mm Mg: 0.0001
IMZ S-15																		40 mm Ø x ~23 mm
IMZ 502																		47 mm Ø x ~25 mm
NCS AH21312																		40 mm Ø x 40 mm
IMZ S-21																		40 mm Ø x ~30 mm
IMZ S-30																		40 mm Ø x ~23 mm
IMZ S-06A																		45 mm Ø x ~25 mm
KUT K10																		30-35 mm Ø x 39 mm
KUT K10B																		30-35 mm Ø x 39 mm
KUT K10C																		30-35 mm Ø x 39 mm
IMZ S-24																		40 mm Ø x ~30 mm
BS SU 410			0.0002		0.0002		0.0038											40 mm Ø x 40 mm
IMZ S-10																		45 mm Ø x ~30 mm
IMZ S-34																		40 mm Ø x ~30 mm
BS 224																		32 mm Ø x 17 mm
IMZ S-33																		40 mm Ø x ~35 mm
IMZ S-16												0.01						40 mm Ø x ~30 mm
BS SU 309			0.0030				0.005											44 mm Ø x 40 mm
KUT K7																		30-35 mm Ø x 39 mm
KUT K8																		30-35 mm Ø x 39 mm
R H 34	<0.001											0.01						40 mm Ø x 40 mm
IMZ S-36																		40 mm Ø x ~35 mm
BS SU 347			0.0040				0.004											38 mm Ø x 40 mm
BS SU 321							0.002											39 mm Ø x 40 mm
NCS AH11333d																		38 mm Ø x 35 mm
C Fe 3																		40 mm Ø x 30 or 40 mm
BS SU 321A	0.004		0.0005		0.0003		<0.001	<0.01				<0.001						

ALUMINUM IN XRF DISCS

typical analysis

30-40 mm \varnothing x 5 mm

Number	Al ₂ O ₃	As ₂ O ₃	B ₂ O ₃	BaO	Bi ₂ O ₃	CaO	Fe ₂ O ₃	GeO ₂	K ₂ O	MgO	MoO ₃	Na ₂ O	P ₂ O ₅	PbO	Sb ₂ O ₃	SiO ₂	TiO ₂	V ₂ O ₅	WO ₃
BR CH1	28.0	0.8	20.0	1.0	1.0	.	7.0	0.3	8.0	.	.	6.5	14.0	.	.	9.11	0.1	0.3	1.2
SV C	27.15	0.78	19.23	1.0	0.5	0.03	5.4	0.27	6.9	.	2.0	7.9	15.6	.	.	9.9	0.1	0.26	0.9
BR PC 3	27.1	0.78	19.1	1.0	0.50	0.03	5.4	0.27	6.9	.	2.0	7.9	15.6	.	.	9.9	0.10	0.26	0.90
BR CS1	27.1	0.78	19.23	1.0	0.5	0.03	5.4	0.27	6.9	.	2.0	7.9	15.6	.	.	11.3	0.1	0.26	0.05
FLX CH2/1	24.83	2.68	8.76	.	0.82	15.57	0.79	1.86	0.30	7.99	1.03	10.11	4.87	3.20	2.16	8.40	.	1.54	0.45
BR ACEM	21.68	.	19.88	.	.	10.53	11.93	.	3.14	7.03	.	11.15	0.20	2.0	2.0	9.56	0.20	.	.
FLX PR3	17.68	.	.	.	.	3.16	.	.	.	6.76	.	.	9.72	.	.	41.28	3.32	.	.
FLX S7	15.46	.	.	.	.	10.1	11.52	.	3.14	4.71	.	3.38	0.28	.	.	48.06	2.36	.	.

Number	CdO	Ce ₂ O ₃	Cr ₂ O ₃	La ₂ O ₃	MnO	Mn ₂ O ₃	Nb ₂ O ₅	Nd ₂ O ₃	NiO	Pr ₂ O ₃	Rb ₂ O	SO ₃	SrO	U ₃ O ₈	ZrO ₂
BR CH1	0.15	.	.	.	0.5	.	0.7	0.5	0.3	0.4	0.04	.	.	0.1	.
SV C	0.66	.	.	.	0.47	.	0.6	0.46	0.29	0.2	.	.	.	.	last
BR PC 3	0.16	.	.	.	0.47	.	0.60	0.46	0.29	0.20	.	.	.	.	.
BR CS1	0.16	.	.	.	0.47	.	.	0.46	0.29	0.2	.	.	.	.	.
FLX CH2/1	.	1.23	.	0.87	.	.	.	0.44	Li ₂ O:1.20	.	.	.	0.55	.	0.33
BR ACEM	.	.	.	.	.	0.20	.	.	.	.	.	0.50	.	.	.
FLX PR3	.	.	1.07	.	.	.	.	.	0.373	.	.	.	.	.	.
FLX S7	.	.	.	.	0.234	.	.	.	.	.	.	.	.	.	.

ANTIMONY AND ARSENIC IN XRF DISC

typical analysis

40 mm \varnothing x 6 mm

Number	As ₂ O ₃	CaO	Co ₃ O ₄	K ₂ O	MnO	MoO ₃	Na ₂ O	Sb ₂ O ₃	SiO ₂
FLX K04	2.12	14.8	0.52	2.18	6.81	2.9	5.22	2.12	29.9

BARIUM IN XRF DISCS

typical analysis

40 mm \varnothing x 5 mm

Number	BaO	SiO ₂	TiO ₂	Al ₂ O ₃	As ₂ O ₃	B ₂ O ₃	CaO	CeO ₂	Cr ₂ O ₃	CuO	Fe ₂ O ₃	K ₂ O	MgO	Na ₂ O	PbO	Sb ₂ O ₃	SrO	ZnO	ZrO ₂	
BR M 1	62.2	0.2	33.5	1.3	2.8	.	0.02	last
BR 4/L	24.70	35.00	2.33	0.70	0.31	4.25	4.77	0.0	.	.	0.02	1.85	0.0	1.08	18.70	0.20	0.22	4.98	0.0	
BR BG18	11.5	78.4	.	.	.	3.5	.	.	.	3.6	.	1.0	.	.	.	.	.	1.0	.

BORON IN XRF DISCS

typical analysis

30-40 mm \varnothing x 5 mm

Number	B ₂ O ₃	Al ₂ O ₃	As ₂ O ₃	CaO	CdO	Cr ₂ O ₃	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	NiO	P ₂ O ₅	PbO	SO ₃	Sb ₂ O ₃	SiO ₂	SnO	SnO ₂	TiO ₂	ZnO
BR AN1/1	61.43	22.6	.	0.03	1.04	0.68	0.1	0.83	0.6	.	1.7	0.78	0.4	0.92	0.5	.	3.0	.	.	0.6	1.2
BR DSH2	45.0	21.80	.	0.71	.	0.68	0.70	0.83	0.60	.	17.82	0.78	0.57	0.92	0.50	.	3.0	.	.	0.60	0.80
BR DSH1	41.82	21.82	.	0.71	2.0	0.68	0.70	0.83	0.60	2.0	17.0	0.78	0.57	0.92	0.50	.	3.0	.	0.79	0.60	0.80
FLX PR2	41.0	.	.	.	.	.	.	9.02	19.45	.	.	.	.	2.79	.	.	23.57	.	1.05	.	.
BR WR2	40.0	0.1	.	1.1	.	0.1	9.0	5.0	15.0	0.5	10.0	.	0.5	.	0.5	0.5	15.8	.	.	0.5	.
BR BP2	36.0	20.33	1.0	14.0	.	0.7	.	.	6.0	.	12.0	.	.	.	.	2.0	4.27	.	.	0.33	4.0
BR MM1	31.10	9.0	.	3.0	.	.	0.50	2.0	5.0	10.0	16.0	2.0	0.50	4.0	0.10	0.50	6.0	1.0	3.0	5.0	5.0
BR WR1	30.0	13.0	.	30.0	.	1.5	0.1	2.0	5.0	0.2	5.0	.	0.1	0.5	12.5	.	.	.	.	.	.
BR OS1	26.68	15.11	2.0	14.0	.	.	.	.	13.43	.	10.78	.	5.0	.	2.0	5.0	.	.	.	.	6.0
SV D	25.2	15.3	2.0	15.0	.	.	0.5	.	9.0	.	10.0	.	5.0	1.0	.	2.0	3.0	.	.	.	5.0
BR DS1	23.62	20.0	.	14.40	.	.	0.58	0.09	7.4	.	9.6	.	5.8	1.7	.	1.85	6.6	.	.	0.03	3.7
BR AX3	23.28	18.89	.	7.0	.	.	12.0	3.14	7.03	.	11.15	.	0.2	4.0	0.5	2.0	9.56	.	.	.	.
BR PD 3	22.2	20.6	1.86	14.4	.	.	0.58	0.09	7.4	.	9.6	.	5.8	1.7	.	1.85	5.48	.	.	0.03	3.7
BR U 30	22.0	20.0	.	.	.	.	.	.	14.0	.	14.0	.	.	.	.	2.0	5.0	.	.	.	6.0
BR WIE3/II	21.77	.	.	8.0	.	.	.	10.0	.	.	15.0	12.73	.	10.77	.	2.0	7.28	.	.	.	12.45
BR KA1	20.79	20.0	.	10.0	.	.	0.01	1.0	15.0	.	11.0	.	2.0	.	0.2	1.0	4.0	.	.	.	15.0
BR WIE3/I	20.0	18.9	.	5.0	.	.	14.3	3.0	.	.	11.0	.	.	.	.	2.0	7.28	11.32	.	.	.
BR ARL2	20.0	12.0	0.5	0.5	2.0	.	.	.	3.0	25.0	12.0	.	1.0	.	0.5	.	19.4	.	0.5	.	2.0

Number	Ag ₂ O	BaO	Bi ₂ O ₃	CuO	CeO ₂	Ce ₂ O ₃	Cl	Ga ₂ O ₃	GeO ₂	In ₂ O ₃	La ₂ O ₃	Nb ₂ O ₅	MoO	MoO ₃	Se	SrO	Ta ₂ O ₅	Te ₂ O ₃	V ₂ O ₅	WO ₃	ZrO ₂	
BR AN1/1	.	0.89	1.2	0.8	.	.	0.1	.	.	.	.	.	.	.	.	.	.	.	0.6	.	.	.
BR DSH2	.	0.89	1.20	0.80	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0.60	.	.	.
BR DSH1	0.93	0.89	.	0.80	.	.	0.60	.	.	.	.	.	0.66	.	.	.	.	.	.	.	.	.
FLX PR2	3.76	.	.
BR WR2	1.5	.
BR BP2
BR MM1	.	.	0.30	.	.	.	.	.	.	.	.	.	.	.	1.0	.	.	.	.	.	.	.
BR WR1
BR OS1
SV D	.	.	1.0	.	1.0	.	.	.	1.5	.	1.0	.	.	1.0	.	.	.	.	1.0	.	0.5	.
BR DS1	0.84	.	0.46	.	.	0.88	.	.	0.87	0.13	.	.	.	0.86	0.05	0.34	.	.
BR AX3	.	.	.	1.25	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
BR PD 3	.	.	0.18	.	0.84	.	0.46	0.41	.	0.88	.	.	0.87	0.13	.	.	.	0.86	0.32	0.34	.	.
BR U 30
BR WIE3/II
BR KA1
BR WIE3/I	1.21	.	1.43	.	1.43	.	.	.	.	1.8	1.26	.	.	.
BR ARL2	.	.	0.5	.	.	.	.	.	.	.	.	.	.	.	.	.	0.5	0.1	.	.	0.5	.

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 last

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
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
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

HIGH SILICA IN XRF DISCS

typical analysis		40 mm Ø x 5-6 mm								
Number	SiO ₂	Al ₂ O ₃	CaO	Cl	Fe ₂ O ₃	K ₂ O	Na ₂ O	SO ₃	TiO ₂	
ASO TU1	99.99	0.005	0.005	.	<0.01	.	0.005	.	.	last
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	.

CRM URANIUM IN XRF DISCS

typical analysis listed in mg/kg		12 mm Ø x 5 mm	
Number	U		
IRMM 540R	15.0	last	

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	last
SV E	0.5	0.3	.	.	.	.	.	.	last
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	.	.	.

last of stock

GEOLOGICAL POWDER SETTING-UP SAMPLES

analysis in mass % Data Sheet shows two lists of analytical results, no uncertainties, last of stock 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

continued analysis in mg/kg

Number	Ag	As	Au	B	Be	Bi	Br	Cd	Ce	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

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

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 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.