

Appendix 4.1 Operating conditions and standards for the major element routine "GARNET".

SUMMARY OF CONDITIONS IN GARNET.EXP AND GARNET.PHY

Cosecant of the take off angle: 1.556

Total number of elements : 11

Number of analyzed elements :10

CALIBRATION DATA :

	SPC	XTAL	POS.	+BG. OFFSET	-BG. OFFSET	BG SLOPE	PK-BG C/s/nA	SIGMA	PK_TIMs	%REQ. ACCUR.	BG_TIM ms
Na	1	PC0	26848	2500	-2500	0.00	1517.62	0.7	10	0.1	5000
K	3	PET	42757	1000	0	1.00	294.38	0.6	10	0.5	5000
Fe	4	LIF	48081	1050	0	1.00	333.18	0.3	10	0.1	5000
Mg	2	TAP	38516	1000	0	1.00	1155.93	0.2	10	0.1	5000
Si	2	TAP	27732	1500	0	1.00	1312.58	0.5	10	0.1	5000
Ca	3	PET	38389	2000	0	1.00	370.99	0.4	10	0.1	5000
Mn	4	LIF	52201	1200	0	1.00	435.75	0.2	10	0.5	4627
Ti	3	PET	31426	1000	0	1.00	803.96	0.1	10	0.1	5000
Cr	3	PET	26193	1000	0	1.00	366.95	0.1	10	0.1	5000
Al	2	TAP	32468	1000	0	1.00	1372.19	0.1	10	0.1	5000

STANDARD DATA:

	STD	WT	LINE	kV	BEAM
Na	NACL7	0.3930	Ka	20.0	20.0
K	KBR7	0.3290	Ka	20.0	20.0
Fe	MAG1	0.7236	Ka	20.0	20.0
Mg	MGO1	0.6032	Ka	20.0	20.0
Si	QTZ1	0.4674	Ka	20.0	20.0
Ca	WOL1	0.3432	Ka	20.0	20.0
Mn	MN	1.0000	Ka	20.0	20.0
Ti	RUT	0.5895	Ka	20.0	20.0
Cr	CHR1	0.2504	Ka	20.0	20.0
Al	COR1	0.5290	Ka	20.0	20.0

NACL7	Na	0.3930	Cl	0.6070								
KBR7	K	0.3290	Br	0.6710								
MAG1	Fe	0.7236	O	0.2764								
MGO1	Mg	0.6032	O	0.3968								
QTZ1	Si	0.4674	O	0.5326								
WOL1	Ca	0.3432	Fe	0.0030	Mn	0.0012	Si	0.2399	O	0.4127		
MN	Mn	1.0000										
RUT1	Ti	0.5895	Fe	0.0050	Nb	0.0050	O	0.4005				
CHR1	Cr	0.2504	Al	0.0762	Fe	0.2985	Mg	0.0434	Ti	0.0054	V	0.0012
	Mn	0.0015	Ni	0.0012	Si	0.0011	O	0.3211				
COR1	Al	0.5290	O	0.4710								

Appendix 4.2 Counting times for the sample and the calculated minimum detection limits (MDL) for the major element routine "GARNET".

ELEMENT	TIME (s)	MDL (ppm)	MDL (oxide wt.%)
Na	10	300	0.040
Si	10	80	0.017
K	10	200	0.024
FE	10	400	0.051
AL	10	100	0.019
CA	10	200	0.028
MN	10	400	0.052
MG	10	200	0.033
TI	10	200	0.033
CR	10	200	0.029