DRC and KED Gases and their Effect on Elements
NexION 300/350/1000/2000

YY=goes well with this gas

Y=goes reasonably well

XX=doesn't go well, no advantage

Domain of KED Mode m/z < 80 YY=goes well with this gas (KED)

				DRC					KED		
Analyte	m/z	Abundance (%)	Interference	NH_3	CH_4	H_2	O_2	7% H_2/He	He	7% H_2/He	Comments
Li	6	7,5	-	Y	Y	Y	XX	XX	YY	YY	light element tends to be scattered; in KED significant
Li	7	92,5	-	Y	Y	Y	XX	XX	YY	YY	light element tends to be scattered; in KED significant
Be	8	100	-	Y	Y	Y	XX	XX	YY	YY	light element tends to be scattered; in KED significant
B	11	80,1	-	XX	XX	Y	XX	XX	YY	YY	light element tends to be scattered; in KED significant
Na	23	100	bgd, LiO	YY	XX	Y	XX	XX	YY	YY	
Mg	24	78,99	LiO, NaH, Ti++, Ti++, Ca++	YY	Y	Y	XX	XX	YY	YY	
Mg	25	10	LiO, BeO, NaH, Ti++	YY	X	Y	XX	XX	YY	YY	
Mg	26	11,01	CN, BO, BeO	YY	X	Y	XX	XX	YY	YY	
Al	27	100	BeO, BO, CN	YY	XX	XX	XX	XX	YY	YY	only NH3 reacts with CN
Si	28	92,23	AlH, BO, N2, CO	XX	XX	YY	YY	XX	Y	Y	Si reacts with gases, SiO works at 44, but Ca overlap
P	31	100	NOH, SiH, NO	XX	XX	XX	YY	XX	Y	Y	P disappears with most gases, PO47 at 0.6 ml O2 works
S	32	95,02	NOH, NO, O2	XX	XX	XX	YY	XX	Y	Y	S disappears with most gases, SO48 works well
K	39	93,251	ArH	YY	XX	Y	Y	XX	Y	Y	
Ca	40	96,941	Ar, K, MgO	YY	YY	Y	XX	XX	XX	XX	for semicon users only
Ca	43	0,135	CaH, MgO, CNO, AlO, BO2, Sr++, Sr++	YY	XX	XX	XX	XX	YY	YY	low sensitivity isotope
Ca	44	2,086	CaH, BO2, CO2, MgO, SiO, CNO, AlO, Y++, Sr++	YY	YY	Y	XX	XX	YY	YY	used for correction if necessary
Sc	45	100	AlO, BO2, CaH, CO2, SiO, Zr++, Zr++	XX	XX	XX	XX	XX	YY	YY	reacts with most reaction gases and disappears
Ti	46	8,0	Ca, NO2, CO2, SiO, Zr++	XX	Y	XX	XX	XX	Y	Y	No reaction between CH4 and Ti+, looks promising
Ti	47	7,3	NO2, SiO, CCl, PO, Zr++	XX	X	XX	XX	XX	Y	Y	Ti+ loses charge to some gases
Ti	48	73,8	Ca, SO, ArC, NO2, CCl, PO, Zr++	XX	Y	XX	XX	XX	Y	Y	CX type interferences
Ti	49	5,5	CaH, CCl, SO, PO, HSO	XX	Y	XX	YY	XX	YY	YY	TiO2 at mass 81 works with 2ml/min O2 cell gas
Ti	50	5,4	Cr, V, SO, ArC, CCl, HSO, ArN	XX	Y	XX	XX	XX	YY	YY	
V	51	99,75	HSO, ClO	YY	XX	XX	Y	XX	YY	YY	H2/CH4 does not remove ClO, VO works ok at low Zn
Cr	52	83,789	ClO, HClO, SO, ArO, ArC, ArN	YY	YY	Y	XX	XX	YY	YY	
Cr	53	9,501	ArC, HSO, ClO, HClO	YY	XX	XX	XX	XX	YY	YY	H2/CH4 does not remove ClO
Fe	54	5,8	Cr, ArO, ArN, HClO	YY	YY	YY	XX	XX	YY	YY	
Mn	55	100	ArNH	YY	YY	YY	XX	XX	YY	YY	
Fe	56	91,72	ArO, HClO, CaO	YY	YY	YY	Y	XX	YY	YY	FeO72
Fe	57	2,2	ArOH	XX	XX	Y	XX	XX	YY	YY	CaNH3+ formed with NH3
Ni	58	68,077	Fe, CaO	YY	YY	YY	XX	XX	YY	YY	
Co	59	100	ArOH	YY	YY	YY	XX	XX	YY	YY	
Ni	60	26,23	CaO	YY	YY	YY	XX	XX	YY	YY	CaO lowest with CH4
Cu	63	69,17	NaAr; TiO, PO2, TiO, PO2	YY	Y	YY	XX	XX	YY	YY	
Zn	64	48,6	SOO, POO	YY	Y	XX	XX	XX	YY	YY	H2 doesn't remove SOO
Cu	65	30,83	PO2, SO2, TiO, Ba++	YY	Y	Y	XX	XX	YY	YY	NH3 does remove SOO with high q
Zn	66	27,9	SO2, TiO, VO, Ba++	YY	Y	Y	XX	XX	YY	YY	
Zn	67	4,1	VO, ArP, TiO, ClO2, Ba++, Ba++	Y	X	Y	XX	XX	YY	YY	
Zn	68	18,8	VO, ClO2, ArS, TiO, SO2, Ba++, Ba++, Ce++	YY	YY	Y	XX	XX	YY	YY	
Ga	71	39,892	-	YY	YY	YY	YY	XX	YY	YY	good internal std
Ge	72	27,66	-	Y	Y	Y	XX	XX	YY	YY	reacts to form hydrides, can be used as internal std
As	75	100	ArCl, Sm++, Nd++, Eu++	XX	Y	YY	YY	XX	Y	Y	AsO at mass91 with 0.5ml/min O2
Se	78	23,78	Kr, Ar2, Gd++, Gd++, Dy++	Y	YY	YY	YY	YY	Y	YY	Kr interference is removed, KED
Se	80	49,61	ArAr	Y	YY	YY	Y	Y	XX	XX	NH3 removes Br+; H2/He not promising
Sr	88	82,58	Yb++, Lu++	YY	YY	YY	XX	XX	YY	YY	
Zr	90	51,45	-	XX	YY	YY	XX	XX	YY	YY	Zr reacts with NH3
Zr	91	11,22	AsO	XX	YY	YY	XX	XX	Y	Y	
Mo	95	15,92	BrO, ArKO	YY	YY	Y	XX	XX	YY	YY	no interferences but good focussing
Mo	98	24,13	Ru, BrO, K2O	YY	YY	Y	XX	XX	YY	YY	
Rh	103	100	SrO, ArCu	YY	YY	YY	YY	XX	YY	YY	good internal std
Ag	107	51,839	ZrO, YO	YY	YY	YY	YY	XX	YY	YY	
Ag	109	48,161	ZrO	YY	YY	YY	YY	XX	YY	YY	
Cd	111	12,8	MoO	Y	YY	Y	YY	XX	Y	Y	need to use high flows of O2 to remove MoO
Cd	114	28,73	MoO	Y	YY	Y	YY	XX	Y	Y	need to use high flows of O2 to remove MoO
In	115	95,7	Sn, MoO	YY	YY	YY	YY	XX	YY	YY	good internal std
Sn	118	24,23	MoO, U++	YY	YY	YY	XX	XX	YY	YY	
Sn	120	32,59	Te	YY	YY	YY	XX	XX	YY	YY	
Sb	121	57,36	-	YY	YY	YY	XX	XX	YY	YY	
Sb	123	42,64	Te	YY	YY	YY	XX	XX	YY	YY	
Te	125	7,139	MoO2	YY	YY	YY	XX	XX	YY	YY	potential as internal std
Ba	137	11,23		YY	YY	YY	XX	XX	YY	YY	
Ba	138	71,7	Ce, La	YY	YY	YY	XX	XX	YY	YY	
Re	185	37,4	ErO, TmO	YY	YY	YY	YY	XX	Y	Y	good internal std
Ir	191	37,3	LuO, YbO	YY	YY	YY	YY	XX	Y	Y	good internal std
Ir	193	62,7	HfO, LuO	YY	YY	YY	YY	XX	Y	Y	good internal std
Hg	202	29,86	WO	XX	YY	YY	YY	XX	Y	Y	Hg reacts with NH3, used to separate Hg from Pb
Tl	203	29,524	WO	YY	YY	YY	YY	XX	Y	Y	
Tl	205	70,476	-	YY	YY	YY	XX	XX	Y	Y	
Pb	206	24,1	-	YY	YY	YY	XX	XX	Y	Y	
Pb	207	22,1	-	YY	YY	YY	XX	XX	Y	Y	
Pb	208	52,4	-	YY	YY	YY	XX	XX	Y	Y	
Bi	209	100	-	YY	YY	YY	XX	XX	Y	Y	good internal std for Pb
U	238	99,2745	-	XX	YY	YY	YY	XX	Y	Y	UO2 formed with O2