

See back cover for an English translation of this cover

90944MR



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

Pūtaiao, Kaupae 1, 2012

90944M Te whakaatu māramatanga ki ngā āhuatanga
o te waikawa me te pāpāhua¹

9.30 i te ata Rāhina 19 Whiringa-ā-rangi 2012
Whiwhinga: Whā

PUKAITI RAUEMI

Tirohia tēnei pukaiti hei whakautu i ngā pātai mō 90944M.

Tirohia mehemea kei roto nei ngā whārangi 2–5 e raupapa tika ana, ā, kāore hoki he whārangi wātea.

KA TAEA TĒNEI PUKAITI TE PUPURI HEI TE MUTUNGA O TE WHAKAMĀTAUTAU.

¹ kawakore

Taka Katote

+1	+2	+3	-3	-2	-1
NH_4^+	Ca^{2+}	Al^{3+}		O^{2-}	OH^-
Na^+	Mg^{2+}	Fe^{3+}		S^{2-}	Cl^-
K^+	Cu^{2+}			CO_3^{2-}	NO_3^-
Ag^+	Pb^{2+}			SO_4^{2-}	HCO_3^-
H^+	Fe^{2+}				
	Ba^{2+}				
	Zn^{2+}				

Table of Ions

+1	+2	+3	-3	-2	-1
NH_4^+	Ca^{2+}	Al^{3+}		O^{2-}	OH^-
Na^+	Mg^{2+}	Fe^{3+}		S^{2-}	Cl^-
K^+	Cu^{2+}			CO_3^{2-}	NO_3^-
Ag^+	Pb^{2+}			SO_4^{2-}	HCO_3^-
H^+	Fe^{2+}				
	Ba^{2+}				
	Zn^{2+}				

TAKA PŪMOTU

18

Tau Iraoaho																																																		
																	1	H																																
																	2	He																																
1	2		3			4			5			6			7			8			9			10			11			12			13			14			15			16			17			18		
3	Li	Be			B	C	N	O			F	Ne			Al	Si	P	S			Cl	Ar			Ga	Ge	As	Se			Br	Kr			In	Sn	Sb	Te			I	Xe								
11	Na	Mg			Al	Si	P	S			Cl	Ar			K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn			Ga	Ge	As	Se			Br	Kr			In	Sn	Sb	Te			I	Xe				
19	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn			Ga	Ge	As	Se			Br	Kr			In	Sn	Sb	Te			I	Xe																		
37	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd			In	Sn	Sb	Te			I	Xe																												
55	Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg			Tl	Pb	Bi	Po			At	Rn																												
87	Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg																																							

57	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
89	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No

PERIODIC TABLE OF THE ELEMENTS

18

Atomic Number																		2																	
1	H																	He																	
2																	10																		
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																				
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36										
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70		
87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118				
Fr	Ra	La	Ac	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn			
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Li	Be	B	C	N	O	F	Ne	Na	Mg	Al	Si	P	S	Cl	Ar	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		
Li	Be	B	C	N	O	F	Ne	Na	Mg	Al	Si	P	S	Cl	Ar	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		

57	58	59	60	61	62	63	64	65	66	67	68	69	70
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
89	90	91	92	93	94	95	96	97	98	99	100	101	102
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No

English translation of the wording on the front cover



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

Level 1 Science, 2012

90944 Demonstrate understanding of aspects of acids and bases

9.30 am Monday 19 November 2012
Credits: Four

RESOURCE BOOKLET

Refer to this booklet to answer the questions for 90944.

Check that this booklet has pages 2–5 in the correct order and that none of these pages is blank.

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.