

See back cover for an English translation of this cover

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L2-CHEMMR



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

Te Mātauranga Matū, Kaupae 2, 2012

9.30 i te ata Rātū 20 Whiringa-ā-rangi 2012

PUKA RAUEMI
mō 91164M, 91165M, 91166M

Tirohia tēnei pukaiti hei whakautu i ngā pātai o ō pukapuka Pātai, Whakautu hoki.

Āta tirohia kua tāngia a muri o tēnei.

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

TE TAKA PŪMOTU

18

Tau Iraoho		Papatipu Rāpoi Ngota/g mol ⁻¹																																													
1		2																																													
H		He																																													
1.0		4.0																																													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18																														
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21																													
Li	Be	B	C	N	O	F	Ne	Na	Mg	Al	Si	P	S	Cl	Ar	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Cu	Zn	Ga	Ge	As	Se	Br	Kr																
6.9	9.0	10.8	12.0	14.0	16.0	19.0	20.2	23.0	24.3	27.0	28.1	31.0	32.1	35.5	40.0	39.1	40.1	45.0	47.9	50.9	52.0	54.9	55.9	63.5	65.4	69.7	72.6	74.9	79.0	83.8																	
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				
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	Xe	Cs	Ba	Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Lr	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg		
85.5	87.6	88.9	91.2	92.9	95.9	98.9	101	103	106	108	112	115	119	122	128	131	133	137	175	179	181	184	186	190	192	195	197	201	204	207	209	210	210	222	223	226	262	263	265	268	271	272					
55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
133	137	139	140	141	144	147	150	152	157	159	163	165	167	169	173	175	181	184	186	188	190	192	195	197	201	204	207	209	210	210	222	223	226	262	263	265	268	271	272								

Te Raupapa Lanthanide	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
	139	140	141	144	147	150	152	157	159	163	165	167	169	173
Te Raupapa Actinide	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
	227	232	231	238	237	239	241	244	249	251	252	257	258	259

English translation of the wording on the front cover

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Level 2 Chemistry, 2012

9.30 am Tuesday 20 November 2012

RESOURCE SHEET for 91164, 91165, 91166

Refer to this sheet to answer the questions in your Question and Answer Booklets.

Check that this sheet is printed on the back.

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