

L1-CHEMR



NEW ZEALAND QUALIFICATIONS AUTHORITY  
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD  
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

## Level 1 Chemistry, 2015

9.30 a.m. Tuesday 24 November 2015

### RESOURCE BOOKLET for 90933 and 90934

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

Check that this booklet has pages 2 and 3 in the correct order and that neither of these pages is blank.

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

### Activity series

Ca Mg Al Zn Fe Pb (H) Cu Ag
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### Solubility rules

nitrates, $\text{NO}_3^-$	All <b>soluble</b>
chlorides, $\text{Cl}^-$	All <b>soluble</b> except $\text{AgCl}$ , $\text{PbCl}_2$
iodides, $\text{I}^-$	All <b>soluble</b> except $\text{AgI}$ , $\text{PbI}_2$
sulfates, $\text{SO}_4^{2-}$	All <b>soluble</b> except $\text{BaSO}_4$ , $\text{PbSO}_4$ , $\text{CaSO}_4$
hydroxides, $\text{OH}^-$	All <b>insoluble</b> except $\text{KOH}$ , $\text{NaOH}$
carbonates, $\text{CO}_3^{2-}$	All <b>insoluble</b> except $\text{K}_2\text{CO}_3$ , $\text{Na}_2\text{CO}_3$

### Table of ions

+1	+2	+3	-3	-2	-1
$\text{NH}_4^+$	$\text{Ca}^{2+}$	$\text{Al}^{3+}$		$\text{O}^{2-}$	$\text{OH}^-$
$\text{Na}^+$	$\text{Mg}^{2+}$	$\text{Fe}^{3+}$		$\text{S}^{2-}$	$\text{Cl}^-$
$\text{K}^+$	$\text{Cu}^{2+}$			$\text{CO}_3^{2-}$	$\text{I}^-$
$\text{Ag}^+$	$\text{Pb}^{2+}$			$\text{SO}_4^{2-}$	$\text{NO}_3^-$
$\text{H}^+$	$\text{Fe}^{2+}$				$\text{HCO}_3^-$
$\text{Li}^+$	$\text{Ba}^{2+}$				$\text{F}^-$
	$\text{Zn}^{2+}$				

# PERIODIC TABLE OF THE ELEMENTS

Atomic number																		1																																																																																		
																		<b>H</b>																																																																																		
1	2																	13	14	15	16	17	18																																																																													
3	4	11	12	19	20	27	28	35	36	43	44	51	52	59	60	67	68	75	76	83	84	91	92	99	100	107	108	115	116																																																																							
<b>Li</b>	<b>Be</b>	<b>Na</b>	<b>Mg</b>	<b>K</b>	<b>Ca</b>	<b>V</b>	<b>Ti</b>	<b>Cr</b>	<b>Mn</b>	<b>Fe</b>	<b>Co</b>	<b>Ni</b>	<b>Cu</b>	<b>Zn</b>	<b>B</b>	<b>C</b>	<b>N</b>	<b>O</b>	<b>F</b>	<b>Ne</b>	<b>Al</b>	<b>Si</b>	<b>P</b>	<b>S</b>	<b>Cl</b>	<b>Ar</b>	<b>Ga</b>	<b>Ge</b>	<b>As</b>	<b>Se</b>	<b>Br</b>	<b>Kr</b>	<b>In</b>	<b>Sn</b>	<b>Sb</b>	<b>Te</b>	<b>I</b>	<b>Xe</b>	<b>Rb</b>	<b>Sr</b>	<b>Y</b>	<b>Zr</b>	<b>Nb</b>	<b>Mo</b>	<b>Tc</b>	<b>Ru</b>	<b>Rh</b>	<b>Pd</b>	<b>Ag</b>	<b>Cd</b>	<b>Hg</b>	<b>Tl</b>	<b>Pb</b>	<b>Bi</b>	<b>Po</b>	<b>At</b>	<b>Rn</b>	<b>Cs</b>	<b>Ba</b>	<b>Lu</b>	<b>Hf</b>	<b>Ta</b>	<b>W</b>	<b>Re</b>	<b>Os</b>	<b>Ir</b>	<b>Pt</b>	<b>Au</b>	<b>Hg</b>	<b>Tl</b>	<b>Pb</b>	<b>Bi</b>	<b>Po</b>	<b>At</b>	<b>Rn</b>	<b>Fr</b>	<b>Ra</b>	<b>Lr</b>	<b>Rf</b>	<b>Db</b>	<b>Sg</b>	<b>Bh</b>	<b>Hs</b>	<b>Mt</b>	<b>Ds</b>	<b>Rg</b>	<b>Cn</b>	<b>Fl</b>	<b>Lv</b>	<b>U</b>	<b>Np</b>	<b>Pu</b>	<b>Am</b>	<b>Cm</b>	<b>Bk</b>	<b>Cf</b>	<b>Es</b>	<b>Fm</b>	<b>Md</b>	<b>No</b>

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

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