

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE (9–1)
J248 01/02/03/04
CHEMISTRY A
(GATEWAY SCIENCE)
DATA SHEET (INSERT)
JUNE 2018
MODIFIED ENLARGED 36pt**

INSTRUCTIONS

**Do not send this Data Sheet for marking;
it should be retained in the centre or
destroyed.**

INFORMATION

**The information in this Data Sheet is for
the use of candidates following GCSE (9–1)
Chemistry A (J248 01/02/03/04).**



The Periodic Table of the Elements

(1) (2) (3) (4) (5) (6) (7) (0)

Key	
atomic number	
Symbol <small>name</small>	
relative atomic mass	

1		2		3										4										5										6										7										8										9										10										11										12										13										14										15										16										17										18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
1	H hydrogen 1.0	3	Li lithium 6.9	11	Na sodium 23.0	19	K potassium 39.1	37	Rb rubidium 85.5	55	Cs caesium 132.9	87	Fr francium	20	Ca calcium 40.1	38	Sr strontium 87.6	56	Ba barium 137.3	88	Ra radium	21	Sc scandium 45.0	39	Y yttrium 88.9	57-71	lanthanoids	89-103	actinoids	22	Ti titanium 47.9	40	Zr zirconium 91.2	72	Hf hafnium 178.5	104	Rf rutherfordium	23	V vanadium 50.9	41	Nb niobium 92.9	73	Ta tantalum 180.9	105	Db dubnium	24	Cr chromium 52.0	42	Mo molybdenum 95.9	74	W tungsten 183.8	106	Sg seaborgium	25	Mn manganese 54.9	43	Tc technetium	75	Re rhenium 186.2	107	Bh bohrium	26	Fe iron 55.8	44	Ru ruthenium 101.1	76	Os osmium 190.2	108	Hs hassium	27	Co cobalt 58.9	45	Rh rhodium 102.9	77	Ir iridium 192.2	109	Mt meitnerium	28	Ni nickel 58.7	46	Pd palladium 106.4	78	Pt platinum 195.1	110	Ds darmstadtium	29	Cu copper 63.5	47	Ag silver 107.9	79	Au gold 197.0	111	Rg roentgenium	30	Zn zinc 65.4	48	Cd cadmium 112.4	80	Hg mercury 200.6	112	Cn copernicium	31	Ga gallium 69.7	49	In indium 114.8	81	Tl thallium 204.4	113	Fl flerovium	32	Ge germanium 72.6	50	Sn tin 118.7	82	Pb lead 207.2	114	Fl flerovium	33	As arsenic 74.9	51	Sb antimony 121.8	83	Bi bismuth 209.0	115		34	Se selenium 79.0	52	Te tellurium 127.6	84	Po polonium	116	Lv livermorium	35	Br bromine 79.9	53	I iodine 126.9	85	At astatine	36	Kr krypton 83.8	54	Xe xenon 131.3	86	Rn radon	37		55		87		38		56		88		39		57-71		89-103		40		58		89		41		59		90		42		60		91		43		61		92		44		62		93		45		63		94		46		64		95		47		65		96		48		66		97		49		67		98		50		68		99		51		69		100		52		70		101		53		71		102		54		72		103		55		73		104		56		74		105		57		75		106		58		76		107		59		77		108		60		78		109		61		79		110		62		80		111		63		81		112		64		82		113		65		83		114		66		84		115		67		85		116		68		86		117		69		87		118		70		88		119		71		89		120		72		90		121		73		91		122		74		92		123		75		93		124		76		94		125		77		95		126		78		96		127		79		97		128		80		98		129		81		99		130		82		100		131		83		101		132		84		102		133		85		103		134		86		104		135		87		105		136		88		106		137		89		107		138		90		108		139		91		109		140		92		110		141		93		111		142		94		112		143		95		113		144		96		114		145		97		115		146		98		116		147		99		117		148		100		118		149		101		119		150		102		120		151		103		121		152		104		122		153		105		123		154		106		124		155		107		125		156		108		126		157		109		127		158		110		128		159		111		129		160		112		130		161		113		131		162		114		132		163		115		133		164		116		134		165		117		135		166		118		136		167		119		137		168		120		138		169		121		139		170		122		140		171		123		141		172		124		142		173		125		143		174		126		144		175		127		145		176		128		146		177		129		147		178		130		148		179		131		149		180		132		150		181		133		151		182		134		152		183		135		153		184		136		154		185		137		155		186		138		156		187		139		157		188		140		158		189		141		159		190		142		160		191		143		161		192		144		162		193		145		163		194		146		164		195		147		165		196		148		166		197		149		167		198		150		168		199		151		169		200		152		170		201		153		171		202		154		172		203		155		173		204		156		174		205		157		175		206		158		176		207		159		177		208		160		178		209		161		179		210		162		180		211		163		181		212		164		182		213		165		183		214		166		184		215		167		185		216		168		186		217		169		187		218		170		188		219		171		189		220		172		190		221		173		191		222		174		192		223		175		193		224		176		194		225		177		195		226		178		196		227		179		197		228		180		198		229		181		199		230		182		200		231		183		201		232		184		202		233		185		203		234		186		204		235		187		205		236		188		206		237		189		207		238		190		208		239		191		209		240		192		210		241		193		211		242		194		212		243		195		213		244		196		214		245		197		215		246		198		216		247		199		217		248		200		218		249		201		219		250		202		220		251		203		221		252		204		222		253		205		223		254		206		224		255		207		225		256		208		226		257		209		227		258		210		228		259		211		229		260		212		230		261		213		231		262		214		232		263		215		233		264		216		234		265		217		235		266		218		236		267		219		237		268		220		238		269		221		239		270		222		240		271		223		241		272		224		242		273		225		243		274		226		244		275		227		245		276		228		246		277		229		247		278		230		248		279		231		249		280		232		250		281		233		251		282		234		252		283		235		253		284		236		254		285		237		255		286		238		256		287		239		257		288		240		258		289		241		259		290		242		260		291		243		261		292		244		262		293		245		263		294		246		264		295		247		265		296		248		266		297		249		267		298		250		268		299		251		269		300		252		270		301		253		271		302		254		272		303		255		273		304		256		274		305		257		275		306		258		276		307		259		277		308		260		278		309		261		279		310		262		280		311		263		281		312		264		282		313		265		283		314		266		284		315		267		285		316		268		286		317		269		287		318		270		288		319		271		289		320		272		290		321		273		291		322		274		292		323		275		293		324		276		294		325		277		295		326		278		296		327		279		297		328		280		298		329		281		299		330		282		300		331		283		301		332		284		302		333		285		303		334		286		304		335		287		305		336		288		306		337		289		307		338		290		308		339		291		309		340		292

ELEMENTS LISTED IN NUMERICAL ORDER:

1	Hydrogen	H
2	Helium	He
3	Lithium	Li
4	Beryllium	Be
5	Boron	B
6	Carbon	C
7	Nitrogen	N
8	Oxygen	O
9	Fluorine	F
10	Neon	Ne
11	Sodium	Na
12	Magnesium	Mg
13	Aluminium	Al
14	Silicon	Si
15	Phosphorus	P
16	Sulfur	S
17	Chlorine	Cl
18	Argon	Ar
19	Potassium	K
20	Calcium	Ca
21	Scandium	Sc
22	Titanium	Ti
23	Vanadium	V
24	Chromium	Cr
25	Manganese	Mn

26	Iron	Fe
27	Cobalt	Co
28	Nickel	Ni
29	Copper	Cu
30	Zinc	Zn
31	Gallium	Ga
32	Germanium	Ge
33	Arsenic	As
34	Selenium	Se
35	Bromine	Br
36	Krypton	Kr
37	Rubidium	Rb
38	Strontium	Sr
39	Yttrium	Y
40	Zirconium	Zr
41	Niobium	Nb
42	Molybdenum	Mo
43	Technetium	Tc
44	Ruthenium	Ru
45	Rhodium	Rh
46	Palladium	Pd
47	Silver	Ag
48	Cadmium	Cd
49	Indium	In
50	Tin	Sn
51	Antimony	Sb
52	Tellurium	Te
53	Iodine	I

54	Xenon	Xe
55	Caesium	Cs
56	Barium	Ba
72	Hafnium	Hf
73	Tantalum	Ta
74	Tungsten	W
75	Rhenium	Re
76	Osmium	Os
77	Iridium	Ir
78	Platinum	Pt
79	Gold	Au
80	Mercury	Hg
81	Thallium	Tl
82	Lead	Pb
83	Bismuth	Bi
84	Polonium	Po
85	Astatine	At
86	Radon	Rn
87	Francium	Fr
88	Radium	Ra
104	Rutherfordium	Rf
105	Dubnium	Db
106	Seaborgium	Sg
107	Bohrium	Bh
108	Hassium	Hs
109	Meitnerium	Mt
110	Darmstadtium	Ds
111	Roentgenium	Rg

112	Copernicium	Cn
114	Flerovium	Fl
116	Livermorium	Lv



Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.