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**AS  
CHEMISTRY**7404

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**Data Sheet**

This Data Sheet is provided with AQA AS Chemistry question papers.

**Table A**

Infrared absorption data

<b>Bond</b>	<b>Wavenumber / <math>\text{cm}^{-1}</math></b>
N—H (amines)	3300–3500
O—H (alcohols)	3230–3550
C—H	2850–3300
O—H (acids)	2500–3000
$\text{C}\equiv\text{N}$	2220–2260
$\text{C}=\text{O}$	1680–1750
$\text{C}=\text{C}$	1620–1680
$\text{C}-\text{O}$	1000–1300
$\text{C}-\text{C}$	750–1100

# The Periodic Table of the Elements

	1	2											3	4	5	6	7	0																																																																									
(1)	(2)	Key																(18)																																																																									
		relative atomic mass		symbol																																																																																							
		name		atomic (proton) number																																																																																							
6.9 <b>Li</b> lithium 3	9.0 <b>Be</b> beryllium 4	23.0 <b>Na</b> sodium 11	24.3 <b>Mg</b> magnesium 12	39.1 <b>K</b> potassium 19	40.1 <b>Ca</b> calcium 20	45.0 <b>Sc</b> scandium 21	47.9 <b>Ti</b> titanium 22	47.9 <b>Ti</b> titanium 22	50.9 <b>V</b> vanadium 23	52.0 <b>Cr</b> chromium 24	54.9 <b>Mn</b> manganese 25	55.8 <b>Fe</b> iron 26	58.9 <b>Co</b> cobalt 27	58.9 <b>Co</b> cobalt 27	65.4 <b>Zn</b> zinc 30	63.5 <b>Cu</b> copper 29	58.7 <b>Ni</b> nickel 28	63.5 <b>Cu</b> copper 29	65.4 <b>Zn</b> zinc 30	69.7 <b>Ga</b> gallium 31	72.6 <b>Ge</b> germanium 32	74.9 <b>As</b> arsenic 33	79.0 <b>Se</b> selenium 34	79.9 <b>Br</b> bromine 35	83.8 <b>Kr</b> krypton 36	85.5 <b>Rb</b> rubidium 37	87.6 <b>Sr</b> strontium 38	88.9 <b>Y</b> yttrium 39	91.2 <b>Zr</b> zirconium 40	91.2 <b>Zr</b> zirconium 40	92.9 <b>Nb</b> niobium 41	96.0 <b>Mo</b> molybdenum 42	98 <b>Tc</b> technetium 43	101.1 <b>Ru</b> ruthenium 44	102.9 <b>Rh</b> rhodium 45	106.4 <b>Pd</b> palladium 46	107.9 <b>Ag</b> silver 47	112.4 <b>Cd</b> cadmium 48	114.8 <b>In</b> indium 49	118.7 <b>Sn</b> tin 50	121.8 <b>Sb</b> antimony 51	126.9 <b>I</b> iodine 53	126.9 <b>I</b> iodine 53	131.3 <b>Xe</b> xenon 54	132.9 <b>Cs</b> caesium 55	137.3 <b>Ba</b> barium 56	138.9 <b>La *</b> lanthanum 57	178.5 <b>Hf</b> hafnium 72	178.5 <b>Hf</b> hafnium 72	180.9 <b>Ta</b> tantalum 73	183.8 <b>W</b> tungsten 74	186.2 <b>Re</b> rhenium 75	190.2 <b>Os</b> osmium 76	192.2 <b>Ir</b> iridium 77	195.1 <b>Pt</b> platinum 78	197.0 <b>Au</b> gold 79	200.6 <b>Hg</b> mercury 80	204.4 <b>Tl</b> thallium 81	207.2 <b>Pb</b> lead 82	209.0 <b>Bi</b> bismuth 83	[209] <b>Po</b> polonium 84	[210] <b>At</b> astatine 85	[222] <b>Rn</b> radon 86	[223] <b>Fr</b> francium 87	[226] <b>Ra</b> radium 88	[227] <b>Ac †</b> actinium 89	[267] <b>Rf</b> rutherfordium 104	[267] <b>Rf</b> rutherfordium 104	[268] <b>Db</b> dubnium 105	[271] <b>Sg</b> seaborgium 106	[272] <b>Bh</b> bohrium 107	[270] <b>Hs</b> hassium 108	[276] <b>Mt</b> meitnerium 109	[281] <b>Ds</b> darmstadtium 110	[280] <b>Rg</b> roentgenium 111	Elements with atomic numbers 112-116 have been reported but not fully authenticated															
		140.1 <b>Ce</b> cerium 58	140.9 <b>Pr</b> praseodymium 59	144.2 <b>Nd</b> neodymium 60	[145] <b>Pm</b> promethium 61	150.4 <b>Sm</b> samarium 62	152.0 <b>Eu</b> europium 63	157.3 <b>Gd</b> gadolinium 64	158.9 <b>Tb</b> terbium 65	162.5 <b>Dy</b> dysprosium 66	164.9 <b>Ho</b> holmium 67	167.3 <b>Er</b> erbium 68	168.9 <b>Tm</b> thulium 69	173.1 <b>Yb</b> ytterbium 70	175.0 <b>Lu</b> lutetium 71	232.0 <b>Th</b> thorium 90	231.0 <b>Pa</b> protactinium 91	238.0 <b>U</b> uranium 92	[237] <b>Np</b> neptunium 93	[244] <b>Pu</b> plutonium 94	150.4 <b>Sm</b> samarium 62	152.0 <b>Eu</b> europium 63	157.3 <b>Gd</b> gadolinium 64	158.9 <b>Tb</b> terbium 65	162.5 <b>Dy</b> dysprosium 66	164.9 <b>Ho</b> holmium 67	167.3 <b>Er</b> erbium 68	168.9 <b>Tm</b> thulium 69	173.1 <b>Yb</b> ytterbium 70	175.0 <b>Lu</b> lutetium 71	251 <b>Cf</b> californium 98	[247] <b>Bk</b> berkelium 97	[251] <b>Cf</b> californium 98	[252] <b>Es</b> einsteinium 99	[257] <b>Fm</b> fermium 100	[258] <b>Md</b> mendelevium 101	[259] <b>No</b> nobelium 102	[262] <b>Lr</b> lawrencium 103																																																					

\* 58 – 71 Lanthanides

† 90 – 103 Actinides