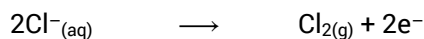


0	1
---	---

Chlorine gas can be obtained from the electrolysis of sodium chloride solution.

The equation for the reaction at the positive electrode is:



0.015 moles of gas was collected in 2 minutes.

0	1	.	1
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Calculate the volume (in cm³) of chlorine gas generated in this time.

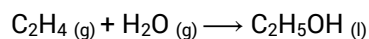
[2 marks]

.....

Volume of chlorine gas = cm³

0	2
---	---

Ethene reacts with steam to make ethanol in the following reaction:



0	2	.	1
---	---	---	---

What volume of ethene gas would be required to produce 138 grams of ethanol?

[3 marks]

.....

Volume of ethene gas =

(Total 5 marks)

End of Question
See next page for Data Sheet

1	2	3	4	5	6	7	0
7 Li lithium 3	9 Be beryllium 4	11 Na sodium 11	12 C carbon 6	14 N nitrogen 7	16 O oxygen 8	19 F fluorine 9	20 Ne neon 10
23 Na sodium 11	24 Mg magnesium 12	27 Al aluminium 13	28 Si silicon 14	31 P phosphorous 15	32 S sulfur 16	35.5 Cl chlorine 17	40 Ar argon 18
39 K potassium 19	40 Ca calcium 20	70 Ga gallium 31	73 Ge germanium 32	75 As arsenic 33	79 Se selenium 34	80 Br bromine 35	84 Kr krypton 36
85 Rb rubidium 37	88 Sr strontium 38	115 In indium 49	119 Sn tin 50	122 Sb antimony 51	128 Te tellurium 52	127 I iodine 53	131 Xe xenon 54
133 Cs caesium 55	137 Ba barium 56	204 Tl thallium 81	207 Pb lead 82	209 Bi bismuth 83	209 Po polonium 84	[210] At astatine 85	[222] Rn radon 86
[223] Fr francium 87	[226] Ra radium 88	201 Hg mercury 80	201 Hg mercury 80	197 Au gold 79	197 Au gold 79	[272] Rg roentgenium 111	
				195 Pt platinum 78	195 Pt platinum 78	[271] Ds darmstadtium 110	
				192 Ir iridium 77	192 Ir iridium 77	[268] Mt meitnerium 109	
				190 Os osmium 76	190 Os osmium 76	[277] Hs hassium 108	
				186 Re rhenium 75	186 Re rhenium 75	[264] Bh bohrium 107	
				184 W tungsten 74	184 W tungsten 74	[266] Sg seaborgium 106	
				181 Ta tantalum 73	181 Ta tantalum 73	[262] Db dubnium 105	
				178 Hf hafnium 72	178 Hf hafnium 72	[261] Rf rutherfordium 104	
				93 Nb niobium 41	93 Nb niobium 41		
				91 Zr zirconium 40	91 Zr zirconium 40		
				96 Mo molybdenum 42	96 Mo molybdenum 42		
				[98] Tc technetium 43	[98] Tc technetium 43		
				55 Mn manganese 25	55 Mn manganese 25		
				56 Fe iron 26	56 Fe iron 26		
				59 Co cobalt 27	59 Co cobalt 27		
				59 Ni nickel 28	59 Ni nickel 28		
				63.5 Cu copper 29	63.5 Cu copper 29		
				65 Zn zinc 30	65 Zn zinc 30		

