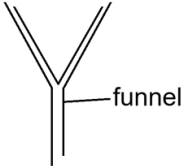
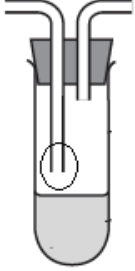
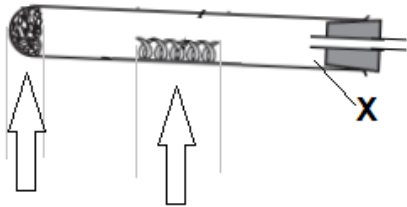


1(a)	(conical) flask
1(b)	(concentrated) hydrochloric acid
1(c)	Bunsen (burner)
1(d)	<i>any one from:</i> • collection tube needs to be the other way up • use downward delivery • use upward displacement of air • collect chlorine in a gas syringe
1(e)	chlorine is toxic

1(a)(i)	effervescence/fizzing/bubbles
1(a)(ii)	M1 test with universal indicator M2 turns red/orange OR M1 add (more) acid M2 no fizzing/bubbles/effervescence
1(b)(i)	 M1 diagram showing filter paper in a funnel (both funnel and paper must be visible) M2 labels
1(b)(ii)	M1 (dilute) hydrochloric acid M2 calcium chloride
1(b)(iii)	M1 $2.00 - 0.11 = 1.89$ M2 $(1.89 \div 2.00) \times 100 = 94.5$

1(a)	funnel
1(b)	to cool / to condense (AND) the water/steam/(water) vapour
1(c)	M1 anhydrous cobalt(II) chloride / anhydrous copper(II) sulfate M2 blue to pink if cobalt(II) chloride OR white to blue if copper(II) sulfate
1(d)	boiling tube
1(e)	circle must include the bottom of the left-hand tube but not the right-hand tube. It can overlap the surface of the liquid. 
1(f)	sulfur dioxide (made when the fuel is burned)

1(a)	(gas) syringe
1(b)	(rub with) sand / emery / abrasive paper
1(c)	to hold / absorb the water / to prevent the water running along the tube
1(d)	
1(e)	water / H ₂ O
1(f)	contains air (that was in the apparatus at the start)

1(a)	A (conical) flask
	B (gas) syringe
1(b)	to keep (the contents of the flask) warm / at 25 °C to 35 °C
1(c)	gas volume still increasing / gas volume not constant
1(d)(i)	(turns) milky / cloudy
1(d)(ii)	no more bubbles
1(e)	(fractional) distillation